PROPOSED MERGER
YOUR VOTE IS VERY IMPORTANT

To the Stockholders of ARCA biopharma, Inc. and Oruka Therapeutics, Inc.,

ARCA biopharma, Inc., a Delaware corporation ("ARCA"), and Oruka Therapeutics, Inc., a Delaware corporation ("Oruka"), entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement") on April 3, 2024, pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Atlas Merger Sub Corp, a Delaware corporation ("First Merger Sub"), will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the merger (the "First Merger"), and Oruka will merge with and into Atlas Merger Sub II, LLC, a Delaware limited liability company ("Second Merger Sub" and together with First Merger Sub, "Merger Subs"), with Second Merger Sub being the surviving entity of the merger (the "Second Merger" and, together with the First Merger, the "Merger"). After the completion of the Merger, Second Merger Sub will change its corporate name to "Oruka Therapeutics Operating Company, LLC" and ARCA will change its name to "Oruka Therapeutics, Inc." The term "combined company" when used in the following proxy statement/prospectus refers to the post-Merger corporate structure including Oruka Therapeutics, Inc. (f/k/a ARCA biopharma, Inc.) as the parent entity and Oruka Therapeutics Operating Company, LLC as its wholly-owned subsidiary.

At the closing of the First Merger (the "First Effective Time"), upon the terms and subject to the conditions set forth in the Merger Agreement, (i) each then-outstanding share of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing) (as defined below) and excluding shares to be canceled pursuant to the Merger Agreement and excluding dissenting shares) will be automatically converted solely into the right to receive a number of shares of ARCA common stock equal to the exchange ratio (described in more detail in the section titled "*The Merger Agreement — Exchange Ratio*" beginning on page 136 of the accompanying proxy statement/prospectus), (ii) each then-outstanding share of Oruka preferred stock will be converted into the right to receive a number of shares of ARCA Series B non-voting convertible preferred stock, par value $0.001 per share ("ARCA Series B Preferred Stock"), which are each convertible into 1,000 shares of ARCA common stock, equal to the exchange ratio divided by 1,000, (iii) each then-outstanding option to purchase Oruka common stock will be assumed by ARCA, subject to adjustment as set forth in the Merger Agreement and described in more detail in the section titled "*The Merger Agreement — Oruka Options*" beginning on page 139 of the accompanying proxy statement/prospectus, (iv) each then-outstanding warrant to purchase shares of Oruka common stock will be converted into a warrant to purchase shares of ARCA common stock, subject to adjustment as set forth in the Merger Agreement and described in more detail in the section titled "*The Merger Agreement — Oruka Warrants*" beginning on page 139 of the accompanying proxy statement/prospectus, (v) each in-the-money option to acquire shares of ARCA's common stock that is issued and outstanding (whether vested or unvested) will be cancelled and converted into the right to receive an amount in cash equal to the excess (if any) of the volume weighted average closing price of ARCA's common stock for the five consecutive trading days ending three (3) trading days prior to the closing of the First Merger (the "Parent Closing Price") over the option's exercise price and (vi) each share of ARCA common stock that is issued and outstanding at the First Effective Time will remain issued and outstanding in accordance with its terms and such shares, subject to the proposed reverse stock split, and will be unaffected by the Merger.

Based on ARCA's and Oruka's capitalization as of July 16, 2024 and taking into account ARCA's current cash position, each share of Oruka capital stock is currently estimated to be entitled to receive approximately 6.8699 shares of ARCA common stock. This estimated exchange ratio does not give effect to the proposed ARCA reverse stock split and is

subject to adjustment based on ARCA's estimated net cash at the closing of the First Merger as described in more detail in the section titled "*The Merger Agreement — Exchange Ratio*" beginning on page 136 of the accompanying proxy statement/prospectus.

In addition, prior to the First Effective Time, ARCA's board of directors expects to declare a special cash dividend (the "special cash dividend") to stockholders of record of outstanding shares of ARCA common stock as of a record date prior to the First Effective Time, to be set by ARCA's board of directors as close as reasonably practicable to (but not later than) the First Effective Time. The ex-dividend date in respect of such special cash dividend will be determined by The Nasdaq Stock Market LLC ("Nasdaq"). ARCA stockholders of record who continue to hold their eligible shares of ARCA common stock until market open on the ex-dividend date will be entitled to payment of the special cash dividend. The special cash dividend will be equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash (as determined pursuant to the Merger Agreement) is expected to exceed $5.0 million. ARCA currently estimates that the aggregate amount of cash to be distributed to stockholders of record as of the record date of the special cash dividend will be approximately $20.0 million.

On April 3, 2024, concurrently with the execution and delivery of the Merger Agreement, Oruka entered into a subscription agreement with certain investors to purchase shares of Oruka common stock and Oruka pre-funded warrants for an aggregate purchase price of approximately $275.0 million (which includes $25.0 million of proceeds previously received from the issuance of the Convertible Note and accrued interest on such note), which subscription agreement was subsequently amended and restated on July 3, 2024 (the "Subscription Agreement") to provide for, among other things, the issuance of warrants to certain of Oruka's employees, directors and service providers (the "employee warrants"), immediately prior to the closing of the Merger (referred to herein as the "Oruka pre-closing financing"). The shares of Oruka common stock and Oruka pre-funded warrants that are issued in the Oruka pre-closing financing will be converted into the right to receive a number of shares of ARCA common stock and warrants to purchase shares of ARCA common stock, respectively, equal to the exchange ratio described in more detail in the section titled "*The Merger Agreement — Exchange Ratio*" beginning on page 136 of the accompanying proxy statement/prospectus. ARCA, Oruka and the investors participating in the Oruka pre-closing financing have also agreed to enter into a registration rights agreement (the "registration rights agreement") at the closing of the Oruka pre-closing financing, pursuant to which, among other things, the combined company will agree to provide for the registration and resale of certain shares of ARCA common stock that are held by the investors participating in the Oruka pre-closing financing from time to time pursuant to Rule 415 under the Securities Act ("Rule 415"). The Oruka pre-closing financing is more fully described in the sections titled "*Agreements Related to the Merger — Subscription Agreement*" and "*Agreements Related to the Merger — Registration Rights Agreement*" beginning on page 153 and 155, respectively, of the accompanying proxy statement/prospectus.

Immediately after the Merger, based solely on the estimated exchange ratio as described in the accompanying proxy statement/prospectus, ARCA securityholders as of immediately prior to the Merger are expected to own approximately 2.39% of the outstanding shares of capital stock of the combined company (on a fully diluted basis), and former holders of Oruka securities (including those issued in the Oruka pre-closing financing) are expected to own approximately 97.61% of the outstanding shares of capital stock of the combined company (on a fully diluted basis), subject to certain assumptions, including, but not limited to, ARCA's net cash as of closing being equal to $5.0 million. Under certain circumstances described in more detail in the section titled "*The Merger Agreement — Exchange Ratio*" beginning on page 136 of the accompanying proxy statement/prospectus, the ownership percentages may be adjusted up or down including, but not limited to, if ARCA's net cash as of closing is less than $5.0 million. ARCA currently estimates that its net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, and the currently estimated ownership percentages reflect this projection.

Shares of ARCA common stock are currently listed on Nasdaq under the symbol "ABIO." ARCA has filed an initial listing application for the combined company with Nasdaq. After completion of the Merger, ARCA will be renamed "Oruka Therapeutics, Inc." and it is expected that the common stock of the combined company will trade on Nasdaq under the symbol "ORKA." It is a condition to the consummation of the Merger that ARCA will receive confirmation from Nasdaq that the combined company has been approved for listing on Nasdaq, but there can be no assurance such listing condition will be met or that ARCA will obtain such confirmation from Nasdaq. If such listing condition is not met or if such confirmation is not obtained, the Merger will not be consummated

unless the condition is waived. The Nasdaq condition set forth in the Merger Agreement is not expected to be waived by the applicable parties. On July 19, 2024, the last trading day before the date of the accompanying proxy statement/prospectus, the closing sale price of ARCA common stock was $3.29 per share.

ARCA stockholders are cordially invited to attend the special meeting in lieu of the annual meeting of ARCA stockholders. ARCA is holding its special meeting in lieu of the annual meeting of stockholders (the "ARCA special meeting") on August 22, 2024, at 9:00 a.m. Mountain Time, unless postponed or adjourned to a later date, in order to obtain the stockholder approvals necessary to complete the Merger and related matters. At the ARCA special meeting, ARCA will ask its stockholders to:

1. Approve (i) the issuance of shares of ARCA common stock (including the shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock), which will represent more than 20% of the shares of ARCA common stock outstanding immediately prior to the Merger, to stockholders of Oruka, pursuant to the terms of the Merger Agreement, a copy of which is attached as *Annex A* to the accompanying proxy statement/prospectus, and (ii) the change of control of ARCA resulting from the Merger, pursuant to Nasdaq Listing Rules 5635(a) and 5635(b), respectively (the "Nasdaq Stock Issuance Proposal" or "Proposal No. 1");

2. Approve an amendment to the amended and restated certificate of incorporation of ARCA (the "ARCA Charter") to increase the number of shares of ARCA common stock that ARCA is authorized to issue from 100,000,000 shares to 545,000,000, in the form attached as *Annex G* to the accompanying proxy statement/prospectus (the "Authorized Share Increase Proposal" or "Proposal No. 2");

3. Approve an amendment to the ARCA Charter to effect a reverse stock split of ARCA's issued and outstanding common stock at a ratio in the range between 6:1 to 12:1, inclusive, in the form attached as *Annex H* to the accompanying proxy statement/prospectus, if deemed necessary by ARCA and Oruka, with the final ratio and effectiveness of such amendment and the abandonment of such amendment to be mutually agreed by ARCA's board of directors and Oruka's board of directors prior to the First Effective Time or, if the Nasdaq Stock Issuance Proposal is not approved by ARCA stockholders, determined solely by ARCA's board of directors (the "Reverse Stock Split Proposal" or "Proposal No. 3");

4. Approve an amendment to the ARCA Charter to reflect Delaware law provisions regarding officer exculpation, in the form attached as *Annex I* (the "Officer Exculpation Proposal" or "Proposal No. 4");

5. Elect the Class III director, Jacob Ma-Weaver, to ARCA's board of directors and to hold office until ARCA's 2027 annual meeting of stockholders and until his successor has been duly elected and qualified, or until his earlier death, resignation or removal (the "Director Election Proposal" or "Proposal No. 5"), provided that if the Merger is consummated, the approval of Proposal No. 5 will only have an effect until the completion of the Merger because the composition of ARCA's board of directors will be reconstituted upon completion of the Merger, in accordance with the Merger Agreement;

6. Ratify the appointment of KPMG LLP as ARCA's independent registered public accounting firm for fiscal year ending December 31, 2024, provided that PricewaterhouseCoopers LLP is expected to be appointed for that fiscal year if the Merger is completed (the "Auditor Ratification Proposal" or "Proposal No. 6");

7. Approve the Oruka Therapeutics, Inc. 2024 Stock Incentive Plan (the "Stock Plan Proposal" or "Proposal No. 7");

8. Approve the Oruka Therapeutics, Inc. 2024 Employee Stock Purchase Plan (the "ESPP Proposal" or "Proposal No. 8");

9. Approve, on an advisory basis, certain compensation arrangements for ARCA named executive officers that are based on or otherwise relate to the Merger (the "the Merger Compensation Proposal" or "Proposal No. 9");

10. Approve an adjournment of the ARCA special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal (the "Adjournment Proposal" or "Proposal No. 10"); and

11. Transact such other business as may properly come before the stockholders at the ARCA special meeting or any adjournment or postponement thereof.

As described in the accompanying proxy statement/prospectus, certain ARCA stockholders who in the aggregate owned approximately 28.5% of the outstanding shares of ARCA capital stock as of July 16, 2024, and certain Oruka stockholders who in the aggregate owned approximately 90% of the outstanding shares of Oruka capital stock as of July 16, 2024, are parties to stockholder support agreements with ARCA and Oruka, respectively, whereby such stockholders have agreed to vote in favor of the adoption of the Merger Agreement and the approval of the Merger and related transactions contemplated by the Merger Agreement, subject to the terms of the support agreements. Following the effectiveness of the registration statement on Form S-4 of which the accompanying proxy statement/prospectus is a part and pursuant to the Merger Agreement, Oruka stockholders holding a sufficient number of shares of Oruka capital stock to adopt the Merger Agreement and approve the Merger and related transactions will be asked to execute written consents providing for such adoption and approval.

While the combined company will not be considered a "controlled company" under the relevant listing rules of Nasdaq, it is anticipated that the combined company's executive officers, directors and principal stockholders will, in the aggregate, beneficially own approximately 47% of the combined company's outstanding shares of common stock (on a fully-diluted basis). As a result, if these stockholders were to choose to act together, they would be able to control or significantly influence all matters submitted to the combined company's stockholders for approval, as well as the combined company's management and affairs, though they have no agreement to do so or any expectation of entering into such an agreement.

After careful consideration, each of ARCA's and Oruka's boards of directors have approved the Merger Agreement and have determined that it is advisable to consummate the Merger. ARCA's board of directors has approved the proposals described in the accompanying proxy statement/prospectus and recommends that its stockholders vote "**FOR**" the proposals described in the accompanying proxy statement/prospectus.

More information about ARCA, Oruka, the Merger Agreement and transactions contemplated thereby and the foregoing proposals is contained in the accompanying proxy statement/prospectus. ARCA urges you to read the accompanying proxy statement/prospectus carefully and in its entirety. IN PARTICULAR, YOU SHOULD CAREFULLY CONSIDER THE MATTERS DISCUSSED UNDER "RISK FACTORS" BEGINNING ON PAGE 15 OF THE ACCOMPANYING PROXY STATEMENT/PROSPECTUS.

ARCA and Oruka are excited about the opportunities the Merger brings to ARCA's and Oruka's stockholders and thank you for your consideration and continued support.

Thomas A. Keuer
President and Chief Operating Officer
ARCA biopharma, Inc.

Lawrence Klein
Chief Executive Officer
Oruka Therapeutics, Inc.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of the accompanying proxy statement/prospectus. Any representation to the contrary is a criminal offense.

The accompanying proxy statement/prospectus is dated July 22, 2024, and is first being mailed to ARCA's stockholders on or about July 26, 2024.

ARCA BIOPHARMA, INC.
10170 Church Ranch Way, Suite 100
Westminster, CO 80021

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS IN LIEU OF ANNUAL MEETING OF STOCKHOLDERS

To the stockholders of ARCA biopharma, Inc.:

NOTICE IS HEREBY GIVEN that a special meeting in lieu of annual meeting of stockholders (the "ARCA special meeting") will be held on Thursday, August 22, 2024 at 9:00 a.m. Mountain Time, unless postponed or adjourned to a later date. The ARCA special meeting will be held in person at the Denver Marriott Westminster, 7000 Church Ranch Blvd, Westminster, Colorado 80021.

The ARCA special meeting will be held for the following purposes:

1. To approve (i) the issuance of shares of ARCA common stock (including the shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock), which will represent more than 20% of the shares of ARCA common stock outstanding immediately prior to the Merger, to stockholders of Oruka, pursuant to the terms of the Merger Agreement, a copy of which is attached as *Annex A* to the accompanying proxy statement/prospectus, and (ii) the change of control of ARCA resulting from the Merger, pursuant to Nasdaq Listing Rules 5635(a) and 5635(b), respectively;

2. To approve an amendment to the amended and restated certificate of incorporation of ARCA (the "ARCA Charter") to increase the number of shares of ARCA common stock that ARCA is authorized from 100,000,000 to issue to 545,000,000, in the form attached as *Annex G* to the accompanying proxy statement/prospectus;

3. To approve an amendment to the ARCA Charter to effect a reverse stock split of ARCA's issued and outstanding common stock at a ratio in the range between 6:1 to 12:1, inclusive, in the form attached as *Annex H* to the accompanying proxy statement/prospectus, if deemed necessary by ARCA and Oruka, with the final ratio and effectiveness of such amendment and the abandonment of such amendment to be mutually agreed by ARCA's board of directors and Oruka's board of directors prior to the First Effective Time or, if the Nasdaq Stock Issuance Proposal is not approved by ARCA stockholders, determined solely by ARCA's board of directors;

4. To approve an amendment to the ARCA Charter to reflect Delaware law provisions regarding officer exculpation, in the form attached as *Annex I* to the accompanying proxy statement/prospectus;

5. To elect the Class III director, Jacob Ma-Weaver, to ARCA's board of directors and to hold office until ARCA's 2027 annual meeting of stockholders and until his successor has been duly elected and qualified, or until his earlier death, resignation or removal, provided that if the Merger is consummated, the approval of Proposal No. 5 will only have an effect until the completion of the Merger because the composition of ARCA's board of directors will be reconstituted upon completion of the Merger, in accordance with the Merger Agreement;

6. To ratify the appointment of KPMG LLP as ARCA's independent registered public accounting firm for fiscal year ending December 31, 2024, provided that PricewaterhouseCoopers LLP is expected to be appointed for that fiscal year if the Merger is completed;

7. To approve the Oruka Therapeutics, Inc. 2024 Stock Incentive Plan;

8. To approve the Oruka Therapeutics, Inc. 2024 Employee Stock Purchase Plan;

9. To approve, on an advisory basis, certain compensation arrangements for ARCA named executive officers that are based on or otherwise relate to the Merger;

10. To approve an adjournment of the ARCA special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal; and

11. To transact such other business as may properly come before the stockholders at the ARCA special meeting or any adjournment or postponement thereof.

These proposals are collectively referred to as the "Proposals."

ARCA's board of directors has fixed July 22, 2024 as the record date (the "Record Date") for the determination of stockholders entitled to notice of, and to vote at, the ARCA special meeting and any adjournment or postponement thereof. Only holders of record of shares of ARCA common stock at the close of business on the Record Date are entitled to notice of, and to vote at, the ARCA special meeting. At the close of business on the Record Date, ARCA had 14,507,143 shares of common stock outstanding and entitled to vote.

Your vote is important. The affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present at the ARCA special meeting, assuming a quorum is present, is required for approval of Proposal No. 1, Proposal No. 6, Proposal No. 7, Proposal No. 8, Proposal No. 9 and Proposal No. 10. The affirmative vote of a majority of the votes properly cast by the holders of ARCA common stock at the ARCA special meeting, assuming a quorum is present, is required for approval of Proposal No. 2 and Proposal No. 3. The affirmative vote of a majority of the outstanding shares of ARCA common stock is required for approval of Proposal No. 4. With respect to Proposal No. 5, the director is elected by a plurality of the votes properly cast at the ARCA special meeting, and the one nominee for director receiving the highest number of affirmative votes properly cast will be elected. Proposal No. 1 is conditioned on the approval of Proposal No. 2. Notwithstanding the approval of Proposal No. 1, if Proposal No. 2 is not approved, the actions contemplated by Proposal No. 1 will not be effected and the Merger will not be consummated.

All stockholders are cordially invited to attend the special meeting in person. Even if you plan to attend the ARCA special meeting, ARCA requests that you sign and return the enclosed proxy or vote by mail or online to ensure that your shares will be represented at the ARCA special meeting if you are unable to attend. You may change or revoke your proxy at any time before it is voted at the ARCA special meeting.

ARCA'S BOARD OF DIRECTORS HAS DETERMINED AND BELIEVES THAT EACH OF THE PROPOSALS OUTLINED ABOVE IS FAIR TO, IN THE BEST INTERESTS OF, AND ADVISABLE TO ARCA AND ITS STOCKHOLDERS AND HAS APPROVED EACH SUCH PROPOSAL. ARCA'S BOARD OF DIRECTORS RECOMMENDS THAT ARCA STOCKHOLDERS VOTE "FOR" EACH SUCH PROPOSAL.

Important Notice Regarding the Availability of Proxy Materials for the Stockholders' Meeting to Be Held on August 22, 2024 at 9:00 a.m. Mountain Time

The proxy statement/prospectus, which also serves as the annual report to stockholders in connection with the special meeting in lieu of annual meeting, is available at *www.arcabio.com.*

By Order of ARCA's Board of Directors,

Thomas A. Keuer

President and Chief Operating Officer

July 22, 2024

EXPLANATORY NOTE

The issuances of (i) all shares of ARCA common stock in exchange for each share of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing), (ii) all shares of ARCA common stock issuable upon exercise of pre-funded warrants issued in exchange for pre-funded warrants to purchase shares of Oruka common stock sold in the Oruka pre-closing financing, and (iii) all shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock issued in exchange for each share of Oruka preferred stock, are intended to be covered by this registration statement on Form S-4 of which the accompanying proxy statement/prospectus is a part. There is no difference between the shares of ARCA common stock that will be issued in exchange for each share of Oruka common stock issued in the pre-closing financing, the shares of ARCA common stock that will be issued in exchange for each other share of Oruka common stock, the shares of ARCA common stock that will be issuable upon the exercise of pre-funded warrants that will be issued in exchange for pre-funded warrants to purchase shares of Oruka common stock sold in the pre-closing financing and the shares of ARCA common stock that will be issuable upon conversion of ARCA Series B Preferred Stock that will be issued in exchange for each share of Oruka preferred stock.

REFERENCES TO ADDITIONAL INFORMATION

The accompanying proxy statement/prospectus incorporates important business and financial information about ARCA biopharma, Inc. that is not included in or delivered with this document. You may obtain this information without charge through the Securities and Exchange Commission ("SEC") website (*www.sec.gov*) or upon your written or oral request by contacting 10170 Church Ranch Way, Suite 100, Westminster, Colorado, Attention: Corporate Secretary, or by calling (720) 940-2100. ARCA also maintains a website at *https://arcabio.com/*, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. However, the information contained in or accessible through ARCA's website is not part of the accompanying proxy statement/prospectus or the registration statement of which the accompanying proxy statement/prospectus forms a part.

To ensure timely delivery of these documents, any request should be made no later than August 9, 2024 to receive them before the ARCA special meeting.

For additional details about where you can find information about ARCA, please see the section titled "*Where You Can Find More Information*" beginning on page 321 of the accompanying proxy statement/prospectus.

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TABLE OF CONTENTS

QUESTIONS AND ANSWERS ABOUT THE MERGER

Except where specifically noted, the following information and all other information contained in this proxy statement/prospectus does not give effect to the proposed reverse stock split described in Proposal No. 3 of this proxy statement/prospectus.

All references to Oruka's "product candidates," "programs," "portfolio" and "pipeline" in this proxy statement/prospectus refer to the research programs with respect to which Oruka has the option to acquire intellectual property license rights to pursuant to those certain antibody discovery and option agreements, each dated March 6, 2024 and subsequently amended and restated on March 28, 2024, by and among Oruka, Paragon Therapeutics, Inc. ("Paragon") and Paruka Holding LLC ("Paruka") (the "Paragon Option Agreements").

The following section provides answers to frequently asked questions about the Merger. This section, however, provides only summary information. For a more complete response to these questions and for additional information, please refer to the cross-referenced sections.

Q: What is the Merger?

A: On April 3, 2024, ARCA, Oruka, First Merger Sub and Second Merger Sub entered into the Merger Agreement, a copy of which is attached as *Annex A*. The Merger Agreement contains the terms and conditions of the proposed Merger. Pursuant to the Merger Agreement, First Merger Sub will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the First Merger. Oruka will then merge with and into Second Merger Sub, with Second Merger Sub being the surviving entity of the Second Merger. This entire transaction is referred to in this proxy statement/prospectus as the Merger. In connection with the Merger, ARCA will change its corporate name to "Oruka Therapeutics, Inc."

At the First Effective Time, upon the terms and subject to the conditions set forth in the Merger Agreement, (i) each then-outstanding share of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing) (excluding shares to be canceled pursuant to the Merger Agreement and excluding dissenting shares) will be automatically converted solely into the right to receive a number of shares of ARCA common stock equal to the exchange ratio (described in more detail in the section titled "*The Merger Agreement — Exchange Ratio*" beginning on page 136 of this proxy statement/prospectus), (ii) each then-outstanding share of Oruka preferred stock will be converted into the right to receive a number of shares of ARCA Series B Preferred Stock, which are each convertible into 1,000 shares of ARCA common stock, equal to the exchange ratio divided by 1,000, in accordance with the terms of the Merger Agreement, (iii) each then-outstanding option to purchase Oruka common stock will be assumed by ARCA, subject to adjustment as set forth in the Merger Agreement, and (iv) each then-outstanding warrant to purchase shares of Oruka common stock will be converted into a warrant to purchase shares of ARCA common stock, subject to adjustment as set forth in the Merger Agreement and the form of warrant.

Each share of ARCA common stock that is issued and outstanding at the First Effective Time will remain issued and outstanding in accordance with its terms and such shares, subject to the proposed reverse stock split, will be unaffected by the Merger. Immediately after the Merger, based solely on the estimated exchange ratio as described in this proxy statement/prospectus, ARCA securityholders as of immediately prior to the Merger are expected to own approximately 2.39% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis), and former holders of Oruka securities (including those issued in the Oruka pre-closing financing) are expected to own approximately 97.61% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis), subject to certain assumptions, including, but not limited to, ARCA's net cash as of closing being equal to $5.0 million. Under certain circumstances described in more detail in the section titled "*The Merger Agreement — Exchange Ratio*" beginning on page 136 of this proxy statement/prospectus, the ownership percentages may be adjusted up or down including, but not limited to, if ARCA's net cash as of closing is less than $5.0 million. ARCA currently estimates that its net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, and the currently estimated ownership percentages reflect this projection.

In addition, prior to the First Effective Time, ARCA's board of directors expects to declare the special cash dividend to stockholders of record of outstanding shares of ARCA common stock as of the record date prior to the First Effective Time, to be set by ARCA's board of directors as close as reasonably practicable to (but not later than) the First Effective Time. The ex-dividend date in respect of such special cash dividend

will be determined by Nasdaq. ARCA stockholders of record who continue to hold their eligible shares of ARCA common stock until market open on the ex-dividend date will be entitled to payment of the special cash dividend. The special cash dividend will be equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash (as determined pursuant to the Merger Agreement) is expected to exceed $5.0 million. ARCA currently estimates that the aggregate amount of cash to be distributed to stockholders of record as of the record date for the special cash dividend will be approximately $20.0 million.

Q: Why are the two companies proposing to merge?

A: ARCA and Oruka believe that combining the two companies will result in a company with a promising pipeline, a strong leadership team and substantial capital resources, focused on developing novel biologics designed to set a new standard for the treatment of chronic skin diseases. For a more complete description of the reasons for the Merger, please see the sections titled "*The Merger — ARCA's Reasons for the Merger*" and "*The Merger — Oruka's Reasons for the Merger*" beginning on pages 104 and 110, respectively, of this proxy statement/prospectus.

Q: What will happen to ARCA if, for any reason, the merger with Oruka does not close?

A: ARCA has invested significant time and incurred, and expects to continue to incur, significant expenses related to the proposed merger with Oruka. In the event the Merger does not close, ARCA will have a limited ability to continue its current operations without obtaining additional financing. Although ARCA's board of directors may elect, among other things, to attempt to complete another strategic transaction if the merger with Oruka does not close, ARCA's board of directors may instead divest all or a portion of ARCA's business or take steps necessary to liquidate or dissolve ARCA's business and assets if a viable alternative strategic transaction is not available. If ARCA decides to dissolve and liquidate its assets, ARCA would be required to pay all of its contractual obligations, and to set aside certain reserves for potential future claims, and there can be no assurance as to the amount of and the timing of such liquidation and distribution of available cash left to distribute to stockholders after paying the obligations of ARCA and setting aside funds for reserves.

Q: Why am I receiving this proxy statement/prospectus?

A: You are receiving this proxy statement/prospectus because you have been identified as a stockholder of ARCA as of the applicable Record Date, and you are entitled to vote to approve the matters set forth herein. This document serves as:

- a proxy statement of ARCA used to solicit proxies for the ARCA special meeting to vote on the matters set forth herein;
- a prospectus of ARCA used to offer (i) shares of ARCA common stock issued in exchange for shares of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing), (ii) shares of ARCA common stock issuable upon exercise of pre-funded warrants issued in exchange for pre-funded warrants to purchase shares of Oruka common stock sold in the Oruka pre-closing financing, and (iii) shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock issued in exchange for shares of Oruka preferred stock in the Merger; and
- the annual report of ARCA provided in connection with the special meeting in lieu of annual meeting.

Q: What is the Oruka pre-closing financing?

A: On April 3, 2024, concurrently with the execution and delivery of the Merger Agreement, Oruka entered into the Subscription Agreement with certain investors named therein, including, among others, Fairmount, Venrock Healthcare Capital Partners, RTW Investments, Access Biotechnology, Commodore Capital, Deep Track Capital, Perceptive Advisors, Blackstone Multi-Asset Investing, Avidity Partners, Great Point Partners LLC, Paradigm BioCapital, Braidwell LP and Redmile Group, pursuant to which such investors agreed to purchase shares of Oruka common stock and pre-funded warrants to purchase shares of Oruka common stock for an aggregate purchase price of approximately $275.0 million (which includes $25.0 million of proceeds previously received from the issuance of the Convertible Note and accrued interest on such note). Shares of Oruka common stock and pre-funded warrants issued pursuant to this financing transaction will be converted into shares of ARCA common stock and pre-funded warrants to acquire shares ARCA common stock, in accordance with the exchange ratio and the Merger Agreement.

Immediately after the First Merger, the shares of Oruka common stock and Oruka pre-funded warrants issued in the Oruka pre-closing financing are expected to represent approximately 63% of the outstanding shares of common stock of the combined company, on a fully-diluted basis. ARCA, Oruka and the investors participating in the Oruka pre-closing financing have also agreed to enter into a registration rights agreement at the closing of the Oruka pre-closing financing, pursuant to which, among other things, the combined company will agree to provide for the registration and resale of certain shares of ARCA common stock that are held by the investors participating in the Oruka pre-closing financing from time to time pursuant to Rule 415. The closing of the Oruka pre-closing financing is conditioned upon the satisfaction or waiver of the conditions to the closing of the Merger as well as certain other conditions.

For a more complete description of the Oruka pre-closing financing, please see the sections titled "*Agreements Related to the Merger — Subscription Agreement*" and "*— Registration Rights Agreement*" beginning on pages 153 and 155 of this proxy statement/prospectus, respectively.

Q: What proposals will be voted on at the ARCA special meeting in connection with the Merger?

A: Pursuant to the terms of the Merger Agreement, the following proposals must be approved by the requisite stockholder vote at the ARCA special meeting in order for the Merger to close:

Proposal No. 1 — The Nasdaq Stock Issuance Proposal to approve (i) the issuance of shares of ARCA common stock (including the shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock), which will represent more than 20% of the shares of ARCA common stock outstanding immediately prior to the Merger, to stockholders of Oruka, pursuant to the terms of the Merger Agreement, a copy of which is attached as *Annex A* to this proxy statement/prospectus, and (ii) the change of control of ARCA resulting from the Merger, pursuant to Nasdaq Listing Rules 5635(a) and 5635(b), respectively;

Proposal No. 2 — Authorized Share Increase Proposal to approve an amendment to the ARCA Charter to increase the number of shares of ARCA common stock that ARCA is authorized to issue from 100,000,000 to 545,000,000, in the form attached as *Annex G* to this proxy statement/prospectus;

Additionally, Proposal No. 2 must be approved to have an adequate number of authorized but unissued shares of ARCA common stock to complete the Merger; and

Proposal No. 3 — Reverse Stock Split Proposal to approve an amendment to the ARCA Charter to effect a reverse stock split of ARCA's issued and outstanding common stock at a ratio in the range between 6:1 to 12:1, inclusive, if deemed necessary by ARCA and Oruka, with the final ratio and effectiveness of such amendment and the abandonment of such amendment to be mutually agreed by ARCA's board of directors and Oruka's board of directors prior to the First Effective Time or, if the Nasdaq Stock Issuance Proposal is not approved by ARCA stockholders, determined solely by ARCA's board of directors, the form attached as *Annex H* to this proxy statement/prospectus.

Each of Proposal No. 1 and Proposal No. 2 is a condition to completion of the Merger. The issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, and ARCA Series B Preferred Stock in connection with the Merger and the change of control of ARCA resulting from the Merger will not take place unless Proposal No. 1 and Proposal No. 2 are approved by ARCA stockholders and the Merger is consummated. ARCA's board of directors may determine to effect the authorized share increase or the reverse stock split if one or both are approved and Proposal No. 1 is not approved by ARCA stockholders, following the special meeting.

In addition to the requirement of obtaining ARCA stockholder approval of Proposal No. 1 and Proposal No. 2, the closing of the Merger is subject to the satisfaction or waiver of each of the other closing conditions set forth in the Merger Agreement. For a more complete description of the closing conditions under the Merger Agreement, please see the section titled "*The Merger Agreement — Conditions to the Completion of the Merger*" beginning on page 148 of this proxy statement/prospectus.

The presence, by attending in person or being represented by proxy, at the ARCA special meeting of the holders of at least one-third of the shares of ARCA common stock outstanding and entitled to vote at the ARCA special meeting is necessary to constitute a quorum at the meeting for the Proposals.

Q: What proposals are to be voted on at the ARCA special meeting, other than the Nasdaq Stock Issuance Proposal, the Reverse Stock Split Proposal and the Authorized Share Increase Proposal?

A: At the ARCA special meeting, the holders of ARCA common stock will also be asked to consider the following proposal:

Proposal No. 4 — The Officer Exculpation Proposal to approve an amendment to the ARCA Charter to reflect Delaware law provisions regarding officer exculpation, in the form attached as *Annex I*;

Proposal No. 5 — The Director Election Proposal to elect one (1) Class III director nominee named in the accompany proxy statement/prospectus to ARCA's board of directors, to serve until ARCA's 2027 annual meeting of stockholders or until his successor has been duly elected and qualified, or until his earlier death, resignation or removal;

Proposal No. 6 — The Auditor Ratification Proposal to ratify the selection of KPMG LLP as ARCA's independent registered public accounting firm for the fiscal year ending December 31, 2024;

Proposal No. 7 — The Stock Plan Proposal to approve the Oruka Therapeutics, Inc. 2024 Stock Incentive Plan;

Proposal No. 8 — The ESPP Proposal to approve the Oruka Therapeutics, Inc. 2024 Employee Stock Purchase Plan;

Proposal No. 9 — The Merger Compensation Proposal to approve, on an advisory basis, certain compensation arrangements for ARCA named executive officers that are based on or otherwise relate to the Merger; and

Proposal No. 10 — The Adjournment Proposal to approve an adjournment of the ARCA special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal.

The approval of Proposal Nos. 3, 4, 5, 6, 7, 8, 9 and 10 are not a condition to the Merger. ARCA does not expect that any matter other than the Proposals will be brought before the ARCA special meeting.

The presence, by attending in person or being represented by proxy, at the ARCA special meeting of the holders of at least one-third of the shares of ARCA common stock outstanding and entitled to vote at the ARCA special meeting is necessary to constitute a quorum at the meeting for the purpose of approving the Proposals.

Q: What stockholder votes are required to approve the Proposals at the ARCA special meeting?

A: The affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present at the ARCA special meeting, assuming a quorum is present, is required for approval of Proposal Nos. 1, 6, 7, 8, 9 and 10. The affirmative vote of a majority of the votes properly cast by the holders of ARCA common stock at the ARCA special meeting, assuming a quorum is present, is required for approval of Proposal Nos. 2 and 3. The affirmative vote of a majority of the outstanding shares of ARCA common stock is required for approval of Proposal No. 4. With respect to Proposal No. 5, directors are elected by a plurality of the votes properly cast at the ARCA special meeting, and the one nominee for director receiving the highest number of affirmative votes properly cast will be elected. Proposal No. 1 is conditioned on the approval of Proposal No. 2. Notwithstanding the approval of Proposal No. 1, if Proposal No. 2 is not approved, the actions contemplated by Proposal No. 1 will not be effected and the Merger will not be consummated.

Q: What will Oruka stockholders, participants in Oruka's 2024 Equity Incentive Plan, option holders and warrant holders receive in the Merger?

A: Oruka stockholders will receive shares of ARCA common stock. ARCA will assume Oruka's 2024 Equity Incentive Plan, as amended, along with issued and outstanding awards under such plan. Outstanding and unexercised options to purchase shares of Oruka common stock immediately prior to the First Effective Time will be converted into options to purchase shares of ARCA's common stock, with necessary adjustments being made to the number of shares and exercise price underlying such options in order to reflect the economic equivalent of the prior equity award in light of the exchange ratio. Oruka warrant holders' outstanding and

unexercised warrants to purchase shares of Oruka common stock immediately prior to the First Effective Time will be assumed by ARCA and each outstanding and unexercised warrant will be converted into a warrant to purchase shares of ARCA's common stock, with necessary adjustments to the number of shares and exercise price to reflect the exchange ratio. Applying the exchange ratio, the former Oruka securityholders immediately before the Merger are expected to own approximately 97.61% of the aggregate number of shares of the combined company's capital stock following the Merger (on a fully-diluted basis), and ARCA securityholders immediately before the Merger are expected to own approximately 2.39% of the aggregate number of shares of the combined company capital stock following the Merger (on a fully-diluted basis), subject to certain assumptions, including, but not limited to, ARCA's net cash as of closing being equal to $5.0 million. Under certain circumstances further described in the Merger Agreement, the ownership percentages may be adjusted up or down including, but not limited to, if ARCA's net cash less than $5.0 million. ARCA management currently anticipates ARCA's net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, and the currently estimated ownership percentages reflect this projection.

For a more complete description of the treatment of Oruka common stock, Oruka's 2024 Equity Incentive Plan, Oruka options and Oruka warrants in the Merger, please see the sections titled "*The Merger Agreement — Merger Consideration*" and "*The Merger Agreement — Exchange Ratio*" beginning on pages 135 and 136, respectively, of this proxy statement/prospectus. For a description of the effect of the Oruka pre-closing financing on ARCA's and Oruka's current securityholders, please see the section titled "*Agreements Related to the Merger — Subscription Agreement*" beginning on page 153 of this proxy statement/prospectus.

Q: Will the common stock of the combined company trade on an exchange?

A: Shares of ARCA common stock are currently listed on Nasdaq under the symbol "ABIO." ARCA intends to file an initial listing application for the common stock of the combined company with Nasdaq. After completion of the Merger, ARCA will be renamed "Oruka Therapeutics, Inc." and it is expected that the common stock of the combined company will trade on Nasdaq under the symbol "ORKA." It is a condition to the consummation of the Merger that ARCA will receive confirmation from Nasdaq that the combined company has been approved for listing on Nasdaq, but there can be no assurance such listing condition will be met or that ARCA will obtain such confirmation from Nasdaq. If such listing condition is not met or if such confirmation is not obtained, the Merger will not be consummated unless the condition is waived. The Nasdaq condition set forth in the Merger Agreement is not expected to be waived by the applicable parties.

On July 19, 2024, the last trading day before the date of this proxy statement/prospectus, the closing sale price of ARCA common stock was $3.29 per share.

Q: Who will be the directors of the combined company immediately following the Merger?

A: Immediately following the Merger, the combined company's board of directors will be composed of six members, all of whom will have been designated by Oruka.

Effective as of the First Effective Time, ARCA's board of directors will appoint the following Oruka designees: Lawrence Klein, Kristine Ball, Carl Dambkowski, Peter Harwin, Samarth Kulkarni and Cameron Turtle, to the board of directors of the combined company and concurrently therewith all of ARCA's current directors will resign from their positions as directors of ARCA's board of directors effective as of the First Effective Time. Dr. Kulkarni is expected to be appointed as Chair of the board of directors of the combined company.

The staggered structure of three classes of directors of ARCA's board of directors will remain in place for the combined company following the completion of the Merger. See the section titled "*Management Following the Merger*" for additional information.

Q: Who will be the executive officers of the combined company immediately following the Merger?

A: Immediately following the Merger, the executive management team of the combined company is expected to consist of the following members of the Oruka executive management team:

Name	Title
Lawrence Klein	President, Chief Executive Officer and Director
Arjun Agarwal	Senior Vice President, Finance and Treasurer
Joana Goncalves	Chief Medical Officer
Paul Quinlan	General Counsel and Secretary

Q: As an ARCA stockholder, how does ARCA's board of directors recommend that I vote?

A: ARCA's board of directors, in consultation with financial and legal advisors and management, evaluated the terms of the Merger Agreement and the related transactions contemplated thereby and: (i) determined that the Merger and the related transactions contemplated by the Merger Agreement are fair to, advisable and in the best interests of ARCA and its stockholders; (ii) approved and declared advisable the Merger Agreement and the related transactions contemplated by the Merger Agreement and the Subscription Agreement, including the issuance of shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, in connection with the Merger and the Oruka pre-closing financing, respectively; and (iii) recommends that ARCA's stockholders vote "**FOR**" each of the Proposals.

Q: What risks should I consider in deciding whether to vote in favor of the Merger?

A: You should carefully review the section titled "*Risk Factors*" beginning on page 15 of this proxy statement/prospectus and the documents incorporated by reference herein, which set forth certain risks and uncertainties related to the Merger, risks and uncertainties to which the combined company's business will be subject, and risks and uncertainties to which each of ARCA and Oruka, as independent companies, are subject.

Q: When do you expect the Merger to be consummated?

A: The Merger is anticipated to close in the third quarter of 2024, but the exact timing cannot be predicted. For more information, please see the section titled "*The Merger Agreement — Conditions to the Completion of the Merger*" beginning on page 148 of this proxy statement/prospectus.

Q: What do I need to do now?

A: ARCA urges you to read this proxy statement/prospectus carefully, including the annexes and the documents incorporated by reference, and to consider how the Merger affects you.

Stockholder of Record: Shares Registered in Your Name

If you are a stockholder of record, you may vote in person at the ARCA special meeting, vote by proxy over the telephone, vote by proxy through the Internet or vote by proxy using a proxy card that you may request or that we may elect to deliver at a later time, the form of which is attached as *Annex M*. Whether or not you plan to attend the meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the meeting and vote in person even if you have already voted by proxy.

- To vote in person, come to the special meeting and we will give you a ballot when you arrive.
- To vote using the proxy card, simply complete, sign and date the proxy card that you may request or that we may elect to deliver at a later time and return it promptly in the envelope provided. If you return your signed proxy card to us before the special meeting, we will vote your shares as you direct.
- To vote over the telephone, dial toll-free 1-800-652-VOTE (8683) using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number found on the Notice. Your vote must be received by 1:00 a.m. Mountain Time on August 22, 2024 to be counted.

- To vote through the Internet, go to *http://www.investorvote.com/ABIO* to complete an electronic proxy card. You will be asked to provide the company number and control number from the Notice. Your vote must be received by 1:00 a.m. Mountain Time on August 22, 2024 to be counted.

Beneficial Owner: Shares Registered in the Name of Broker or Bank

If you are a beneficial owner of shares registered in the name of your broker, bank, or other agent, you should have received a Notice containing voting instructions from that organization rather than from ARCA. Simply follow the voting instructions in the Notice to ensure that your vote is counted. You may vote by telephone or over the Internet as instructed by your broker or bank. To vote in person at the ARCA special meeting, you must obtain a valid proxy from your broker, bank, or other agent. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request a proxy form.

Q: What if I return a proxy card or otherwise vote but do not make specific choices?

A: If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, "For" the Nasdaq Stock Issuance Proposal, "For" the Authorized Share Proposal, "For" the Reverse Stock Split Proposal, "For" the Officer Exculpation Proposal, "For" the Director Election Proposal, "For" the Auditor Ratification Proposal, "For" the Stock Plan Proposal, "For" the ESPP Proposal, "For" the Merger Compensation Proposal, and "For" the Adjournment Proposal. If any other matter is properly presented at the meeting, your proxy holder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

Q: What happens if I do not return a proxy card or otherwise vote or provide proxy instructions, as applicable?

A: If you are an ARCA stockholder, the failure to return your proxy card or otherwise vote or provide proxy instructions will reduce the aggregate number of votes required to approve Proposal Nos. 1, 6, 7, 8, 9, and 10.

Q: If my ARCA shares are held in "street name" by my broker and I do not provide my broker or bank with voting instructions, what happens?

A: If you are a beneficial owner of shares held in street name and you do not instruct your broker, bank or other agent how to vote your shares, your broker, bank or other agent may still be able to vote your shares in its discretion or your shares may constitute "broker non-votes."

If an ARCA stockholder does not return voting instructions to their broker on how to vote their shares of ARCA common stock, such broker may be prevented from voting, or may otherwise choose not to vote, such shares held by such broker, resulting in broker non-votes with respect to such shares. To make sure that your vote is counted, you should instruct your broker to vote your shares of ARCA common stock, following the procedures provided by your broker.

Q: What are broker non-votes and do they count for determining a quorum?

A: Generally, a "broker non-vote" occurs when shares held by a broker are not voted with respect to a particular proposal because the broker has not received voting instructions from its client(s) with respect to such shares on how to vote and does not have or did not exercise discretionary authority to vote on the matter.

Broker non-votes, if any, will be treated as shares present for the purpose of determining the presence of a quorum for the transaction of business at the ARCA special meeting. Broker non-votes, if any, will not be counted as "votes properly cast" or "shares entitled to vote" and will therefore have no effect on Proposal Nos. 1, 2, 3, 5, 6, 7, 8, 9 and 10, but will have the same effect as votes "AGAINST" Proposal No. 4.

Q: May I revoke and/or change my vote after I have submitted a proxy or provided proxy instructions?

A: ARCA stockholders of record, unless such stockholder's vote is subject to a support agreement, may revoke and/or change their vote at any time before their proxy is voted at the ARCA special meeting in one of four ways:

- You may submit another properly completed proxy with a later date by mail or via the internet.
- You can provide your proxy instructions via telephone at a later date.

- You may send a notice that you are revoking your proxy over the internet, following the instructions provided on your proxy card.
- You may attend the ARCA special meeting in person and vote during the meeting. Simply attending the ARCA special meeting will not, by itself, revoke your proxy and/or change your vote.

Q: What are the material U.S. federal income tax consequences of the Merger to U.S. holders of Oruka common stock and Oruka preferred stock?

A: The Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended (the "Code") for U.S. federal income tax purposes. As a result, subject to the limitations and qualifications described in the section titled "*The Merger — Material U.S. Federal Income Tax Consequences of the Merger*" beginning on page 128, a U.S. holder of Oruka stock (as defined in therein) will generally not recognize any gain or loss for U.S. federal income tax purposes on the receipt of ARCA stock (as defined therein) in the Merger. For a more complete discussion of the material U.S. federal income tax consequences of the Merger, see the section titled "*The Merger — Material U.S. Federal Income Tax Consequences of the Merger*" beginning on page 128.

Q: What are the material U.S. federal income tax consequences of the reverse stock split to holders of ARCA common stock?

A: The reverse stock split is intended to be treated as a "recapitalization" within the meaning of Section 368(a)(1)(E) of the Code for U.S. federal income tax purposes. Assuming it so qualifies, a U.S. holder of ARCA common stock should not recognize gain or loss for U.S. federal income tax purposes upon the reverse stock split, except with respect to cash received in lieu of a fractional share of ARCA common stock.

Please review the information in the section titled "*Proposal No. 3 — The Reverse Stock Split Proposal — Material U.S. Federal Income Tax Consequences of the Reverse Stock Split*" beginning on page 184 of this proxy statement/prospectus for a more complete description of the material U.S. federal income tax consequences of the reverse stock split to a U.S. holder of ARCA common stock.

Q: What are the material U.S. federal income tax consequences of the special cash dividend that ARCA will declare and pay to holders of ARCA common stock?

A: The U.S. federal income tax consequences of a holder's receipt of the special cash dividend generally should be treated first as a dividend to the extent of ARCA's current and accumulated earnings and profits, then as a non-taxable return of capital to the extent of the holder's basis in ARCA common stock, and then as capital gain from the sale or exchange of ARCA common stock with respect to any remaining amount. ARCA currently has an accumulated deficit and expects additional losses in the current period. Thus, ARCA expects most or all of the distribution of the special cash dividend to be treated as other than a dividend for U.S. federal income tax purposes. However, there can be no assurance that it will be so treated. Please review the information in the section titled "*The Merger — Material U.S. Federal Income Tax Considerations — Material U.S. Federal Income Tax Consequences of the Special Cash Dividend to Holders of ARCA Common Stock*" beginning on page 130 of this proxy statement/prospectus for a discussion of the material U.S. federal income tax consequences of the special cash dividend to holders of ARCA common stock.

Q: Who can help answer my questions?

A: If you are an ARCA stockholder and would like additional copies of this proxy statement/prospectus without charge or if you have questions about the Merger or related matters, including the procedures for voting your shares, you should contact:

Innisfree M&A Incorporated
Banks and Brokers Call: (877) 750-8310
Stockholders Call Toll Free: (212) 750-5833

PROSPECTUS SUMMARY

This summary highlights selected information from this proxy statement/prospectus and may not contain all of the information that is important to you. To better understand the Merger and the proposals being considered at the ARCA special meeting, you should read this entire proxy statement/prospectus carefully, including the Merger Agreement and the other annexes to which you are referred in this proxy statement/prospectus, and the documents incorporated by reference therein. For more information, please see the section titled "*Where You Can Find More Information*" beginning on page 321 of this proxy statement/prospectus. Except where specifically noted, the following information and all other information contained in this proxy statement/prospectus does not give effect to the proposed reverse stock split described in Proposal No. 3 of this proxy statement/prospectus.

The Companies

ARCA

ARCA is a biotechnology company dedicated to applying a precision medicine approach to the development and commercialization of targeted therapies for cardiovascular diseases. Precision medicine refers to the tailoring of medical treatment to the individual characteristics of patients, using genomic, non-genomic biomarker and other information that extends beyond routine diagnostic categorization. ARCA believes that when implemented correctly precision medicine can enhance therapeutic response, improve patient outcomes, and reduce healthcare costs.

ARCA's lead product candidate is Gencaro™ (bucindolol hydrochloride) for the treatment of atrial fibrillation ("AF") in patients with chronic heart failure ("HF"). Gencaro is being developed for patients who have a genotype that identifies a drug target associated with heightened efficacy.

ARCA's principal executive offices are located at 10170 Church Ranch Way, Suite 100, Westminster, CO 80021, and its telephone number is (720) 940-2100.

Oruka

Oruka is a biotechnology company developing novel biologics designed to set a new standard for the treatment of chronic skin diseases. Oruka's mission is to offer patients suffering from chronic skin diseases like psoriasis ("PsO") the greatest possible freedom from their condition by achieving high rates of complete disease clearance with dosing as infrequently as one or twice a year. Oruka is advancing a proprietary portfolio of antibodies that were engineered by Paragon and target the core mechanisms underlying PsO and other dermatologic and inflammatory diseases.

Oruka's lead program, ORKA-001, is designed to target the p19 subunit of interleukin-23 (IL-23p19) for the treatment of PsO. Oruka's co-lead program, ORKA-002, is designed to target interleukin-17A and interleukin-17F for the treatment of PsO, psoriatic arthritis ("PsA"), and other conditions. These programs each bind their respective targets at high affinity and incorporate half-life extension technology with the aim to increase exposure and decrease dosing frequency. Oruka believes that its focused strategy, differentiated portfolio, and deep expertise position it to set a new treatment standard in large inflammatory and immunology ("I&I") markets with continued unmet need.

Oruka's principal executive offices are located at 855 Oak Grove Ave., Suite 100, Menlo Park, CA 94025, and its telephone number is (650) 606-7910.

First Merger Sub

First Merger Sub is a direct, wholly owned subsidiary of ARCA and was formed solely for the purpose of carrying out the Merger. First Merger Sub's principal executive offices are located at 10170 Church Ranch Way, Suite 100, Westminster, CO 80021, and its telephone number is (720) 940-2100.

Second Merger Sub

Second Merger Sub is a direct, wholly owned subsidiary of ARCA and was formed solely for the purpose of carrying out the Merger. Second Merger Sub's principal executive offices are located at 10170 Church Ranch Way, Suite 100, Westminster, CO 80021, and its telephone number is (720) 940-2100.

The Merger (see page 96)

Subject to the satisfaction or waiver of the conditions to closing set forth in the Merger Agreement, at the closing of the Merger, First Merger Sub will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the First Merger and as part of the same overall transaction, Oruka will merge with and into Second Merger Sub, with Second Merger Sub being the surviving entity of the Second Merger.

ARCA's Reasons for the Merger (see page 104)

In reaching its decision to approve the Merger Agreement and the transactions contemplated by the Merger Agreement, ARCA's board of directors considered a number of factors that it viewed as supporting its decision to approve the Merger Agreement, including:

- The financial condition and prospects of ARCA and the risks associated with continuing to operate ARCA on a stand-alone basis as well as the risks of accomplishing those objectives;
- ARCA's board of directors' belief that, after a thorough review of strategic alternatives, including further advancing the development of its internal programs, entering into a licensing, sale or other strategic agreement related to certain assets sufficient to fund operations, combining with other potential strategic transaction candidates, and discussions with ARCA's senior management, financial advisors and legal counsel, the Merger is more favorable to ARCA stockholders than the potential value that might have resulted from other strategic alternatives available to ARCA;
- ARCA's board of directors' view that the $6.0 million enterprise value ascribed to ARCA would provide the existing ARCA stockholders significant value for ARCA's public listing and afford the ARCA stockholders a significant opportunity to participate in the potential growth of the combined company following the Merger at the negotiated exchange ratio while also receiving a cash payment on account of the special cash dividend; and
- ARCA's board of directors' view, following a review with ARCA's management and advisors of Oruka's current development and clinical trial plans, of the likelihood that the combined company would possess sufficient cash resources at the closing of the Merger to fund development of Oruka's product candidates through upcoming value inflection points, including Oruka's ongoing IND-enabling preclinical development work and its anticipated initiation of its Phase 1 trials of ORKA-001 in the first half of 2025 and Phase 1 trials of ORKA-002 in the second half of 2025.

Oruka's Reasons for the Merger (see page 110)

In the course of reaching its decision to approve the Merger and the Oruka pre-closing financing, Oruka's board of directors held numerous meetings, consulted with Oruka's senior management, legal counsel and financial advisors, and considered a wide variety of factors. Ultimately, Oruka's board of directors concluded that a merger with ARCA, together with the additional financing committed from the Oruka pre-closing financing, was the best option to generate capital resources to support the advancement of Oruka's pipeline and fund the combined organization.

Additional factors Oruka's board of directors considered included the following:

- the Merger will potentially expand the access to capital and the range of investors available as a public company to support the clinical development of Oruka's pipeline, compared to the capital and investors Oruka could otherwise gain access to if it continued to operate as a privately-held company;
- the potential benefits from increased public market awareness of Oruka and its pipeline;
- the historical and current information concerning Oruka's business, including its financial performance and condition, operations, management and preclinical and clinical data;

- Oruka's board of directors' belief that no alternatives to the Merger, together with the additional financing committed from the Oruka pre-closing financing, were reasonably likely to create greater value for Oruka stockholders, after considering the various financing and other strategic options to enhance stockholder value that were considered by the Oruka board of directors;
- Oruka's board of directors' expectation that the Merger, together with the additional financing committed from the Oruka pre-closing financing, would be a higher probability and more cost-effective means to access capital than other options considered, including an initial public offering ("IPO");
- the expected financial position, operations, management structure and operating plans of the combined company (including the ability to support the combined company's current and planned preclinical and clinical trials);
- the business, history, operations, financial resources, assets, technology and credibility of ARCA; and
- the terms and conditions of the Merger Agreement.

Oruka's board of directors also considered a number of uncertainties and risks in its deliberations concerning the Merger, the Oruka pre-closing financing, and the other transactions contemplated by the Merger Agreement, including the following:

- the possibility that the Merger or Oruka pre-closing financing might not be completed;
- there is no adjustment to the exchange ratio if ARCA's net cash as of closing is above $5.0 million, and thus Oruka stockholders are expected to own at least approximately 97.61% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis) following the completion of the Merger;
- the potential effect of the $440,000 termination fee payable by Oruka;
- the potential reduction of ARCA's net cash to an amount below $5.0 million prior to the closing;
- the possibility that ARCA could consider certain unsolicited acquisition proposals;
- the costs, time and effort involved in connection with completing the Merger, related disruptions or potential disruptions to Oruka's business and related administrative challenges associated with combining the companies;
- the additional expenses and obligations to which Oruka's business will be subject following the Merger as a public company; and
- various other risks associated with the combined organization and the Merger, including the risks described in the section titled "*Risk Factors*" in this proxy statement/prospectus.

Recommendation of ARCA's Board of Directors (see page 92)

- ARCA's board of directors has determined and declared that the issuance of shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, pursuant to the Merger Agreement, and the change of control of ARCA resulting from the Merger, is fair to, in the best interests of, and advisable to, ARCA and its stockholders. ARCA's board of directors recommends that ARCA stockholder vote "**FOR**" the approval of Nasdaq Stock Issuance Proposal as described in this proxy statement/prospectus.
- ARCA's board of directors has determined and declared that it is advisable and in the best interests of ARCA and its stockholders to approve the amendment to the ARCA Charter to effect the increase in authorized shares. ARCA's board of directors recommends that ARCA stockholder vote "**FOR**" the Authorized Share Increase Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and declared that it is advisable and in the best interests of ARCA and its stockholders to approve the amendment to the ARCA Charter to effect the reverse stock split, if necessary. ARCA's board of directors recommends that ARCA stockholder vote "**FOR**" the Reverse Stock Split Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to approve the amendment to the ARCA Charter to provide for the exculpation of officers, as described in this proxy statement/prospectus. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Officer Exculpation Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to elect Jacob Ma-Weaver to serve on the ARCAs board of directors in the class of directors with terms expiring at ARCA's 2027 annual meeting of stockholders. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the director nominee named in the Director Election Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to ratify the selection of KPMG LLP as ARCA's independent registered public accounting firm for the fiscal year ending December 31, 2024, provided that PricewaterhouseCoopers LLP is expected to be appointed for that fiscal year if the Merger is completed. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Auditor Ratification Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes it that it is advisable to, and in the best interests of, ARCA and its stockholders to approve the 2024 Stock Incentive Plan, as described in this proxy statement/prospectus. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Stock Plan Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to approve the 2024 Employee Stock Purchase Plan, as described in this proxy statement/prospectus. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the ESPP Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to approve certain compensation arrangements for ARCA named executive officers that are based on or otherwise relate to the Merger. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Merger Compensation Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that adjourning the ARCA special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal is fair to, in the best interests of, and advisable to, ARCA and its stockholders and has approved and adopted the proposal. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Adjournment Proposal, if necessary, as described in this proxy statement/prospectus.

Interests of ARCA's Directors and Executive Officers in the Merger (see page 121)

In considering the recommendation of ARCA's board of directors with respect to issuing shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, in the Merger and the other matters to be acted upon by the ARCA stockholders at the ARCA special meeting, the ARCA stockholders should be aware that ARCA's directors and executive officers have interests in the Merger that are different from, or in addition to, the interests of ARCA stockholders generally. These interests may present ARCA's directors and executive officers with actual or potential conflicts of interest. These interests include the following:

- in connection with the Merger, each option to purchase shares of ARCA common stock held by ARCA's executive officers and directors will accelerate and fully vest, and (i) each such option with an exercise price less than or equal to the Parent Closing Price will be cancelled and converted into the right to

receive an amount in cash, without interest, equal to the Parent Closing Price less the exercise price of such option and (ii) each other option to acquire shares of ARCA's common stock will be cancelled for no consideration;

- certain of ARCA's executive officers will be eligible to receive retention bonuses and severance payments in connection with the Merger;
- certain of ARCA's directors will be eligible to receive special committee fees in connection with the Merger;
- prior to the closing of the First Merger, ARCA expects to declare a cash dividend to the pre-First Merger ARCA stockholders equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash will exceed $5.0 million, and any of ARCA's directors and executive officers that are also ARCA stockholders will share in any such cash dividend proportionally to their pre-First Merger ownership of ARCA common stock (see the section titled "*Principal Stockholders of ARCA*" beginning on page 312 of this proxy statement/prospectus for additional information regarding ARCA's directors' and officers' holdings of ARCA common stock; notably, Jacob Ma-Weaver and affiliated entities together hold 4,000,452 shares of ARCA common stock, representing over 27% of outstanding shares of ARCA common stock); and
- under the Merger Agreement, ARCA's directors and executive officers are entitled to continued indemnification, expense advancement and insurance coverage.

ARCA's board of directors was aware of these potential conflicts of interest and considered them, among other matters, in reaching its decision to approve the Merger Agreement and the Merger, and to recommend that the ARCA stockholders approve the proposals to be presented to the ARCA stockholders for consideration at the ARCA special meeting as contemplated by this proxy statement/prospectus. As of July 16, 2024, the directors and executive officers of ARCA owned or controlled 28.5% of the outstanding shares of ARCA common stock entitled to vote at the ARCA special meeting.

Interests of Oruka's Directors and Executive Officers in the Merger (see page 124)

In considering the recommendation of Oruka's board of directors with respect to approving the Merger, stockholders should be aware that Oruka's directors and executive officers have interests in the Merger that are different from, or in addition to, the interests of Oruka stockholders generally. These interests may present them with actual or potential conflicts of interest. These interests include the following:

- as of July 16, 2024, Oruka's current non-employee directors and executive officers beneficially owned, in the aggregate, approximately 73.5% of the shares of Oruka capital stock, which for purposes of this subsection excludes any Oruka shares issuable upon exercise or settlement of Oruka options held by such individual;
- Fairmount Healthcare Fund II L.P. ("Fairmount Fund II"), an affiliate of Peter Harwin, an Oruka director, currently holds shares of Oruka capital stock and an unsecured convertible promissory note with an initial principal amount of $25.0 million at an interest rate of 12% per annum (the "Convertible Note") of Oruka and has agreed to purchase shares and pre-funded warrants in the Oruka pre-closing financing;
- in connection with the Merger, each option to purchase shares of Oruka common stock held by Oruka's executive officers and directors, whether or not vested, will be converted into an option to purchase shares of the combined company's common stock, on the same terms and conditions (including any vesting and acceleration provisions);
- Oruka's directors and executive officers are expected to become directors and executive officers of the combined company upon completion of the Merger; and
- Oruka's directors and executive officers are entitled to certain indemnification and liability insurance coverage pursuant to the terms of the Merger Agreement.

Oruka's board of directors was aware of these potential conflicts of interest and considered them, among other matters, in reaching its decision to approve the Merger Agreement and the Merger, and to recommend that the Oruka stockholders approve the Merger as contemplated by this proxy statement/prospectus. As of July 16, 2024, the directors and executive officers of Oruka owned or controlled 73.5% of the outstanding shares of Oruka capital stock.

Opinion of Lucid Capital Markets to the ARCA Board (see page 112)

On April 2, 2024, Lucid Capital Markets, LLC ("Lucid") orally rendered its opinion to ARCA's board of directors (which was subsequently confirmed in writing by delivery of Lucid's written opinion addressed to ARCA's board of directors dated April 2, 2024), that, as of such date and based upon and subject to the various assumptions and limitations made, and such other factors Lucid deemed relevant upon the review undertaken by Lucid in preparing its opinion, the exchange ratio proposed to be paid by ARCA pursuant to the terms of the Merger Agreement was fair, from a financial point of view, to the holders of ARCA common stock.

The full text of the written opinion of Lucid, dated April 2, 2024, which describes the assumptions made and the qualifications and limitations upon the review undertaken by Lucid in preparing its opinion, is attached as *Annex B* to this proxy statement/prospectus and is incorporated herein by reference. **Lucid's financial advisory services and opinion were provided for the information and assistance of ARCA's board of directors (in their capacity as directors and not in any other capacity) in connection with and for purposes of ARCA's board of directors' consideration of the Merger and the opinion of Lucid addressed only the fairness, from a financial point of view, as of the date thereof, to the holders of ARCA common stock of the exchange ratio proposed to be paid by ARCA pursuant to the terms of the Merger Agreement. The opinion of Lucid did not address any other term or aspect of the Merger Agreement or the Merger and does not constitute a recommendation to any stockholder of ARCA or Oruka as to whether or how such holder should vote with respect to the Merger or otherwise act with respect to the Merger or any other matter.**

The full text of the written opinion of Lucid should be read carefully in its entirety for a description of the assumptions made and qualifications and limitations upon the review undertaken by Lucid in preparing its opinion.

The Merger Agreement (see page 135)

Merger Consideration (see page 135)

At the First Effective Time, upon the terms and subject to the conditions set forth in the Merger Agreement, (i) each then-outstanding share of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing) (excluding shares to be canceled pursuant to the Merger Agreement and excluding dissenting shares) will be automatically converted solely into the right to receive a number of shares of ARCA common stock equal to the exchange ratio (described in more detail in the section titled "*The Merger Agreement — Exchange Ratio*" beginning on page 136 of this proxy statement/prospectus), (ii) each then-outstanding share of Oruka preferred stock will be converted into the right to receive a number of shares of ARCA Series B Preferred Stock, which are each convertible into 1,000 shares of ARCA common stock, equal to the exchange ratio divided by 1,000, in accordance with the terms of the Merger Agreement, (iii) each then-outstanding option to purchase Oruka common stock will be assumed by ARCA, subject to adjustment as set forth in the Merger Agreement, and (iv) each then-outstanding warrant to purchase shares of Oruka common stock will be converted into a warrant to purchase shares of ARCA common stock, subject to adjustment as set forth in the Merger Agreement and the form of warrant.

Immediately after the Merger, ARCA securityholders as of immediately prior to the Merger are expected to own approximately 2.39% of the outstanding shares of capital stock of the combined company (on a fully diluted basis), and former holders of Oruka securities are expected to own approximately 97.61% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis). Under certain circumstances further described in the Merger Agreement, the ownership percentages may be adjusted up or down including, but not limited to, if ARCA's net cash as of closing is lower than $5.0 million. ARCA management currently anticipates ARCA's net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, and the currently estimated ownership percentages reflect this projection.

In addition, prior to the First Effective Time, ARCA expects to declare a cash dividend to the pre-First Merger ARCA stockholders equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash (as determined pursuant to the Merger Agreement) will exceed $5.0 million. ARCA management currently anticipates that ARCA's net cash as of closing to be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million.

Oruka Options and Oruka's 2024 Equity Incentive Plan (see page 174)

Under the terms of the Merger Agreement, ARCA will assume Oruka's 2024 Equity Incentive Plan and each option to purchase shares of Oruka common stock that is outstanding and unexercised immediately prior to the First Effective Time, whether or not vested, will be assumed and converted into an option to purchase shares of ARCA common stock.

Accordingly, from and after the First Effective Time: (i) each outstanding Oruka stock option assumed by ARCA may be exercised solely for shares of ARCA common stock; (ii) the number of shares of ARCA common stock subject to each outstanding Oruka stock option assumed by ARCA will be determined by multiplying (A) the number of shares of Oruka common stock that were subject to such Oruka stock option assumed by ARCA, as in effect immediately prior to the First Effective Time, by (B) the exchange ratio, and rounding the resulting number down to the nearest whole number of shares of ARCA common stock; and (iii) the per share exercise price of each Oruka stock option assumed by ARCA will be determined by dividing (A) the per share exercise price of such Oruka stock option, as in effect immediately prior to the First Effective Time, by (B) the exchange ratio and rounding the resulting exercise price up to the nearest whole cent. Each Oruka stock option assumed by ARCA will otherwise continue in full force and effect and the term, exercisability, vesting schedule, acceleration rights and other terms and conditions of such Oruka stock option will otherwise remain unchanged.

Each Oruka stock option shall, in accordance with its terms, continue to be subject to further adjustment as appropriate to reflect any stock split, division or subdivision of shares, stock dividend, reverse stock split, consolidation of shares, reclassification, recapitalization or other similar transaction with respect to shares of ARCA common stock subsequent to the First Effective Time. In addition, the combined company's compensation committee will succeed to the authority and responsibility of Oruka's board of directors as administrator of the Oruka 2024 Equity Incentive Plan.

Oruka Warrants (see page 139)

Under the terms of the Merger Agreement, each warrant to purchase shares of Oruka capital stock that is outstanding and unexercised immediately prior to the First Effective Time (including any pre-funded warrant issued pursuant to the Oruka pre-closing financing), whether or not vested, will be converted into a warrant to purchase shares of ARCA common stock.

Accordingly, from and after the First Effective Time: (i) each outstanding Oruka warrant assumed by ARCA may be exercised solely for shares of ARCA common stock; (ii) the number of shares of ARCA common stock subject to each outstanding Oruka warrant assumed by ARCA will be determined by multiplying (A) the number of shares of Oruka common stock that were subject to such Oruka warrant, as in effect immediately prior to the First Effective Time, by (B) the exchange ratio, and rounding the resulting number down to the nearest whole number of shares of ARCA common stock; and (iii) the per share exercise price of each Oruka warrant assumed by ARCA will be determined by dividing (A) the per share exercise price of such Oruka warrant, as in effect immediately prior to the First Effective Time, by (B) the exchange ratio and rounding the resulting exercise price up to the nearest whole cent. Each Oruka warrant assumed by ARCA will otherwise continue in full force and effect and the term, exercisability, vesting schedule, acceleration rights and other terms and conditions of such Oruka warrant will otherwise remain unchanged.

Each Oruka warrant shall, in accordance with its terms, continue to be subject to further adjustment as appropriate to reflect any stock split, division or subdivision of shares, stock dividend, reverse stock split, consolidation of shares, reclassification, recapitalization or other similar transaction with respect to shares of ARCA common stock subsequent to the First Effective Time.

ARCA Common Stock and ARCA Options (see page 140)

Except as contemplated by the proposed increase in the number of authorized shares of ARCA common stock described in Proposal No. 2 of this proxy statement/prospectus and the proposed reverse stock split of issued and outstanding ARCA common stock described in Proposal No. 3 of this proxy statement/prospectus, ARCA common stock will remain unaffected by the Merger.

Under the terms of the Merger Agreement, prior to the closing of the Merger, ARCA's board of directors will accelerate the vesting of all equity awards of ARCA then outstanding but not then vested or exercisable, and cancel each option to acquire shares of ARCA's common stock with an exercise price per share greater than the Parent Closing Price, in each case, in accordance with the terms of the Merger Agreement. At the closing of the First Merger, (i) each option to acquire shares of ARCA's common stock with an exercise price less than or equal to the Parent Closing Price will be cancelled and converted into the right to receive an amount in cash, without interest, equal to the Parent Closing Price less the exercise price of such option and (ii) each other option to acquire shares of ARCA common stock will be cancelled for no consideration.

Conditions to the Completion of the Merger (see page 148)

To complete the Merger, ARCA stockholders must approve Proposal No. 1 and Proposal No. 2 and Oruka stockholders must adopt the Merger Agreement and approve the Merger and the related transactions contemplated by the Merger Agreement. Additionally, each of the other closing conditions set forth in the Merger Agreement must be satisfied or waived.

Non-Solicitation (see page 145)

The Merger Agreement contains non-solicitation provisions prohibiting ARCA and Oruka from soliciting a competing transaction. Each of ARCA and Oruka have agreed that, subject to certain exceptions, ARCA and Oruka and any of their respective subsidiaries will not, nor will either party or any of its subsidiaries authorize or permit any of the directors, officers, employees, agents, attorneys, accountants, investment bankers, advisors or representatives retained by it or any of its subsidiaries to, directly or indirectly:

- solicit, initiate or knowingly encourage, induce or facilitate the communication, making, submission or announcement of, any acquisition proposal or acquisition inquiry;
- furnish any non-public information with respect to it to any person in connection with or in response to an acquisition proposal or acquisition inquiry;
- engage in discussions or negotiations with any person with respect to any acquisition proposal or acquisition inquiry;
- execute or enter into any letter of intent or any contract contemplating or otherwise relating to any acquisition transaction; or
- publicly propose to do any of the foregoing.

Board Recommendation Change (see page 146)

Neither Oruka's board of directors nor ARCA's board of directors may change its recommendation in favor of the Merger, except that prior to receipt by such party of its stockholder approval, such party's board of directors may effect a change in recommendation as a result of a material development or change in circumstances ("Intervening Event") or with respect to a superior offer that did not result from a material breach of the Merger Agreement if:

- such party's board of directors shall have determined in good faith, based on the advice of its outside legal counsel, that the failure to effect such change in recommendation would reasonably be expected to be inconsistent with its fiduciary duties under applicable law;

- such party has provided at least four business days' prior written notice to the other party that it intends to effect a change in recommendation, and during such period has, and has caused its lead financial advisor and outside legal counsel to, negotiate with the other party in good faith to make such adjustments to the terms and conditions so that the acquisition proposal ceases to constitute a superior offer; and
- if after the other party shall have delivered to such party a written offer to alter the terms or conditions of the Merger Agreement during the four-business day period referred to above, such party's board of directors shall have determined in good faith (based on the advice of its outside legal counsel), that the failure to effect a change in recommendation would reasonably be expected to be inconsistent with its fiduciary duties under applicable law.

In the event of any material amendment to any superior offer, the party considering the superior offer would be required to provide the other party with notice of such material amendment and there would be a new three-business day period following such notification during which the parties would be obligated to comply again with the requirements described above.

In the case of an Intervening Event, the party suffering such event shall promptly notify the other party before effecting a change in recommendation. The written notice is required to state the material facts and circumstances related to the applicable Intervening Event and that such party's board of directors intends to make a change in recommendation.

Termination of the Merger Agreement (see page 150)

Either ARCA or Oruka may terminate the Merger Agreement under certain circumstances, which would prevent the Merger from being consummated.

Termination Fee (see page 151)

If the Merger Agreement is terminated under certain circumstances, ARCA could be required to pay Oruka a termination fee of $440,000 or Oruka could be required to pay ARCA a termination fee of $440,000.

Support Agreements (see page 153)

Certain Oruka stockholders holding approximately 90% of the outstanding shares of Oruka capital stock have entered into support agreements with ARCA and Oruka to vote all of their shares of Oruka capital stock in favor of the adoption and approval of the Merger Agreement and the transactions contemplated thereby and against any alternative acquisition proposals (the "Oruka Support Agreements"). Certain ARCA stockholders holding approximately 28.5% of the outstanding shares of ARCA common stock have entered into support agreements with ARCA and Oruka to vote all of their shares of ARCA common stock in favor of the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and the Reverse Stock Split Proposal and against any alternative acquisition proposals (the "ARCA Support Agreements," and, together with the Oruka Support Agreements, the "Support Agreements").

Lock-Up Agreements (see page 153)

Certain of Oruka's executive officers, directors and stockholders have entered into lock-up agreements, pursuant to which such parties have agreed not to, except in limited circumstances, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of ARCA's common stock or any securities convertible into or exercisable or exchangeable for ARCA common stock, currently or thereafter owned, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock issued in exchange for shares of Oruka preferred stock in the Merger, but excluding, as applicable, shares purchased in the Oruka pre-closing financing (including any shares of ARCA common stock issuable upon exercise of pre-funded warrants issued in exchange for pre-funded warrants to purchase shares of Oruka common stock sold in the Oruka pre-closing financing), until 180 days following the closing of the Merger.

Subscription Agreement and Registration Rights Agreement (see pages 153 and 155)

Immediately prior to the execution and delivery of the Merger Agreement, certain new and existing investors of Oruka entered into the Subscription Agreement with Oruka, pursuant to which such investors have agreed to purchase Oruka common stock or, in lieu thereof, Oruka pre-funded warrants, representing an aggregate commitment of $275.0 million (which includes $25.0 million of proceeds previously received from the issuance of the Convertible Note and accrued interest on such note), in the Oruka pre-closing financing.

The shares of Oruka common stock and Oruka pre-funded warrants that are issued in the Oruka pre-closing financing will be or will have the right to be, respectively, converted into shares of ARCA common stock in the Merger.

The Subscription Agreement contains customary representations and warranties of Oruka and also contains customary representations and warranties of the purchaser parties thereto.

The Subscription Agreement also contemplates ARCA, Oruka and the investors participating in the Oruka pre-closing financing entering into a registration rights agreement at the closing of the Oruka pre-closing financing, pursuant to which, among other things, the combined company will agree to provide for the registration and resale of certain shares of ARCA common stock that are held by the investors participating in the Oruka pre-closing financing from time to time pursuant to Rule 415.

Management Following the Merger (see page 273)

The following table sets forth the name, age as of July 22, 2024 and position of each of the individuals who are expected to serve as executives and directors of the combined company following completion of the Merger:

Name	Age	Position
Executive Officers		
Lawrence Klein	42	President, Chief Executive Officer and Director
Arjun Agarwal	48	Senior Vice President, Finance and Treasurer
Joana Goncalves	51	Chief Medical Officer
Paul Quinlan	61	General Counsel and Secretary
Non-Employee Directors:		
Samarth Kulkarni	45	Chair and Director
Kristine Ball	52	Director
Carl Dambkowski	39	Director
Peter Harwin	38	Director
Cameron Turtle	34	Director

Material U.S. Federal Income Tax Consequences of the Merger (see page 128)

The Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code for U.S. federal income tax purposes. As a result, subject to the limitations and qualifications described in the section titled "The Merger — Material U.S. Federal Income Tax Consequences of the Merger" beginning on page 128, a U.S. holder of Oruka stock (as defined therein) will generally not recognize any gain or loss for U.S. federal income tax purposes on the receipt of ARCA stock in the Merger.

Risk Factors (see page 15)

Both ARCA and Oruka are subject to various risks associated with their businesses and their industries. In addition, the Merger, including the possibility that the Merger may not be completed, poses a number of risks to each company and its respective securityholders, including the following risks:

Risks Related to the Merger

- Failure to complete, or delays in completing, the potential merger with Oruka could materially and adversely affect ARCA's results of operations, business, financial results and/or common stock price.

- The exchange ratio will not change or otherwise be adjusted based on the market price of ARCA common stock.
- The issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, to Oruka stockholders pursuant to the Merger Agreement and the resulting change in control from the First Merger must be approved by ARCA stockholders, and the Merger Agreement and transactions contemplated thereby must be approved by the Oruka stockholders. Failure to obtain these approvals would prevent the closing of the Merger.
- If ARCA completes the Merger, the combined company will need to raise additional capital and satisfy certain contractual obligations by issuing equity securities or additional debt or through licensing arrangements, which may cause significant dilution to the combined company's stockholders or restrict the combined company's operations.
- ARCA's expected disposal of its historical assets and operations in connection with its proposed Merger with Oruka will make it a shell company. As a result, ARCA will be subject to more stringent reporting requirements, offering limitations and resale restrictions.
- Some of ARCA and Oruka directors and executive officers have interests in the Merger that are different from yours and that may influence them to support or approve the Merger without regard to your interests.
- ARCA stockholders and Oruka stockholders may not realize a benefit from the Merger commensurate with the ownership dilution they will experience in connection with the Merger, including the conversion of Oruka common stock issued in the Oruka pre-closing financing.

Risks Related to ARCA

- Failure to complete, or delays in completing, the proposed merger with Oruka could expose ARCA to other operational and financial risks;
- ARCA has a limited operating history, no history of commercializing products, has not generated any product revenue, has incurred significant operating losses since inception and anticipates continuing to incur net losses for the foreseeable future;
- If ARCA does not successfully consummate the Merger or another strategic transaction, ARCA's board of directors may explore strategic alternatives, including, without limitation, another strategic transaction and/or pursue a dissolution and liquidation of ARCA;
- If the Merger is not consummated and should ARCA pursue additional clinical trials for its product candidates, it may not be able to raise sufficient capital on acceptable terms, or at all, to continue development of Gencaro or rNAPc2 or to otherwise continue operations and may not be able to execute any strategic transaction; and
- ARCA's failure to meet Nasdaq's continued listing requirements could result in a delisting of its common stock, which could have a material adverse effect on its ability to consummate the Merger.

Risks Related to Oruka

- Even if the Merger and Oruka pre-closing financing are successful, Oruka will need to raise additional capital, and if it is unable to do so when needed, that will raise substantial doubt about Oruka's ability to continue as a going concern. If Oruka is unable to raise such capital when needed, or on acceptable terms, Oruka may be forced to delay, reduce or eliminate clinical trials, product development programs or future commercialization efforts and/or file for bankruptcy or cease operations altogether;
- Oruka has never generated any revenue from product sales and may never be profitable;

- Oruka is a preclinical stage biopharmaceutical company with a limited operating history on which to assess its business; it has not initiated, conducted or completed any clinical trials, has no products approved for commercial sale, has historically incurred losses, and anticipates that it will continue to incur significant losses for the foreseeable future;
- Oruka's programs are in preclinical stages of development and may fail in development or suffer delays that materially and adversely affect their commercial viability. If Oruka or its current or future collaborators are unable to complete development of or commercialize Oruka's product candidates, or experience significant delays in doing so, Oruka's business will be materially harmed;
- Oruka is substantially dependent on the success of its two most advanced programs, ORKA-001 and ORKA-002, and its anticipated clinical trials of such programs may not be successful;
- Oruka currently relies on licensing arrangements with Paragon through the Paragon Option Agreements. If Oruka is unable to maintain collaborations or licensing arrangements, or if its collaborations or licensing arrangements are not successful, Oruka's business could be negatively impacted;
- In order to successfully implement Oruka's plans and strategies, Oruka will need to grow the size of its organization and it may experience difficulties in managing this growth;
- Oruka's ability to obtain and protect its patents and other proprietary rights is uncertain, exposing Oruka to the possible loss of competitive advantage; and
- The regulatory approval processes of the U.S. Food and Drug Administration ("FDA") and other comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable. If Oruka is not able to obtain, or if there are delays in obtaining, required regulatory approvals for its product candidates, Oruka will not be able to commercialize, or will be delayed in commercializing, its product candidates, and its ability to generate revenue will be materially impaired.

Risks Related to the Combined Company

- The market price of the combined company's common stock is expected to be volatile, and the market price of the common stock may drop following the Merger;
- The combined company may incur losses for the foreseeable future and might never achieve profitability;
- The combined company will need to raise additional financing in the future to fund its operations, which may not be available to it on favorable terms or at all;
- Provisions that will be in the combined company's certificate of incorporation and bylaws and provisions under Delaware law could make an acquisition of the combined company more difficult and may prevent attempts by its stockholders to replace or remove its management;
- After completion of the Merger, the combined company's executive officers, directors and principal stockholders will have the ability to control or significantly influence all matters submitted to the combined company's stockholders for approval; and
- The combined company will have broad discretion in the use of the cash and cash equivalents of the combined company and the proceeds from the Oruka pre-closing financing and may invest or spend the proceeds in ways with which you do not agree and in ways that may not increase the value of your investment.

These risks and other risks are discussed in greater detail under the section titled "*Risk Factors*" beginning on page 15 of this proxy statement/prospectus. ARCA and Oruka both encourage you to read and consider all of these risks carefully.

Regulatory Approvals (see page 128)

ARCA and Oruka do not intend to seek any regulatory approval from antitrust authorities to consummate the transactions.

Nasdaq Stock Market Listing (see page 131)

Oruka intends to file an initial listing application for the combined company common stock with Nasdaq. If such application is accepted, it is anticipated that the common stock of the combined company will be listed on Nasdaq following the closing of the Merger under the trading symbol "ORKA." It is a condition to the consummation of the Merger that ARCA will receive confirmation from Nasdaq that the combined company has been approved for listing on Nasdaq, but there can be no assurance such listing condition will be met or that ARCA will obtain such confirmation from Nasdaq. If such listing condition is not met or if such confirmation is not obtained, the Merger will not be consummated unless the condition is waived. The Nasdaq condition set forth in the Merger Agreement is not expected to be waived by the applicable parties.

Anticipated Accounting Treatment (see page 132)

The Merger is expected to be treated by ARCA as a reverse merger and will be accounted for as an in-substance reverse recapitalization of ARCA by Oruka in accordance with U.S. generally accepted accounting principles ("U.S. GAAP") as, at close, the transaction is, in essence, the issuance of equity for ARCA's net asset, which primarily consist of cash and other nominal non-operating assets and liabilities. For accounting purposes, Oruka is considered to be acquiring the assets and liabilities of ARCA in this transaction based on the terms of the Merger Agreement and other factors, including: (i) Oruka's equity holders will own a substantial majority of the voting rights in the combined company; (ii) Oruka's largest stockholder will retain the largest interest in the combined company; (iii) Oruka will designate all of the initial members of the board of directors of the combined company; and (iv) Oruka's executive management team will become the management of the combined company. The combined company will be named Oruka Therapeutics, Inc. and be headquartered in Menlo Park, California. Accordingly, the Merger is expected to be treated as the equivalent of Oruka issuing stock to acquire the net assets of ARCA. As a result of the Merger, the net assets of ARCA will be stated at fair value, which approximates carrying value, with no goodwill or other intangible assets recorded, and the historical results of operations prior to the Merger will be those of Oruka. The direct and incremental costs related to the transaction will be treated as a reduction of the net proceeds received within additional paid-in-capital. See the "*Unaudited Pro Forma Condensed Combined Financial Information*" elsewhere in this proxy statement/prospectus for additional information.

Appraisal Rights and Dissenters' Rights (see page 132)

Holders of ARCA common stock are not entitled to appraisal rights in connection with the Merger under Delaware law. Holders of Oruka capital stock are entitled to appraisal rights in connection with the Merger under Delaware law.

Comparison of Stockholder Rights (see page 301)

Both ARCA and Oruka are incorporated under the laws of the State of Delaware and, accordingly, the rights of the stockholders of each are currently, and will continue to be, governed by the Delaware General Corporation Law ("DGCL"). If the Merger is completed, Oruka stockholders will become ARCA stockholders, and their rights will be governed by the DGCL, the amended and restated bylaws of ARCA (the "ARCA Bylaws") and the ARCA Charter, as may be further amended by Proposal Nos. 2, 3 and 4 if approved by the ARCA stockholders at the ARCA special meeting. The rights of ARCA stockholders contained in the ARCA Charter and ARCA Bylaws differ from the rights of Oruka stockholders under the amended and restated certificate of incorporation of Oruka (the "Oruka Charter") and bylaws of Oruka (the "Oruka Bylaws"), as more fully described under the section titled "*Comparison of Rights of Holders of ARCA Capital Stock and Oruka Capital Stock*" beginning on page 301 of this proxy statement/prospectus.

MARKET PRICE AND DIVIDEND INFORMATION

The ARCA common stock is currently listed on The Nasdaq Capital Market under the symbol "ABIO."

The closing price of the ARCA common stock on April 2, 2024, the last day of trading prior to the announcement of the Merger, as reported on The Nasdaq Capital Market, was $1.71 per share. The closing price of the ARCA common stock on July 19, 2024, as reported on The Nasdaq Capital Market, was $3.29 per share.

Because the market price of the ARCA common stock is subject to fluctuation, the market value of the shares of the ARCA common stock that the Oruka stockholders will be entitled to receive in the Merger may increase or decrease.

Oruka is a private company, and its shares of common stock and preferred stock are not publicly traded.

Assuming approval of Proposal Nos. 1 and 2 and successful application for initial listing with Nasdaq, following the consummation of the Merger, shares of ARCA common stock will trade on Nasdaq under ARCA's new name, "Oruka Therapeutics, Inc.," and new trading symbol "ORKA."

As of July 22, 2024, the Record Date for the ARCA special meeting, there were approximately 14 registered holders of record of the ARCA common stock. As of July 22, 2024, Oruka had nine holders of record of Oruka common stock and one holder of record of Oruka preferred stock. For detailed information regarding the beneficial ownership of certain ARCA and Oruka stockholders, see the sections of this proxy statement/prospectus titled "*Principal Stockholders of ARCA*," "*Principal Stockholders of Oruka*" and "*Principal Stockholders of the Combined Company*."

Dividends

ARCA has never declared or paid any cash dividends on the ARCA common stock and does not anticipate paying cash dividends on the ARCA common stock for the foreseeable future, except the special cash dividend that ARCA will declare and pay to the holders of record of outstanding shares of ARCA common stock as of a record date prior to the First Effective Time, to be set by ARCA's board of directors as close as reasonably practicable to (but not later than) the anticipated closing date of the First Merger. The aggregate amount of the special cash dividend shall be up to an amount equal to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash (as calculated pursuant to the terms and conditions of the Merger Agreement) will exceed $5,000,000. Notwithstanding the foregoing, any determination to pay cash dividends subsequent to the Merger will be at the discretion of the combined organization's then-current board of directors and will depend upon a number of factors, including the combined organization's results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors the then-current board of directors deems relevant.

Oruka has never paid or declared any cash dividends on Oruka capital stock. If the Merger does not occur, Oruka does not anticipate paying any cash dividends on the Oruka capital stock in the foreseeable future, and Oruka intends to retain all available funds and any future earnings to fund the development and expansion of its business. Any future determination to pay dividends will be at the discretion of the Oruka board of directors and will depend upon a number of factors, including its results of operations, financial condition, future prospects, contractual restrictions, and restrictions imposed by applicable laws and other factors the Oruka board of directors deems relevant.

RISK FACTORS

The combined company will be faced with a market environment that cannot be predicted and that involves significant risks, many of which will be beyond its control. In addition to the other information contained or incorporated by reference in this proxy statement/prospectus, you should carefully consider the material risks described below before deciding how to vote your shares of ARCA common stock. You should also read and consider the other information in this proxy statement/prospectus. Please see the section titled "Where You Can Find More Information" beginning on page 321 of this proxy statement/prospectus for further information.

Risks Related to the Merger

Failure to complete, or delays in completing, the potential merger with Oruka, announced on April 3, 2024, could materially and adversely affect ARCA's results of operations, business, financial results and/or common stock price.

On April 3, 2024, ARCA entered into the Merger Agreement with Oruka, pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, First Merger Sub will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the First Merger and as part of the same overall transaction, the surviving corporation in the First Merger will merge with and into Second Merger Sub, with Second Merger Sub continuing as a wholly owned subsidiary of ARCA and the surviving entity of the merger. Consummation of the Merger is subject to certain closing conditions, a number of which are not within ARCA's control. Any failure to satisfy these required conditions to closing may prevent, delay or otherwise materially adversely affect the completion of the transaction. ARCA cannot predict with certainty whether or when any of the required closing conditions will be satisfied or if another uncertainty may arise and cannot assure you that it will be able to successfully consummate the Merger as currently contemplated under the Merger Agreement or at all.

ARCA's efforts to complete the Merger could cause substantial disruptions in, and create uncertainty surrounding, its business, which may materially adversely affect its results of operation and its business. Uncertainty as to whether the Merger will be completed in a timely manner or at all may affect ARCA's ability to retain and motivate existing employees. Uncertainty as to whether the Merger will be completed in a timely manner or at all could adversely affect ARCA's business and its relationship with collaborators, suppliers, vendors, regulators and other business partners. For example, vendors, collaborators and other counterparties may defer their decisions to work with ARCA or seek to change their existing business relationships with ARCA. Changes to, or termination of, existing business relationships could adversely affect ARCA's results of operations and financial condition, as well as the market price of ARCA common stock. The adverse effects of the pendency of the transaction could be exacerbated by any delays in completion of the transaction or termination of the Merger Agreement.

If the conditions to the Merger are not satisfied or waived, the Merger may not occur.

Even if the Merger is approved by the stockholders of Oruka and ARCA, specified conditions must be satisfied or, to the extent permitted by applicable law, waived to complete the Merger. These conditions are set forth in the Merger Agreement and described further in the section titled "*The Merger Agreement*" of this proxy statement/prospectus. ARCA cannot assure you that all of the conditions to the consummation of the Merger will be satisfied or waived. If the conditions are not satisfied or waived, the Merger may not occur or the closing may be delayed.

The exchange ratio will not change or otherwise be adjusted based on the market price of ARCA common stock.

Applying the exchange ratio, the former Oruka securityholders immediately before the Merger are expected to own approximately 97.61% of the aggregate number of shares of the combined company's capital stock following the Merger (on a fully-diluted basis), and ARCA securityholders immediately before the Merger are expected to own approximately 2.39% of the aggregate number of shares of the combined company capital stock following the Merger (on a fully-diluted basis), subject to certain assumptions, including, but not limited to, ARCA's net cash as of

closing being equal to $5.0 million. In the event ARCA's net cash is below $5.0 million, the exchange ratio will be adjusted such that the number of shares issued to Oruka's pre-closing securityholders will be increased, and ARCA stockholders will own a smaller percentage of the combined company following the consummation of the Merger.

Any changes in the market price of ARCA's stock before the completion of the First Merger will not affect the number of shares Oruka stockholders will be entitled to receive pursuant to the Merger Agreement. Therefore, if before the completion of the First Merger, the market price of ARCA common stock increases from the market price on the date of the Merger Agreement, then Oruka stockholders could receive merger consideration with substantially more value for their shares of Oruka capital stock than the parties had negotiated when they established the exchange ratio. Similarly, if before the completion of the First Merger, the market price of ARCA common stock declines from the market price on the date of the Merger Agreement, then Oruka stockholders could receive merger consideration with substantially lower value. The Merger Agreement does not include a price-based termination right.

The issuance of ARCA common stock, including the shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, to Oruka stockholders pursuant to the Merger Agreement and the resulting change in control from the First Merger must be approved by ARCA stockholders, and the Merger Agreement and transactions contemplated thereby must be approved by the Oruka stockholders. Failure to obtain these approvals would prevent the closing of the Merger.

Before the Merger can be completed, ARCA stockholders must approve, among other things, the issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, to Oruka stockholders pursuant to the Merger Agreement and the resulting change in control from the First Merger, and Oruka stockholders must adopt the Merger Agreement and approve the Merger and the related transactions. Failure to obtain the required stockholder approvals may result in a material delay in, or the abandonment of, the Merger. Any delay in completing the Merger may materially adversely affect the timing and benefits that are expected to be achieved from the Merger.

The Merger may be completed even though a material adverse effect may result from the announcement of the Merger, industry-wide changes or other causes.

In general, neither ARCA nor Oruka is obligated to complete the Merger if there is a material adverse effect affecting the other party between April 3, 2024, the date of the Merger Agreement, and the closing of the Merger. However, certain types of causes are excluded from the concept of a "material adverse effect." Such exclusions include, but are not limited to, changes in general economic or political conditions, industry-wide changes, changes resulting from the announcement of the Merger, natural disasters, pandemics, other public health events or force majeure events and changes in U.S. generally accepted accounting principles. Therefore, if any of these events were to occur and adversely affect ARCA or Oruka, the other party would still be obliged to consummate the closing of the Merger notwithstanding such material adverse effect. If any such adverse effects occur and ARCA consummates the closing of the Merger, the stock price of the combined company may suffer. This in turn may reduce the value of the Merger to the stockholders of ARCA, Oruka or both.

If the Merger is not completed, ARCA's stock price may decline significantly.

The market price of ARCA common stock is subject to significant fluctuations. Market prices for securities of pharmaceutical, biotechnology and other life science companies have historically been particularly volatile. In addition, the market price of ARCA common stock will likely be volatile based on whether stockholders and other investors believe that ARCA can complete the Merger or otherwise raise additional capital to support ARCA's operations if the Merger is not consummated and another strategic transaction cannot be identified, negotiated and consummated in a timely manner, if at all. The volatility of the market price of ARCA common stock has been and may be exacerbated by low trading volume. Additional factors that may cause the market price of ARCA common stock to fluctuate include:

- the entry into, or termination of, key agreements, including commercial partner agreements;
- announcements by commercial partners or competitors of new commercial products, clinical progress or lack thereof, significant contracts, commercial relationships or capital commitments;
- the loss of key employees;

- future sales of ARCA common stock;
- general and industry-specific economic conditions that may affect ARCA's research and development expenditures; and
- period-to-period fluctuations in financial results.

Moreover, the stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies. These broad market fluctuations may also adversely affect the trading price of ARCA common stock. In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted class action securities litigation against such companies.

If ARCA completes the Merger, the combined company will need to raise additional capital and satisfy certain contractual obligations by issuing equity securities or additional debt or through licensing arrangements, which may cause significant dilution to the combined company's stockholders or restrict the combined company's operations.

On April 3, 2024, Oruka entered into the Subscription Agreement with certain investors, including existing investors of Oruka, pursuant to which the investors agreed to purchase, in the aggregate, $275.0 million (which includes $25.0 million of proceeds previously received from the issuance of the Convertible Note and accrued interest on such note) in shares of common stock and pre-funded warrants of Oruka immediately prior to the closing of the Merger, referred to as the Oruka pre-closing financing. The closing of the Oruka pre-closing financing is conditioned upon the satisfaction or waiver of the conditions to the closing of the Merger as well as certain other conditions. The shares of Oruka common stock and pre-funded warrants issued in the Oruka pre-closing financing will result in dilution to all securityholders of the combined company (i.e., both ARCA's pre-Merger securityholders and former Oruka securityholders). Furthermore, pursuant to the amended and restated offer letter agreement between Oruka and Lawrence Klein, Oruka is obligated to issue additional options to purchase shares of Oruka common stock in order to maintain Dr. Klein's ownership in Oruka at approximately 5.0% on a fully-diluted basis (the "Target Ownership Percentage") until Oruka has raised an aggregate of $200.0 million (the "Covered Limit"). As a result, Oruka expects to issue Dr. Klein warrants of Oruka in full satisfaction of such obligation to maintain his ownership in Oruka at the Target Ownership Percentage concurrently with the closing of the Oruka pre-closing financing up to the Covered Limit. Such warrants will result in further dilution to all securityholders of the combined company.

Additional financing may not be available to the combined company when it is needed or may not be available on favorable terms. To the extent that the combined company raises additional capital by issuing equity securities, such financing will cause additional dilution to all securityholders of the combined company, including ARCA's pre-Merger securityholders and Oruka's former securityholders. It is also possible that the terms of any new equity securities may have preferences over the combined company's common stock. Any debt financing the combined company enters into may involve covenants that restrict its operations. These restrictive covenants may include limitations on additional borrowing and specific restrictions on the use of the combined company's assets, as well as prohibitions on its ability to create liens, pay dividends, redeem its stock or make investments. In addition, if the combined company raises additional funds through licensing arrangements, it may be necessary to grant licenses on terms that are not favorable to the combined company.

In addition, as a result of ARCA's assumption of the Paragon Option Agreements in connection with the Merger, the combined company will be subject to the obligation to grant to Paruka, on each of December 31, 2024 and December 31, 2025, warrants to purchase a number of shares equal to 1.00% of the outstanding shares of ARCA common stock as of the date of the grant on a fully-diluted basis, with an exercise price equal to the fair market value of the underlying shares on the grant date. Such warrants granted will result in further dilution to all securityholders of the combined company.

Transfers of the combined company's securities utilizing Rule 144 of the Securities Act may be limited.

A significant portion of the combined company's securities will be restricted from immediate resale. Holders should be aware that transfers of the combined company's securities pursuant to Rule 144 may be limited as Rule 144 is not available, subject to certain exceptions, for the resale of securities initially issued by shell companies (other than business combination related shell companies) or issuers that have been at any time previously a shell company. ARCA's expected disposal of its historical assets and operations in connection with the Merger with Oruka will make it a shell company. ARCA anticipates that following the consummation of the Merger, the combined

company will no longer be a shell company. As a result, ARCA anticipates that holders will not be able to sell their restricted combined company securities pursuant to Rule 144 without registration until one year after ARCA files the Current Report on Form 8-K following the closing that includes the required Form 10 information that reflects that the combined company is no longer a shell company.

ARCA's expected disposal of its historical assets and operations in connection with its proposed Merger with Oruka will make it a shell company. As a result, ARCA will be subject to more stringent reporting requirements, offering limitations and resale restrictions.

ARCA has two remaining ongoing development programs, Gencaro and rNAPc2, and it will dispose of (or is in the process of disposing of) its legacy technology and intellectual property, including those related to Gencaro and rNAPc2. Any such disposal of legacy technology and intellectual property will be contingent upon obtaining stockholder approval for the Merger. As such, ARCA expects to become a shell company upon consummation of the Merger, and its Merger with Oruka would be subject to the requirements applicable to shell company business combinations; provided, however, that if the Merger is not consummated, the disposal of ARCA's legacy technology and intellectual property is not expected to occur and ARCA would therefore not expect to become a shell company.

The requirements applicable to shell company business combinations are as follows:

- the combined company will need to file a Form 8-K to report the Form 10 type information after closing with the SEC reflecting its status as an entity that is not a shell company;
- ARCA is not, and the combined company will not be, eligible to use a Form S-3 until 12 full calendar months after closing;
- the combined company will need to wait at least 60 calendar days after closing to file a Form S-8 for any equity plans or awards;
- the combined company will be an "ineligible issuer" for three years following the closing, which will prevent the combined company from (i) incorporating by reference in its Form S-1 filings, (ii) using a free writing prospectus, or (iii) taking advantage of well-known seasoned issuer status despite its public float;
- investors who (i) are affiliates of Oruka at the time the Merger is submitted for the vote or consent of Oruka stockholders, (ii) receive securities of the combined company in the Merger (i.e., Rule 145(c) securities) and (iii) publicly offer or sell such securities, will be deemed to be engaged in a distribution of such securities, and therefore to be underwriters with respect to resales of those securities, and accordingly such securities may not be included in the Form S-1 resale registration statement anticipated to be filed after the closing of the Merger unless such securities are sold only in a fixed price offering in which such investors are named as underwriters in the prospectus;
- Rule 144(i)(2) will limit the ability to publicly resell Rule 145(c) securities per Rule 145(d), as well as any other "restricted" or "control" securities of the combined company per Rule 144 (i.e., holders of restricted securities and any affiliates of the public company are also affected) until one year after the Form 10 information is filed with the SEC.

The foregoing SEC requirements would increase the combined company's time and cost of raising capital, offering stock under equity plans, and complying with securities laws. Further, such requirements will add burdensome restrictions on the resale of combined company shares by affiliates of Oruka and any holders of "restricted" or "control" securities.

Some of ARCA's and Oruka's directors and executive officers have interests in the Merger that are different from yours and that may influence them to support or approve the Merger without regard to your interests.

Directors and executive officers of ARCA and Oruka may have interests in the Merger that are different from, or in addition to, the interests of other ARCA stockholders generally. These interests with respect to ARCA's directors and executive officers may include, among others, retention bonus payments, extension of exercisability periods of previously issued stock option grants, severance payments if employment is terminated in a qualifying termination in connection with the Merger and rights to continued indemnification, expense advancement and insurance coverage.

Further, certain current members of Oruka's board of directors will continue as directors of the combined company after the effective time, and, following the closing of the Merger, will be eligible to be compensated as non-employee directors of the combined company pursuant to ARCA's non-employee director compensation policy that is expected to remain in place following the effective time.

ARCA's board of directors was aware of and considered those interests, among other matters, in reaching their decisions to approve and adopt the Merger Agreement, approve the Merger, and recommend the approval of the Merger Agreement to ARCA and Oruka stockholders. These interests, among other factors, may have influenced the directors and executive officers of each company to support or approve the Merger.

ARCA stockholders and Oruka stockholders may not realize a benefit from the Merger commensurate with the ownership dilution they will experience in connection with the Merger, including the conversion of Oruka common stock issued in the Oruka pre-closing financing.

If the combined company is unable to realize the full strategic and financial benefits currently anticipated from the Merger, ARCA stockholders and Oruka stockholders will have experienced substantial dilution of their ownership interests without receiving any commensurate benefit, or only receiving part of the commensurate benefit to the extent the combined company is able to realize only part of the strategic and financial benefits currently anticipated from the Merger.

ARCA securityholders will generally have a reduced ownership and voting interest in, and will exercise less influence over the management of, the combined company following the completion of the Merger as compared to their current ownership and voting interests in the respective companies.

After the completion of the Merger, ARCA's current stockholders will generally own a smaller percentage of the combined company than their ownership of ARCA prior to the Merger. Immediately after the Merger, ARCA securityholders as of immediately prior to the Merger are expected to own approximately 2.39% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis), and former holders of Oruka securities are expected to own approximately 97.61% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis), subject to certain assumptions, including, but not limited to, ARCA's net cash as of closing being equal to $5.0 million. The Chief Executive Officer of Oruka will serve as the Chief Executive Officer of the combined company following the completion of the Merger.

Certain provisions of the Merger Agreement may discourage third parties from submitting competing proposals, including proposals that may be superior to the transactions contemplated by the Merger Agreement.

While the Merger Agreement is in effect, each party is generally prohibited from, among other things, soliciting, initiating or knowingly encouraging, inducing or facilitating the communication, making, submission or announcement of any acquisition proposal or acquisition inquiry. In addition, ARCA's current directors and executive officers and certain significant stockholders have entered into support agreements pursuant to the terms of the Merger Agreement, and as an inducement to Oruka's willingness to enter into the Merger Agreement, by which they have agreed to vote all of their shares of ARCA capital stock in favor of the Merger Agreement and the transactions contemplated thereby and against any competing proposals, subject to certain limited exceptions. These provisions could discourage a potential competing acquirer from considering or proposing an acquisition or merger, even if it were prepared to pay consideration with a higher value than that implied by the merger consideration in the combination.

Because the lack of a public market for Oruka common stock makes it difficult to evaluate the fair market value of its capital stock, the value of ARCA common stock to be issued to Oruka stockholders may be more or less than the fair market value of Oruka common stock.

The outstanding capital stock of Oruka is privately held and is not traded on any public market. The lack of a public market makes it difficult to determine the fair market value of Oruka capital stock. Because the percentage of ARCA's equity to be issued to Oruka stockholders was determined based on negotiations between the parties, it is possible that the value of ARCA common stock and ARCA Series B Preferred Stock to be issued to Oruka stockholders will be more or less than the fair market value of Oruka capital stock.

Lawsuits may be filed against ARCA, Oruka, or any of the members of their respective boards of directors arising out of the Merger, which may delay or prevent the Merger.

Putative stockholder complaints, including stockholder class action complaints, and other complaints may be filed against ARCA, ARCA's board of directors, Oruka, Oruka's board of directors and others in connection with the transactions contemplated by the Merger Agreement. The outcome of litigation is uncertain, and ARCA or Oruka may not be successful in defending against any such future claims. Lawsuits that may be filed against ARCA, ARCA's board of directors, Oruka, or Oruka's board of directors could delay or prevent the Merger, divert the attention of ARCA's and Oruka's management and employees from their day-to-day business and otherwise adversely affect ARCA and Oruka financially.

As of July 8, 2024, one complaint has been filed by a purported ARCA stockholder against ARCA and ARCA's board of directors in connection with the proposed Merger. On May 20, 2024, a purported stockholder filed a complaint, captioned *Wynter v. ARCA biopharma, Inc., et al.,* No.: 1:24-cv-1418-STV (D. Colo.) (the "Complaint"), against ARCA and ARCA's board of directors. The Complaint alleges that the defendants filed or caused to be filed a materially incomplete and misleading preliminary registration statement with the SEC and asserts claims under Sections 14(a) and 20(a) of the Exchange Act. The Complaint seeks an order enjoining the proposed Merger, or in the event that the proposed Merger is consummated, an order rescinding the Merger or awarding rescissory damages, as well as costs, including attorneys' and experts' fees. ARCA cannot predict the outcome of the Complaint. ARCA believes that the allegations and claims asserted in the Complaint are without merit and intends to defend against them vigorously. Additional lawsuits arising out of the Merger may be filed.

ARCA has never paid and, other than in connection with the Merger with Oruka, does not intend to pay any cash dividends in the foreseeable future.

ARCA has never paid cash dividends on any of its capital stock. Pursuant to the terms of the Merger Agreement, ARCA may declare and pay a special cash dividend to ARCA stockholders of record prior to the Merger consisting of cash up to an amount equal in the aggregate of the amount by which ARCA's net cash will exceed $5.0 million. The amount of such special cash dividend is currently uncertain, pending the determination of ARCA's outstanding obligations and net cash position as of the closing of the Merger. Other than such potential special cash dividend in connection with the closing of the Merger, ARCA does not currently anticipate declaring or paying cash dividends on its capital stock in the foreseeable future.

If ARCA does not successfully consummate the Merger or another strategic transaction, ARCA's board of directors may decide to pursue a dissolution and liquidation of ARCA. In such an event, the amount of cash available for distribution to ARCA stockholders will depend heavily on the timing of such liquidation as well as the amount of cash that will need to be reserved for commitments and contingent liabilities, as to which ARCA can give you no assurance.

There can be no assurance that the Merger will be completed. If the Merger is not completed, ARCA's board of directors may decide to pursue a dissolution and liquidation of ARCA. In such an event, the amount of cash available for distribution to ARCA stockholders will depend heavily on the timing of such decision and, ultimately, such liquidation, since the amount of cash available for distribution continues to decrease as ARCA funds its operations while pursuing the Merger. In addition, if ARCA's board of directors were to approve and recommend, and ARCA stockholders were to approve, a dissolution and liquidation of ARCA, ARCA would be required under Delaware law to pay ARCA's outstanding obligations, as well as to make reasonable provision for contingent and unknown obligations, prior to making any distributions in liquidation to stockholders. ARCA's commitments and contingent liabilities may include obligations under ARCA's employment and related agreements with certain employees that provide for severance and other payments following a termination of employment occurring for various reasons, including a change in control of ARCA, litigation against ARCA, and other various claims and legal actions arising in the ordinary course of business, and other unexpected and/or contingent liabilities. As a result of this requirement, a portion of ARCA's assets would need to be reserved pending the resolution of such obligations.

In addition, ARCA may be subject to litigation or other claims related to a dissolution and liquidation of ARCA. If a dissolution and liquidation were to be pursued, ARCA's board of directors, in consultation with ARCA's advisors, would need to evaluate these matters and make a determination about a reasonable amount to reserve. Accordingly, holders of ARCA common stock could lose all or a significant portion of their investment in the event of liquidation, dissolution or winding up of ARCA. A liquidation would be a lengthy and uncertain process with no assurance of any value ever being returned to ARCA stockholders.

ARCA is substantially dependent on its remaining employees to facilitate the consummation of the Merger.

As of April 4, 2024, ARCA had only three full-time employees and one part-time employee. ARCA's ability to successfully complete the Merger depends in large part on its ability to retain certain remaining personnel. Despite ARCA's efforts to retain these employees, one or more employees may terminate their employment with ARCA on short notice. The loss of the services of certain employees could potentially harm ARCA's ability to consummate the Merger and run its day-to-day business operations, as well as fulfill its reporting obligations as a public company.

Risks Related to the Proposed Reverse Stock Split

The reverse stock split may not increase the combined company's stock price over the long-term.

The principal purposes of the reverse stock split are to (i) increase the per-share market price of ARCA common stock above the minimum bid price requirement under the Nasdaq rules so that the listing of ARCA and the shares of ARCA common stock being issued in the Merger on Nasdaq will be approved and (ii) increase the number of authorized and unissued shares available for future issuance in connection with the Merger, though such increase will not alone be sufficient to complete the Merger. It cannot be assured, however, that the reverse stock split will accomplish any increase in the per-share market price of ARCA common stock for any meaningful period of time. While it is expected that the reduction in the number of outstanding shares of ARCA common stock will proportionally increase the market price of ARCA common stock, it cannot be assured that the reverse stock split will increase the market price of ARCA common stock by a multiple of the reverse stock split ratio mutually agreed by ARCA and Oruka, or result in any permanent or sustained increase in the market price of ARCA common stock, which is dependent upon many factors, including ARCA's business and financial performance, general market conditions and prospects for future success. Thus, while the stock price of ARCA common stock might meet the listing requirements for Nasdaq initially after the reverse stock split, it cannot be assured that it will continue to do so.

The reverse stock split may decrease the liquidity of the combined company's common stock.

Although ARCA's board of directors believes that the anticipated increase in the market price of the combined company's common stock resulting from the proposed reverse stock split could encourage interest in its common stock and possibly promote greater liquidity for its stockholders, such liquidity could also be adversely affected by the reduced number of shares outstanding after the reverse stock split. The reduction in the number of outstanding shares may lead to reduced trading and a smaller number of market makers for the combined company's common stock. In addition, the reverse stock split may not result in an increase in the combined company's stock price necessary to satisfy Nasdaq's initial listing requirements for the combined company.

The reverse stock split may lead to a decrease in the combined company's overall market capitalization.

Should the market price of the combined company's common stock decline after the reverse stock split, the percentage decline will be greater, due to the smaller number of shares outstanding, than it would have been prior to the reverse stock split. A reverse stock split is often viewed negatively by the market and, consequently, can lead to a decrease in the combined company's overall market capitalization. If the per share market price does not increase in proportion to the reverse stock split ratio, then the value of the combined company, as measured by its stock capitalization, will be reduced. In some cases, the per-share stock price of companies that have effected reverse stock splits subsequently declined back to pre-reverse split levels, and accordingly, it cannot be assured that the total market value of the combined company's common stock will remain the same after the reverse stock split is effected, or that the reverse stock split will not have an adverse effect on the combined company's stock price due to the reduced number of shares outstanding after the reverse stock split.

Risks Related to ARCA

Risks Related to ARCA's Business and Financial Condition

If ARCA is not able to successfully develop, obtain FDA approval for and provide for the commercialization of Gencaro or rNAPc2 in a timely manner, it may not be able to continue its business operations.

ARCA currently has no products that have received regulatory approval for commercial sale. The process to develop, obtain regulatory approval for and commercialize potential product candidates is long, complex and costly.

Failure to demonstrate that a product candidate, including Gencaro or rNAPc2, is safe and effective, or significant delays in demonstrating such safety and efficacy, would adversely affect ARCA's business. Failure to obtain marketing approval of Gencaro or rNAPc2 from appropriate regulatory authorities, or significant delays in obtaining such approval, would also adversely affect ARCA's business and could, among other things, preclude ARCA from completing a strategic transaction or obtaining additional financing necessary to continue as a going concern.

Even if approved for sale, a product candidate must be successfully commercialized to generate value. ARCA does not currently have the capital resources or management expertise to commercialize Gencaro, rNAPc2 or any of its other product candidates and, as a result, will need to complete a strategic transaction or, alternatively, raise substantial additional funds to enable commercialization of Gencaro, rNAPc2 or any of its other product candidates, if approved. Failure to successfully provide for the commercialization of Gencaro, rNAPc2 or any other product candidate, if approved, would damage ARCA's business.

If ARCA encounters difficulties enrolling patients in its future clinical trial of Gencaro, any potential enrollment milestones or potential regulatory approvals could be delayed or otherwise adversely affected.

ARCA may encounter difficulty enrolling a sufficient number of patients in its clinical trials, due to circumstances which are outside its control, including other clinical trials that may limit the availability of study participants. As a result, ARCA may need to delay or terminate its trials, which would have a negative impact on its business. Delays in enrolling patients in the clinical trial would also adversely affect ARCA's ability to meet projected enrollment milestones or timelines for completing the study and obtaining regulatory approval.

ARCA's clinical trials from its product candidates may not yield results that will enable ARCA to further develop its products as a therapy and obtain regulatory approvals necessary to be used as a drug.

ARCA will receive regulatory approval for its product candidates only if it can demonstrate, in carefully designed and conducted clinical trials, that the product candidate is safe and effective. ARCA does not know whether any future clinical trials for Gencaro, rNAPc2 or any other product candidate will demonstrate sufficient safety and efficacy to obtain the requisite regulatory approvals or will result in marketable products.

The results from preclinical testing and early clinical trials may not be predictive of results from later studies. ARCA may suffer significant setbacks in advanced clinical trials, even after seeing promising results in earlier studies. Based on results at any stage of clinical trials, ARCA may decide to repeat or redesign a trial or discontinue development of one or more of ARCA's product candidates. If ARCA fails to adequately demonstrate the safety and efficacy of its product candidates, ARCA will not be able to obtain the required regulatory approvals to commercialize those product candidates and ARCA's business, results of operations and financial condition would be materially adversely affected.

In addition, administering ARCA's product candidates to humans may produce undesirable side effects. These side effects could interrupt, delay or halt clinical trials of ARCA's product candidates, and could result in the FDA or other regulatory authorities denying approval of ARCA's product candidates, for any or all targeted indications.

ARCA may not achieve its projected development goals in the time frames it announces and expects.

ARCA sets goals for, and makes public statements regarding, the timing of certain accomplishments, such as the initiation of its clinical trials, the steps for commencing and continuing its clinical trials, the disclosure of trial results, the obtainment of regulatory approval and the sale of drug products, which ARCA sometimes refers to as milestones. These milestones may not be achieved, and the actual timing of these events can vary

dramatically due to a number of factors such as delays or failures in ARCA's clinical trials, disagreements with any collaborative partners, the uncertainties inherent in the regulatory approval process and manufacturing scale-up, delays in achieving manufacturing or marketing arrangements sufficient to commercialize ARCA's products or ARCA's inability to obtain sufficient financing in a timely manner. There can be no assurance that ARCA will make regulatory submissions or receive regulatory approvals as planned. If ARCA fails to achieve one or more of these milestones as planned, its business will be materially adversely affected.

ARCA expects a Phase 3 PRECISION-AF clinical trial will require substantially more capital, and ARCA cannot guarantee when or if it will be able to secure such additional financing.

ARCA will need to secure additional financing in order to initiate enrollment of its Phase 3 PRECISION-AF clinical trial. Even if ARCA can begin enrolling patients, it expects to have to raise significant additional capital to continue enrollment. If ARCA is not able to obtain financing in the future or on acceptable terms, it may have to terminate the clinical trial early, which could adversely affect its business.

ARCA will need to raise substantial additional funds through public or private equity or debt transactions and/or complete one or more strategic transactions or partnerships, to continue development of Gencaro, rNAPc2 or any of its other product candidates. If ARCA is unable to raise such financing or complete such a transaction, it may not be able to continue operations.

As a result of the expected development timeline to potentially obtain FDA approval for Gencaro or rNAPc2, if at all, the substantial additional costs associated with the development of ARCA's product candidates, including the costs associated with clinical trials related thereto, and the substantial cost of commercializing Gencaro or rNAPc2, if approved, ARCA will need to raise substantial additional funding through public or private equity or debt transactions or a strategic combination or partnership. If ARCA is delayed in obtaining funding or are unable to complete a strategic transaction, it may discontinue its development activities on Gencaro, rNAPc2 and its other product candidates or discontinue its operations. Even if ARCA is able to fund continued development of Gencaro, rNAPc2 or any of ARCA's other product candidates, ARCA expects that it will need to complete a strategic transaction or raise substantial additional funding through public or private equity or debt securities or partnership to successfully commercialize Gencaro, rNAPc2 or any other product candidate.

ARCA believes its cash and cash equivalents as of March 31, 2024 will be sufficient to fund its operations through the middle of fiscal year 2025. ARCA's review of its strategic options may impact this projection. Conducting a Phase 3 PRECISION-AF trial clinical trial would likely require additional financing. However, changing circumstances may cause ARCA to consume capital significantly faster or slower than currently anticipated. ARCA has based these estimates on assumptions that may prove to be wrong, and ARCA could exhaust its available financial resources sooner than it currently anticipates; therefore, ARCA may have to raise additional capital for other clinical trials. Initiating any Phase 3 clinical trial of Gencaro will require additional financing. In 2020, ARCA entered into a new sales agreement with a placement agent to sell, from time to time, ARCA common stock in an "at the market offering." As of December 31, 2022, ARCA sold an aggregate of 9,928,272 shares of ARCA common stock pursuant to the terms of such sales agreement for aggregate gross proceeds of approximately $54.0 million. Net proceeds received in this offering were approximately $52.2 million, after deducting expenses for executing the "at the market offering" and commissions paid to the placement agent. In 2021, ARCA amended the new sales agreement and the amount available for the offering under its prospectus to its registration statement on Form S-3 (No. 333-254585), which expired in March 2024. In April 2024, ARCA terminated such sales agreement in accordance with its terms. Sales of ARCA common stock dilute the ownership interest of ARCA stockholders and may cause the price per share of ARCA common stock to decrease. Changing circumstances may cause ARCA to consume capital significantly faster or slower than it currently anticipates. ARCA has based these estimates on assumptions that may prove to be wrong, and it could exhaust its available financial resources sooner than it currently anticipates.

ARCA's liquidity, and its ability to raise additional capital or complete any strategic transaction, depends on a number of factors, including, but not limited to, the following:

- the timing and outcome of the strategic review process;
- the consummation of any particular strategic transactions, including the Merger;

- the costs and timing for potential additional clinical trials in order to gain possible regulatory approval for Gencaro, rNAPc2 and ARCA's other product candidates;
- the market price of ARCA's stock and the availability and cost of additional equity capital from existing and potential new investors;
- ARCA's ability to retain the listing of ARCA common stock on the Nasdaq Capital Market;
- general economic and industry conditions affecting the availability and cost of capital, including as a result of deteriorating market conditions due to investor concerns regarding inflation, adverse developments affecting the financial services industry, continued hostilities between Russia and Ukraine and Hamas' attack against Israel and the ensuing conflict;
- ARCA's ability to control costs associated with its operations;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- the terms and conditions of ARCA's existing collaborative and licensing agreements.

The sale of additional equity or convertible debt securities would likely result in substantial dilution to ARCA stockholders. If ARCA raises additional funds through the incurrence of indebtedness, the obligations related to such indebtedness would be senior to rights of holders of its capital stock and could contain covenants that would restrict its operations. ARCA also cannot predict what consideration might be available, if any, to it or its stockholders, in connection with any strategic transaction. Should strategic alternatives or additional capital not be available to ARCA, or not be available on acceptable terms, ARCA may be unable to realize value from its assets and discharge its liabilities in the normal course of business which may, among other alternatives, cause ARCA to further delay, substantially reduce or discontinue operational activities to conserve its cash resources.

ARCA has received a Special Protocol Assessment agreement from the FDA relating to its planned Phase 3 program for Gencaro. This Special Protocol Assessment agreement does not guarantee approval of Gencaro or any other particular outcome from regulatory review.

In 2019, ARCA received a Special Protocol Assessment ("SPA") agreement from the FDA for its planned Phase 3 clinical trial of Gencaro. The FDA's SPA process is designed to facilitate the FDA's review and approval of drugs by allowing the FDA to evaluate the proposed design and size of certain clinical trials that are intended to form the primary basis for determining a drug product's efficacy. Upon specific request by a clinical trial sponsor, the FDA will evaluate the protocol and respond to a sponsor's questions regarding, among other things, primary efficacy endpoints, trial conduct and data analysis, within 45 days of receipt of the request. The FDA ultimately assesses whether the protocol design and planned analysis of the trial are acceptable to support regulatory approval of the product candidate with respect to the effectiveness of the indication studied. All agreements and disagreements between the FDA and the sponsor regarding a SPA must be clearly documented in a SPA letter or the minutes of a meeting between the sponsor and the FDA.

However, an SPA agreement does not guarantee approval of a product candidate, even if the trial is conducted in accordance with the protocol. Moreover, the FDA may revoke or alter ARCA's SPA agreement in certain circumstances. In particular, a SPA agreement is not binding on the FDA if public health concerns emerge that were unrecognized at the time of the SPA agreement, other new scientific concerns regarding product safety or efficacy arise, ARCA fails to comply with the agreed upon trial protocols, or the relevant data, assumptions or information provided by ARCA in its request for the SPA change or are found to be false or omit relevant facts. In addition, even after an SPA agreement is finalized, the SPA agreement may be modified, and such modification will be deemed binding on the FDA review division, except under the circumstances described above, if the FDA and the sponsor agree in writing to modify the protocol and such modification is intended to improve the study. The FDA retains significant latitude and discretion in interpreting the terms of the SPA agreement and the data and results from any study that is the subject of the SPA agreement.

Even though ARCA obtained an agreement on its SPA, ARCA cannot assure you that its planned Phase 3 clinical trial will succeed, will be deemed binding by the FDA under its SPA agreement or will result in any FDA approval for Gencaro. ARCA may also alter the design of the trial to focus on endpoints that are not covered by the SPA. Moreover, if the FDA revokes or alters its agreement under ARCA's SPA, or interprets the data collected from

the clinical trial differently than ARCA does, the FDA may not deem the data sufficient to support an application for regulatory approval, which could materially adversely affect ARCA's business, financial condition and results of operations.

If ARCA is not able to maintain the requirements for listing on the Nasdaq Capital Market, it could be delisted, which could have a material adverse effect on its ability to consummate the Merger, raise additional funds as well as the price and liquidity of ARCA common stock.

ARCA common stock is currently listed on the Nasdaq Capital Market. To maintain the listing of ARCA common stock on the Nasdaq Capital Market, ARCA is required to meet certain listing requirements, including, among others, (i) a minimum closing bid price of $1.00 per share, (ii) a market value of publicly held shares (excluding shares held by ARCA's executive officers, directors and 10% or more stockholders) of at least $1 million and (iii) either: (x) stockholders' equity of at least $2.5 million; or (y) a total market value of listed securities of at least $35 million. In addition, pursuant to the terms of the Merger Agreement ARCA is required to use commercially reasonable efforts to maintain its listing on Nasdaq until the First Merger Effective Time.

ARCA has received three potential delisting notices from Nasdaq since 2012. In each of 2012, 2015 and 2018, ARCA received notification from Nasdaq of potential delisting of its shares from the Nasdaq Capital Market because the closing bid price of ARCA common stock had not met the minimum closing bid price of $1.00 per share during the preceding 30 business days. ARCA subsequently regained compliance with Nasdaq's minimum closing bid price requirements related to the 2012, 2015 and 2018 notices, by effecting a 1-for-6 reverse split of ARCA common stock in March 2013, a 1-for-7 reverse split of ARCA common stock in September 2015 and a 1-for-18 reverse split of ARCA common stock in April 2019. Despite effecting a 1-for-18 reverse split of ARCA common stock in April 2019, there can be no assurance that the market price per share of ARCA common stock will remain in excess of the $1.00 minimum bid price for a sustained period of time. The continuing effect of ARCA's reverse stock split on the market price of ARCA common stock cannot be predicted with any certainty, and the history of similar stock split combinations for companies in like circumstances is varied. It is possible that the per share price of ARCA common stock after the reverse stock split will not rise in proportion to the reduction in the number of shares of common stock outstanding resulting from the reverse stock split, effectively reducing ARCA's market capitalization, and there can be no assurance that the market price per post-reverse split share will either exceed or remain in excess of the $1.00 minimum bid price for a sustained period of time. The market price of ARCA common stock may vary based on other factors that are unrelated to the number of shares outstanding, including ARCA's future performance.

The delisting of ARCA common stock from a national exchange may impair ARCA's ability to consummate the Merger and could impair the liquidity and market price of the common stock. It could also materially adversely affect ARCA's access to the capital markets, and any limitation on market liquidity or reduction in the price of the common stock as a result of that delisting could adversely affect ARCA's ability to consummate the Merger or raise capital on terms acceptable to ARCA, or at all.

In future periods, if ARCA does not meet the minimum stockholders' equity, minimum closing bid price requirements, or any other listing requirements, it would be subject to delisting from the Nasdaq Capital Market.

As of July 19, 2024, the closing price of ARCA common stock was $3.29 per share, and the total market value of ARCA's listed securities was approximately $47.66 million. As of March 31, 2024, ARCA had stockholders' equity of $35.1 million.

ARCA's financial statements for the quarter ended March 31, 2024 were prepared assuming that ARCA will continue as a going concern. ARCA's management has concluded that due to ARCA's need for additional capital, and the uncertainties surrounding ARCA's ability to raise such funding, there may be uncertainty about ARCA's ability to continue as a going concern in future years.

ARCA's financial statements for the quarter ended March 31, 2024 were prepared assuming that ARCA will continue as a going concern. The going concern basis of presentation assumes that ARCA will continue in operation for the foreseeable future and will be able to realize its assets and discharge its liabilities and commitments in the normal course of business and do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from ARCA's inability to continue as a going concern. As of December 31, 2019, ARCA's management and independent

registered public accounting firm concluded that, due to ARCA's need for additional capital and the uncertainties surrounding ARCA's ability to raise such funding, substantial doubt existed as to ARCA's ability to continue as a going concern for a period from one year after ARCA's annual financial statements had been issued. ARCA believes its cash and cash equivalents as of March 31, 2024 will be sufficient to fund its operations through the middle of fiscal year 2025. ARCA's future viability beyond that point is dependent on the results of the strategic review process and ARCA's ability to raise additional capital to fund its operations. ARCA expects to continue to incur costs and expenditures in connection with the process of evaluating strategic alternatives. There can be no assurance, however, that ARCA will be able to successfully consummate any particular strategic transaction, including the Merger Agreement. The process of continuing to evaluate these strategic options may be very costly, time-consuming and complex and ARCA has incurred, and may in the future incur, significant costs related to this continued evaluation, such as legal, accounting and advisory fees and expenses and other related charges, see discussion above regarding the Merger Agreement. Should ARCA pursue additional clinical trials for its product candidates, it will have to raise additional capital for clinical trials of Gencaro. ARCA may not be able to raise sufficient capital on acceptable terms, or at all, to continue development of Gencaro or rNAPc2 or to otherwise continue operations and may not be able to execute any strategic transaction. ARCA's Merger Agreement discussed above may impact this projection. Conducting a Phase 3 PRECISION-AF trial would likely require additional financing, subject to ARCA's pursuits of a potential strategic transaction and the consummation of such potential transaction. However, changing circumstances may cause ARCA to consume capital significantly faster or slower than currently anticipated. ARCA has based these estimates on assumptions that may prove to be wrong, and ARCA could exhaust its available financial resources sooner than it currently anticipates; therefore, ARCA may have to raise additional capital for other clinical trials. Initiating any Phase 3 clinical trial of Gencaro will require additional financing. ARCA cannot be certain that it will be able to make any other sale of ARCA common stock in any future offering to cover its future capital needs, or at all. Changing circumstances may cause ARCA to consume capital significantly faster or slower than it currently anticipates. If ARCA is delayed in completing or is unable to complete additional funding and/or a strategic transaction, it may discontinue its development activities or operations, but there are no assurances that these reductions would be sufficient to allow ARCA to continue to operate as a going concern. Therefore, even if ARCA resolves this uncertainty, its independent registered public accountants and/or management could conclude that uncertainty as to its ability to continue as a going concern could exist at a future date.

ARCA has based these estimates on assumptions that may prove to be wrong, and ARCA could exhaust its available financial resources sooner than it currently anticipates. ARCA may be forced to reduce its operating expenses and raise additional funds to meet its working capital needs, principally through the additional sales of its securities or debt financings. However, ARCA cannot guarantee that it will be able to obtain sufficient additional funds when needed or that such funds, if available, will be obtainable on satisfactory terms. If ARCA is unable to raise sufficient additional capital or complete a strategic transaction, it may be unable to continue to fund its operations, develop Gencaro, rNAPc2 or its other product candidates, or realize value from its assets and discharge its liabilities in the normal course of business. If ARCA cannot raise sufficient funds, it may have to liquidate its assets, and might realize significantly less than the values at which they are carried on its financial statements, and stockholders may lose all or part of their investment in ARCA's securities.

Market conditions and changing circumstances, some of which may be beyond ARCA's control, could impair ARCA's ability to access its existing cash, cash equivalents and investments and to timely pay key vendors and others.

Market conditions and changing circumstances, some of which may be beyond ARCA's control, could impair ARCA's ability to access its existing cash, cash equivalents and investments and to timely pay key vendors and others. For example, on March 10, 2023, Silicon Valley Bank (SVB), where ARCA maintains certain accounts, was placed into receivership with the Federal Deposit Insurance Corporation (FDIC), which resulted in all funds held at SVB being temporarily inaccessible by SVB's customers. If other banks and financial institutions with whom ARCA has banking relationships enter receivership or become insolvent in the future, ARCA may be unable to access, and may lose, some or all of its existing cash, cash equivalents and investments to the extent those funds are not insured or otherwise protected by the FDIC. In addition, in such circumstances, ARCA might not be able to timely pay key vendors and others. ARCA regularly maintains cash balances that are not insured or are in excess of the FDIC's insurance limit. Any delay in ARCA's ability to access its cash, cash equivalents and investments (or the loss of some or all of such funds) or to timely pay key vendors and others could have a material adverse effect on ARCA's operations and cause it to need to seek additional capital sooner than planned.

ARCA's business could be adversely affected by the effects of health epidemics in regions where ARCA or third parties on which ARCA relies may have clinical trial sites or other business operations.

ARCA's business could be adversely affected by health epidemics in regions where ARCA may have concentrations of future clinical trial sites or other business operations.

In addition, third-party manufacturing of ARCA's drug product candidates and suppliers of the materials used in the production of ARCA's drug product candidates may be impacted by significant delays or restrictions resulting from any future health epidemic which may disrupt ARCA's supply chain or limit ARCA's ability to manufacture drug product candidates for its clinical trials.

The ultimate impact of any future health epidemic is highly uncertain and subject to change. These effects could have a material impact on ARCA's operations.

If ARCA encounters difficulties enrolling patients in any future clinical trials, its future trials could be delayed or otherwise adversely affected.

If ARCA has difficulty enrolling a sufficient number of patients in any future clinical trial, ARCA may need to delay or terminate its trial, which would have a negative impact on its business. Delays in enrolling patients in any future clinical trials would also adversely affect ARCA's ability to generate any product, milestone and royalty revenues under collaboration agreements, if any, and could impose significant additional costs on ARCA or on any future collaborators.

For example, the development of vaccines for the SARS-CoV-2 virus and the development of other therapies for COVID-19 disease impacted ARCA's ability to enroll patients in its rNAPc2 (AB201) Phase 2b clinical trial and such enrollment was slower than expected.

The GENETIC-AF clinical trial required that ARCA identify and enroll a large number of patients with the condition under investigation and the trial enrolled only those patients having a specific genotype, and certain patients who have or are willing to have a Medtronic device implanted for monitoring and recording AFB data. As a result, enrollment for GENETIC-AF was slower than expected, with ARCA's first patient enrolled in June 2014 and enrollment completed in August 2017. Because of the rigorous enrollment criteria, ARCA's clinical trial timelines were delayed from ARCA's original projections. ARCA anticipates that any future Phase 3 clinical trial of Gencaro, including PRECISION-AF, may have similar enrollment criteria, and ARCA cannot guarantee that it will not have similar enrollment issues in any future clinical trials.

ARCA may also encounter difficulty enrolling a sufficient number of patients in any future clinical trial, due to circumstances which are outside ARCA's control, including as a result of continued hostilities between Russia and Ukraine and Hamas' attack against Israel and the ensuing conflict.

ARCA will rely on contract research organizations to conduct substantial portions of its clinical trials, including any future clinical trial of Gencaro, rNAPc2, and as a result, ARCA will be unable to directly control the timing, conduct and expense of all aspects of its clinical trials.

ARCA does not currently have sufficient staff with the requisite experience to conduct its clinical trials and therefore will rely on third parties to conduct certain aspects of any future clinical trials. ARCA previously contracted with a CRO to conduct components of its GENETIC-AF clinical trial and anticipate contracting with a CRO to conduct components of any future clinical trial for Gencaro and components of the clinical study of rNAPc2 or any future clinical trials for ARCA's other product candidates. As a result, ARCA will have less control over many details and steps of any clinical trial, the timing and completion of any clinical trial, the required reporting of adverse events and the management of data developed through any clinical trial than would be the case if ARCA were relying entirely upon its own staff. Communicating with outside parties can also be challenging, potentially leading to mistakes as well as difficulties in coordinating activities. Outside parties, such as CROs, may have staffing difficulties, may undergo changes in priorities or may become financially distressed, adversely affecting their willingness or ability to conduct ARCA's clinical trial. ARCA may experience unexpected cost increases that are beyond its control. Problems with the timeliness or quality of the work of a CRO may lead ARCA to seek to terminate the relationship and use an alternative service provider. However, making any change may be costly

and may delay ongoing trials, if any, and contractual restrictions may make such a change difficult or impossible. Additionally, it may be impossible to find a replacement organization that can conduct clinical trials in an acceptable manner and at an acceptable cost.

Even though ARCA anticipates relying on CROs in the future, it will likely have to devote substantial resources and rely on the expertise of ARCA's employees to manage the work being done by the CROs. Due to ARCA's limited experience in managing clinical trials, ARCA cannot guarantee its employees will do so effectively.

ARCA expects to depend on existing and future collaborations with third parties for the development of some of ARCA's product candidates. If those collaborations are not successful, ARCA may not be able to complete the development of these product candidates.

ARCA collaborated with one or more clinical trial networks in its development program for rNAPc2. As a result, ARCA lacked direct control over certain aspects of the development program and the amount and timing of resources that these collaborators devote to the project.

ARCA had a collaboration agreement with Medtronic that supported ARCA's GENETIC-AF clinical trial. If ARCA's arrangement with Medtronic, as amended, is continued as part of ARCA's future development of Gencaro, ARCA will have limited control over the amount and timing of resources that they dedicate to the development of Gencaro. This is also likely to be true in any future collaboration with third parties and ARCA may seek additional third-party collaborators for the development of Gencaro, rNAPc2 or any other product candidates. ARCA's ability to benefit from these arrangements will depend on its collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving ARCA's product candidates pose the following risks to us:

- collaborators have significant discretion in determining the efforts and resources that they will apply to these collaborations;
- collaborators may not pursue development and commercialization of ARCA's product candidates or may elect not to continue or renew development or commercialization programs based on clinical trial results, changes in the collaborator's strategic focus or available funding, or external factors such as an acquisition that diverts resources or creates competing priorities;
- collaborators may delay clinical trials, provide insufficient funding for a clinical trial program, stop a clinical trial or abandon a product candidate, repeat or conduct new clinical trials or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with ARCA's product candidates if the collaborators believe that competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than ARCA's;
- collaborators may not properly maintain or defend ARCA's intellectual property rights or may use ARCA's proprietary information in such a way as to invite litigation that could jeopardize or invalidate its proprietary information or expose it to potential litigation;
- disputes may arise between the collaborators and ARCA that result in the delay or termination of the research, development or commercialization of ARCA's product candidates or that result in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates;
- collaborators may elect to take over manufacturing rather than retain ARCA as manufacturer and may encounter problems in starting up or gaining approval for their manufacturing facility and so be unable to continue development of product candidates;
- ARCA may be required to undertake the expenditure of substantial operational, financial and management resources in connection with any collaboration;

- ARCA may be required to issue equity securities to collaborators that would dilute ARCA's existing stockholders' percentage ownership;
- ARCA may be required to assume substantial actual or contingent liabilities;
- collaborators may not commit adequate resources to the marketing and distribution of ARCA's product candidates, limiting ARCA's potential revenues from these products; and
- collaborators may experience financial difficulties.

ARCA faces a number of challenges in seeking additional collaborations. Collaborations are complex and any potential discussions may not result in a definitive agreement for many reasons. For example, whether ARCA reaches a definitive agreement for a collaboration will depend, among other things, upon its assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration, and the proposed collaborator's evaluation of a number of factors, such as the design or results of ARCA's clinical trials, the potential market for ARCA's product candidates, the costs and complexities of manufacturing and delivering ARCA's product candidates to patients, the potential of competing products, the existence of uncertainty with respect to ownership or the coverage of ARCA's intellectual property, and industry and market conditions generally. If ARCA were to determine that additional collaborations for its Gencaro development are necessary and were unable to enter into such collaborations on acceptable terms, ARCA might elect to delay or scale back the development or commercialization of Gencaro in order to preserve its financial resources or to allow it adequate time to develop the required physical resources and systems and expertise itself.

Collaboration agreements may not lead to development or commercialization of ARCA's product candidates in the most efficient manner, or at all. In addition, there have been a significant number of recent business combinations among large pharmaceutical companies that have resulted in a reduced number of potential future collaborators. If a present or future collaborator of ARCA were to be involved in a business combination, the continued pursuit and emphasis on ARCA's product development or commercialization program could be delayed, diminished or terminated.

Any future clinical trial for Gencaro will require the use of a third-party diagnostic services provider to administer a genetic test needed to identify the patient receptor genotypes of clinical trial participants, and as a result, ARCA will be unable to directly control the timing, conduct and expense of the genetic test.

ARCA anticipates that any future clinical trial of Gencaro, if any, will require a companion diagnostic test that identifies the patient's receptor genotype. The trial would only enroll those patients with the receptor that has the potential for enhanced efficacy, the beta-1 389 Arg receptor as detected by a beta-1 389 Arg/Arg genotype. Accordingly, ARCA anticipates that any future clinical trial for Gencaro will require the use of a third-party diagnostic service to perform the genetic testing. There has been limited experience in ARCA's industry in prospective development of companion diagnostics required to perform the required molecular profiling. ARCA entered into an agreement with LabCorp to provide the diagnostic services of the genetic test needed to support ARCA's GENETIC-AF clinical trial. To provide those services, LabCorp obtained from the FDA an investigational device exemption ("IDE") for the companion diagnostic test being used in ARCA's GENETIC-AF clinical trial. ARCA would expect a similar agreement and approval would be necessary for any companion diagnostic used in any future clinical trials for Gencaro.

The FDA and similar regulatory authorities outside the United States regulate companion diagnostics. Companion diagnostics require separate or coordinated regulatory approval prior to commercialization. Changes to regulatory advice could delay ARCA's development programs or delay or prevent eventual marketing approval for ARCA's product candidates that may otherwise be approvable. In July 2011, the FDA issued draft guidance that stated that if safe and effective use of a therapeutic depends on an *in vitro* diagnostic, the FDA generally will not approve the therapeutic unless the FDA approves or clears this "*in vitro* companion diagnostic device" at the same time that the FDA approves the therapeutic. The approval or clearance of the companion diagnostic would occur through the FDA's Center for Devices and Radiological Health. In 2014, the FDA issued guidance on in vitro companion diagnostic devices. The guidance allows for flexibility by the FDA in the case of therapeutic products to treat serious conditions for which no alternative treatment exists and the benefits of using the companion diagnostic outweigh the risk, but it is unclear how this discretion may be applied by the agency with respect to the companion diagnostic test related to any Gencaro clinical trials. The FDA's evolving position on the topic of companion

diagnostics could affect ARCA's clinical development programs that utilize companion diagnostics. In particular, the FDA may limit ARCA's ability to use retrospective data, otherwise disagree with ARCA's approaches to trial design, biomarker qualification, clinical and analytical validity, and clinical utility, or make ARCA repeat aspects of a trial or initiate new trials.

Given ARCA's limited experience in developing diagnostics, ARCA expects to rely primarily on third parties for the design and manufacture of the companion diagnostics for its product candidates. If ARCA, or any third parties that ARCA engages to assist it, are unable to successfully develop companion diagnostics for its product candidates that require such diagnostics, or experiences delays in doing so, the development of its product candidates may be adversely affected, its product candidates may not receive marketing approval and it may not realize the full commercial potential of any products that receive marketing approval. As a result, ARCA's business could be materially harmed.

ARCA will need to establish a collaborative arrangement with a third-party diagnostics services provider to obtain marketing clearance or approval of the companion genetic test for Gencaro. There is no guarantee that the FDA will grant timely clearance or approval of the genetic test, if at all, and failure to obtain such timely clearance or approval would adversely affect ARCA's ability to market Gencaro.

The drug label ARCA intends to seek for Gencaro would identify the patient receptor genotype for which the drug is approved. Accordingly, ARCA believes developing a genetic test that is simple to administer and widely available will be critical to the successful commercialization of Gencaro. The genetic test will be subject to regulation by the FDA and by comparable agencies in various foreign countries. The process of complying with the requirements of the FDA and comparable agencies is costly, time consuming and burdensome.

Despite the time and expense expended, regulatory clearance or approval is never guaranteed. If regulatory clearance or approval is delayed, or if one or more third-party diagnostic services providers are unable to obtain FDA approval of the genetic test at all or in parallel with the approval of Gencaro, or are unable to commercialize the test successfully and in a manner that effectively supports the commercial efforts for Gencaro, or if the information concerning the differential response to Gencaro resulting from certain genetic variation is not included in the approval label for Gencaro, the commercial launch of Gencaro may be significantly and adversely affected.

Regulatory approval is required for the genetic test to be used in ARCA's Gencaro clinical trials and to support the commercialization of the test, if approved. Delays or failures in obtaining such regulatory approval, including any required validation analyses may prevent a third-party diagnostics provider from commercializing such genetic test and will adversely affect ARCA's business, operating results and prospects.

Before a genetic test can be used commercially, including in conjunction with Gencaro, if it is approved for marketing, the third-party diagnostics provider must obtain FDA Premarket Approval ("PMA"), for such test. The FDA may require additional validation of the genetic test ARCA used in GENETIC-AF prior to any approval of Gencaro or the genetic test or prior to the use of such test in any future clinical trials for Gencaro. ARCA anticipates the genetic test will be required as a condition to prescribing Gencaro. There is no guarantee the FDA will approve the anticipated PMA submission for the genetic test. Even if the genetic test is eventually approved, performing additional validation work necessary to support the PMA, if required, for current or future genetic test products, including one associated with Gencaro, would require additional time and expense and the outcome would be uncertain. Moreover, such delays or increased costs or failures could adversely affect ARCA's business, operating results and prospects for commercializing the genetic test.

If a third-party diagnostics provider responsible for the genetic test associated with Gencaro or certain of its third-party suppliers fails to comply with ongoing FDA or other foreign regulatory authority requirements, or if there are unanticipated problems with the genetic test, these products could be subject to restrictions or withdrawal from use in a trial or from the market.

Any diagnostic for which a third-party diagnostics provider obtains clearance or approval, and the manufacturing processes, reporting requirements, post-approval clinical data and promotional activities for such product, will be subject to continued regulatory review, oversight and periodic inspections by the FDA and other domestic and foreign regulatory bodies. With respect to the genetic test, to the extent applicable, any third-party diagnostics provider and certain of its suppliers will be required to comply with the FDA's Quality System

Regulation ("QSR") and International Standards Organization ("ISO") requirements which cover the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, storage and shipping of any product for which clearance or approval is obtained. Regulatory bodies, such as the FDA, enforce the QSR and other regulations through periodic inspections. The failure by a third-party diagnostics provider, or certain of its third-party manufacturers or suppliers, as the case may be, to comply with applicable statutes and regulations administered by the FDA and other regulatory bodies, or the failure to timely and adequately respond to any adverse inspectional observations or product safety issues, could result in, among other things, enforcement actions. If any of these actions were to occur, it could harm ARCA's reputation and cause product sales and profitability of Gencaro, if approved, to suffer and may prevent ARCA from generating revenue or utilizing the genetic test further in any clinical trial. Even if regulatory clearance or approval is granted, such clearance or approval may be subject to limitations on the intended uses for which the product may be marketed and reduce ARCA's potential to successfully commercialize the product and generate revenue from the product.

Future sales of Gencaro may suffer if its marketplace acceptance is negatively affected by the genetic test.

The genetic test is an important component of the commercial strategy for Gencaro in addition to being required for ARCA's clinical trials. ARCA believes that the genetic test helps predict patient response to Gencaro, and that this aspect of the drug is important to its ability to compete effectively with current therapies. The genetic test adds an additional step in the prescribing process, an additional cost for the patient and payors, the risk that the test results may not be rapidly available and the possibility that it may not be available at all to hospitals and medical centers. Although ARCA anticipates that Gencaro, if approved in a timely manner, would be the first genetically-targeted cardiovascular drug, Gencaro will be one of a number of successful drugs in the beta-blocker class currently on the market. Prescribers may be more familiar with these other beta-blockers, and may be resistant to prescribing Gencaro as an AF therapy in patients with HF. For instance, the top-line results of ARCA's Phase 2B GENETIC-AF clinical trial indicated that Gencaro demonstrated a similar treatment benefit compared to the active comparator, metoprolol succinate (TOPROL-XL). If ARCA's future clinical trials in Gencaro do not show that Gencaro has a clear therapeutic benefit as compared to other drugs in the beta-blocker class currently on the market, then prescribers may be unlikely to prescribe Gencaro to patients, even if approved. Any one of these factors could affect prescriber behavior, which in turn may substantially impede market acceptance of the genetic test, which could cause significant harm to Gencaro's ability to compete, and in turn harm ARCA's business.

Unless ARCA is able to generate sufficient product revenue, it will continue to incur losses from operations and will not achieve or maintain profitability. ARCA is years away from commercializing a product and generating product revenue.

ARCA's historical losses have had, and will continue to have, an adverse effect on ARCA stockholders' equity and working capital, among other things. ARCA is years away from commercializing a product and generating any product revenue. As a result, ARCA expects to continue to incur significant operating losses for the foreseeable future. Even if ARCA ultimately receives regulatory approval for Gencaro, rNAPc2 or ARCA's other product candidates, sales of such products may not generate sufficient revenue for it to achieve or maintain profitability. Because of the numerous risks and uncertainties associated with developing therapeutic drugs, ARCA may experience larger than expected future losses and may never reach profitability.

ARCA's product candidates are subject to extensive regulation, which can be costly and time-consuming, and unsuccessful or delayed regulatory approvals could increase ARCA's future development costs or impair ARCA's future revenue.

The preclinical and clinical development, testing, manufacture, safety, efficacy, labeling, storage, recordkeeping, and subsequent advertising, promotion, sale, marketing, and distribution, if approved, of ARCA's product candidates are subject to extensive regulation by the FDA and other regulatory authorities in the United States and elsewhere. These regulations also vary in important, meaningful ways from country to country. ARCA is not permitted to market a potential drug in the United States until it receives approval of a New Drug Application ("NDA") from the FDA for such drug. ARCA has not received an NDA approval from the FDA for Gencaro, rNAPc2 or any of its other product candidates. There can be no guarantees with respect to ARCA's product candidates that clinical studies will adequately support an NDA, that the products will receive necessary regulatory approvals, or that they will prove to be commercially successful.

To receive regulatory approval for the commercial sale of any product candidates, ARCA must demonstrate safety and efficacy in humans to the satisfaction of regulatory authorities through preclinical studies and adequate and well-controlled clinical trials of the product candidates. This process is expensive and can take many years, and failure can occur at any stage of the testing. ARCA's failure to adequately demonstrate the safety and efficacy of ARCA's product candidates will prevent regulatory approval and commercialization of such products.

In 2008, ARCA submitted and the FDA accepted ARCA's NDA filing for Gencaro for the treatment of chronic HF. In 2009, the FDA issued a Complete Response Letter in which the FDA stated that it could not approve the Gencaro NDA in its current form and specified actions required for approval of the NDA, including conducting an additional Phase 3 clinical trial of Gencaro in patients with HF. ARCA completed a Phase 2B clinical study of Gencaro in HF patients to assess its efficacy in reducing or preventing AF. ARCA enrolled 267 HF patients with AF in the Phase 2B clinical trial. ARCA reported top-line Phase 2B data in February 2018. In the third quarter of 2018, ARCA submitted a SPA to the FDA for a Phase 3 clinical trial. In 2019, the FDA approved ARCA's SPA request for a Phase 3 clinical trial of Gencaro. Even though the FDA approved ARCA's SPA, this product candidate will require years of additional clinical development. Even if ARCA conducts additional studies in accordance with ARCA's SPA agreement or further FDA guidance and submit or file a new or amended NDA, the FDA may ultimately decide that the NDA does not satisfy the criteria for approval.

In the event that ARCA or its collaborators conduct preclinical studies that do not comply with Good Laboratory Practices ("GLP") or incorrectly design or carry out human clinical trials in accordance with Good Clinical Practices ("GCP") or those clinical trials fail to demonstrate clinical significance, it is unlikely that ARCA will be able to obtain FDA approval for product development candidates. ARCA's inability to successfully initiate and effectively complete clinical trials for any product candidate on schedule, or at all, will severely harm ARCA's business. Significant delays in clinical development could materially increase product development costs or allow ARCA's competitors to bring products to market before ARCA does, impairing ARCA's ability to effectively commercialize any future product candidate. ARCA does not know whether planned clinical trials will begin on time, will need to be redesigned or will be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including:

- delays or failures in obtaining regulatory authorization to commence a trial because of safety concerns of regulators relating to ARCA's product candidates or similar product candidates of ARCA's competitors or failure to follow regulatory guidelines;
- delays or failures in obtaining clinical materials and manufacturing sufficient quantities of the product candidates for use in trials;
- failure of clinical materials to meet pre-established specifications at product release or during ongoing stability studies;
- delays or failures in reaching agreement on acceptable terms with prospective study sites;
- delays or failures in obtaining approval of ARCA's clinical trial protocol from an institutional review board to conduct a clinical trial at a prospective study site;
- delays in recruiting patients to participate in a clinical trial, which may be due to the size of the patient population, eligibility criteria, protocol design, perceived risks and benefits of the drug, availability of other approved and standard of care therapies or, availability of clinical trial sites;
- other clinical trials seeking to enroll subjects with similar profile;
- failure of ARCA's clinical trials and clinical investigators to be in compliance with GCP;
- unforeseen safety issues, including negative results from ongoing preclinical studies;
- inability to monitor patients adequately during or after treatment;
- difficulty recruiting and monitoring multiple study sites;

- failure of ARCA's third-party contract research organizations, clinical site organizations and other clinical trial managers, to satisfy their contractual duties, comply with regulations or meet expected deadlines; and
- an insufficient number of patients who have, or are willing to have, a Medtronic device implanted for monitoring and recording AF burden data.

In addition, any approvals ARCA may obtain may not cover all of the clinical indications for which it seeks approval or permit it to make claims of superiority over currently marketed competitive products. Also, an approval might contain significant limitations in the form of narrow indications, warnings, precautions or contraindications with respect to conditions of use. If the FDA determines that a risk evaluation and mitigation strategy, or REMS, is necessary to ensure that the benefits of the drug outweigh the risks, ARCA may be required to include as part of the NDA a proposed REMS that may include a package insert directed to patients, a plan for communication with healthcare providers, restrictions on a drug's distribution, or a Medication Guide, to provide better information to consumers about the drug's risks and benefits. Finally, an approval could be conditioned on ARCA's commitment to conduct further clinical trials, which ARCA may not have the resources to conduct or which may negatively impact ARCA's financial situation.

The manufacture and analytical testing of Gencaro and rNAPc2 is performed by third-party suppliers, who must also meet cGMP requirements and pass a pre-approval inspection of their facilities before ARCA can obtain marketing approval.

All of ARCA's product candidates are prone to the risks of failure inherent in drug development. The results from preclinical animal testing and early human clinical trials may not be predictive of results obtained in later human clinical trials. Further, although a new product may show promising results in preclinical or early human clinical trials, it may subsequently prove unfeasible or impossible to generate sufficient safety and efficacy data to obtain necessary regulatory approvals. The data obtained from preclinical and clinical studies are susceptible to varying interpretations that may delay, limit or prevent regulatory approval, and the FDA and other regulatory authorities in the United States and elsewhere exercise substantial discretion in the drug approval process. The numbers, size and design of preclinical studies and clinical trials that will be required for FDA or other regulatory approval will vary depending on the product candidate, the disease or condition for which the product candidate is intended to be used and the regulations and guidance documents applicable to any particular product candidate. The FDA or other regulators can delay, limit or deny approval of any product candidate for many reasons, including, but not limited to:

- side effects;
- safety and efficacy;
- defects in the design of clinical trials;
- the fact that the FDA or other regulatory officials may not approve ARCA's or ARCA's third-party manufacturer's processes or facilities; or
- the fact that new regulations may be enacted by the FDA or other regulators may change their approval policies or adopt new regulations requiring new or different evidence of safety and efficacy for the intended use of a product candidate.

In light of widely publicized events concerning the safety of certain drug products, regulatory authorities, members of Congress, the Government Accountability Office, medical professionals and the general public have raised concerns about potential drug safety issues. These events have resulted in the withdrawal of certain drug products, revisions to certain drug labeling that further limit use of the drug products and establishment of risk management programs that may, for instance, restrict distribution of drug products. The increased attention to drug safety issues may result in a more cautious approach by the FDA to clinical trials and approval. Data from clinical trials may receive greater scrutiny with respect to safety and the product's risk/benefit profile, which may make the FDA or other regulatory authorities more likely to terminate clinical trials before completion, or require longer or additional clinical trials that may result in substantial additional expense, and a delay or failure in obtaining

approval or approval for a more limited indication than originally sought. Aside from issues concerning the quality and sufficiency of submitted preclinical and clinical data, the FDA may be constrained by limited resources from reviewing and determining the approvability of the Gencaro NDA in a timely manner.

In pursuing clinical development of Gencaro for an AF indication, ARCA will be required to amend the Gencaro HF NDA or prepare a new NDA. The FDA could approve Gencaro, but without including some or all of the prescribing information that ARCA has requested. For instance, the FDA could approve Gencaro for AF in a more limited patient population or include additional warnings in the drug's label. This, in turn, could substantially and detrimentally impact ARCA's ability to successfully commercialize Gencaro and effectively protect ARCA's intellectual property rights in Gencaro.

If ARCA's product candidates receive regulatory approval, ARCA would be subject to ongoing regulatory obligations and restrictions, which may result in significant expenses and limit its ability to develop and commercialize other potential products.

If a product candidate of ARCA's is approved by the FDA or by another regulatory authority, ARCA would be held to extensive regulatory requirements over product manufacturing, testing, distribution, labeling, packaging, adverse event reporting and other reporting to regulatory authorities, storage, advertising, marketing, promotion, distribution, and record keeping. Regulatory approvals may also be subject to significant limitations on the indicated uses or marketing of the product candidates. Potentially costly follow-up or post-marketing clinical studies may be required as a condition of approval to further substantiate safety or efficacy, or to investigate specific issues of interest to the regulatory authority. Previously unknown problems with the product candidate, including adverse events of unanticipated severity or frequency, may result in additional regulatory controls or restrictions on the marketing or use of the product or the need for post marketing studies, and could include suspension or withdrawal of the products from the market.

Furthermore, ARCA's third-party manufacturers and the manufacturing facilities that they use to make ARCA's product candidates are regulated by the FDA. Quality control and manufacturing procedures must continue to conform to cGMP after approval. Drug manufacturers and their subcontractors are required to register their facilities and products manufactured annually with the FDA and certain state agencies and are subject to periodic unannounced inspections by the FDA, state and/or other foreign authorities. Any subsequent discovery of problems with a product, or a manufacturing or laboratory facility used by ARCA or its collaborators, may result in restrictions on the product, or on the manufacturing or laboratory facility, including a withdrawal of the drug from the market or suspension of manufacturing. Any changes to an approved product, including the way it is manufactured or promoted, often require FDA approval before the product, as modified, can be marketed. ARCA and its third-party manufacturers will also be subject to ongoing FDA requirements for submission of safety and other post-market information.

The marketing and advertising of ARCA's drug products by its collaborators or itself will be regulated by the FDA, certain state agencies or foreign regulatory authorities. Violations of these laws and regulations, including promotion of ARCA's products for unapproved uses or failing to disclose risk information, are punishable by criminal and civil sanctions and may result in the issuance of enforcement letters or other enforcement action by the FDA, U.S. Department of Justice, state agencies, or foreign regulatory authorities that could jeopardize ARCA's ability to market the product.

In addition to the FDA, state or foreign regulations, the marketing of ARCA's drug products by itself or its collaborators will be regulated by federal, state or foreign laws pertaining to health care "fraud and abuse," such as the federal anti-kickback law prohibiting bribes, kickbacks or other remuneration for the order or recommendation of items or services reimbursed by federal health care programs. Many states have similar laws applicable to items or services reimbursed by commercial insurers. Violations of these laws are punishable by criminal and civil sanctions, including, in some instances, imprisonment and exclusion from participation in federal and state health care programs, including the Medicare, Medicaid and Veterans Affairs healthcare programs. Because of the far-reaching nature of these laws, ARCA may be required to discontinue one or more of its practices to be in compliance with these laws. Healthcare fraud and abuse regulations are complex, and even minor irregularities can potentially give rise to claims that a statute or prohibition has been violated. Any violations of these laws, or any action against ARCA for violations of these laws, even if ARCA successfully defends against it, could have a material adverse effect on ARCA's business, financial condition and results of operations.

ARCA could also become subject to false claims litigation under federal statutes, which can lead to civil money penalties, restitution, criminal fines and imprisonment, and exclusion from participation in Medicare, Medicaid and other federal and state health care programs. These false claims statutes include the False Claims Act, which allows any person to bring a suit on behalf of the federal government alleging submission of false or fraudulent claims, or causing to present such false or fraudulent claims, under federal programs or contracts claims or other violations of the statute and to share in any amounts paid by the entity to the government in fines or settlement. These suits against pharmaceutical companies have increased significantly in volume and breadth in recent years. Some of these suits have been brought on the basis of certain sales practices promoting drug products for unapproved uses. This new growth in litigation has increased the risk that a pharmaceutical company will have to defend a false claim action, pay fines or restitution, or be excluded from the Medicare, Medicaid, Veterans Affairs and other federal and state healthcare programs as a result of an investigation arising out of such action. ARCA may become subject to such litigation and, if ARCA is not successful in defending against such actions, those actions may have a material adverse effect on its business, financial condition and results of operations. ARCA could also become subject to false claims litigation and consumer protection claims under state statutes, which also could lead to civil monetary penalties, restitution, criminal fines and imprisonment, and exclusion from participation in state health care programs. Of note, over the past few years there has been an increased focus on the sales and marketing practices of the pharmaceutical industry at both the federal and state level. Additionally, the law or regulatory policies governing pharmaceuticals may change. New statutory requirements may be enacted or additional regulations may be adopted that could prevent or delay regulatory approval of ARCA's product candidates or limit ARCA's ability to commercialize its products. ARCA cannot predict the likelihood, nature or extent of adverse government regulation that may arise from future legislation or administrative action, either in the United States or elsewhere.

If ARCA, its collaborators or its third-party manufacturers fail to comply with applicable continuing regulatory requirements, ARCA's business could be seriously harmed because a regulatory agency may:

- issue untitled or warning letters;
- suspend or withdraw ARCA's regulatory approval for approved products;
- seize or detain products or recommend a product recall of a drug or medical device, or issue a mandatory recall of a medical device;
- refuse to approve pending applications or supplements to approved applications filed by ARCA;
- suspend ARCA's ongoing clinical trials;
- restrict ARCA's operations, including costly new manufacturing requirements, or restrict the sale, marketing and/or distribution of ARCA's products;
- seek an injunction;
- pursue criminal prosecutions;
- close the facilities of ARCA's contract manufacturers; or
- impose civil or criminal penalties.

Reliance on third parties to commercialize Gencaro, rNAPc2 or ARCA's other product candidates could negatively impact ARCA's business. If ARCA is required to establish a direct sales force in the United States and are unable to do so, its business may be harmed.

Commercialization of Gencaro, rNAPc2 or any other product candidate, if approved, particularly the establishment of a sales organization, will require substantial additional capital resources. ARCA currently intends to pursue a strategic partnership alternative for the commercialization of Gencaro or rNAPc2, if it is approved, and ARCA has suspended its efforts to build internal sales, marketing and distribution capabilities. If ARCA elects to rely on third parties to sell Gencaro, rNAPc2 and any other products, then it may receive less revenue than if it sold such products directly. In addition, ARCA may have little or no control over the sales efforts of those third parties. If ARCA is unable to complete a strategic transaction, ARCA would be unable to commercialize Gencaro, rNAPc2

or any other product candidate without substantial additional capital. Even if such capital were secured, ARCA would be required to build internal sales, marketing and distribution capabilities to market Gencaro or rNAPc2 in the United States. None of ARCA's current employees have experience in establishing and managing a sales force.

In the event ARCA is unable to sell Gencaro, rNAPc2 and other selected product candidates, either directly or through third parties via a strategic transaction, the commercialization of Gencaro or rNAPc2, if approved, may be delayed indefinitely.

ARCA is dependent on ARCA's key personnel.

The success of ARCA's business is highly dependent on the principal members of ARCA's board of directors and executive management. The loss of the services of any such individual might seriously harm ARCA's product development, partnering and financing efforts. Recruiting and training personnel with the requisite skills is challenging and ARCA competes for talent with companies that are larger and have more financial resources.

ARCA has no manufacturing capacity which puts it at risk of lengthy and costly delays of bringing its products to market.

ARCA does not currently operate manufacturing facilities for clinical or commercial production of its product candidates, including their drug substance or active pharmaceutical ingredients, or API. ARCA has no experience in drug formulation or manufacturing, and it lacks the resources and the capabilities to manufacture any of its product candidates on a clinical or commercial scale. ARCA does not intend to develop facilities for the manufacture of product candidates for clinical trials or commercial purposes in the foreseeable future. ARCA has contracted with several third-party manufacturing organizations for production and analytical testing of its product candidates. These contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to successfully produce, store and distribute ARCA's products. In addition, these manufacturers may have staffing difficulties, may experience delays due to key material or component availability, may not be able to manufacture ARCA's products on a timely basis or may become financially distressed. In the event of errors in forecasting production quantities required to meet demand, natural disaster, equipment malfunctions or failures, technology malfunctions, strikes, lock-outs or work stoppages, regional power outages, product tampering, war or terrorist activities, actions of regulatory authorities, business failure, strike or other difficulty, ARCA may be unable to find an alternative third-party manufacturer in a timely manner and the production of its product candidates would be interrupted, resulting in delays and additional costs, which could impact ARCA's ability to commercialize and sell its product candidates. ARCA or its contract manufacturers may also fail to achieve and maintain required manufacturing standards, which could result in patient injury or death, product recalls or withdrawals, an order by governmental authorities to halt production, delays or failures in product testing or delivery, stability testing failures, cost overruns or other problems that could seriously hurt ARCA's business. Contract manufacturers also often encounter difficulties involving production yields, quality control and quality assurance, as well as shortages of qualified personnel. In addition, ARCA's contract manufacturers are subject to ongoing inspections and regulation by the FDA, the U.S. Drug Enforcement Agency and corresponding foreign and state agencies and they may fail to meet these agencies' acceptable standards of compliance. If ARCA's contract manufacturers fail to comply with applicable governmental regulations, such as quality control, quality assurance and the maintenance of records and documentation, ARCA may not be able to continue production of the API or finished product. If the safety of any API or product supplied is compromised due to failure to adhere to applicable laws or for other reasons, this may jeopardize ARCA's regulatory approval for Gencaro, rNAPc2 and other product candidates, and ARCA may be held liable for any injuries sustained as a result. Upon the occurrence of one of the aforementioned events, the ability to switch manufacturers may be difficult for a number of reasons, including:

- the number of potential manufacturers is limited and ARCA may not be able to negotiate agreements with alternative manufacturers on commercially reasonable terms, if at all;
- long lead times are often needed to manufacture drugs;
- the manufacturing process is complex and may require a significant learning curve; and
- the FDA must approve any replacement prior to manufacturing, which requires new testing and compliance inspections.

Transitioning from a clinical development stage company will require successful completion of a number of steps, many of which are outside of ARCA's control and, consequently, ARCA can provide no assurance of its successful and timely transition from a clinical development stage company.

ARCA is a clinical development stage biopharmaceutical company with a limited operating history. To date ARCA has not generated any product revenue and has historically funded ARCA's operations through investment capital. ARCA's future growth depends on its ability to emerge from the clinical development stage and successfully commercialize or provide for the commercialization of Gencaro, rNAPc2 and ARCA's other product candidates, which in turn will depend, among other things, on ARCA's ability to:

- conduct additional clinical trials and develop and obtain regulatory approval for Gencaro, rNAPc2 or other product candidates;
- successfully partner a companion genetic test with the commercial launch of Gencaro or rNAPc2;
- enter into a strategic transaction enabling the continued development and commercialization of Gencaro or rNAPc2, or alternatively, raise significant additional capital to enable these activities;
- pursue additional indications for Gencaro or rNAPc2 and develop other product candidates, including other cardiovascular therapies; and
- obtain commercial quantities of Gencaro, rNAPc2 or other product candidates at acceptable cost levels.

Any one of these factors or other factors discussed in this report could affect ARCA's ability to successfully commercialize Gencaro and other product candidates, which could impact ARCA's ability to earn sufficient revenues to transition from a clinical development stage company and continue ARCA's business.

If approved by the FDA, Gencaro or rNAPc2 will be entering a competitive marketplace and may not succeed.

Gencaro is a new type of beta-blocker and vasodilator being developed for AF. While ARCA anticipates that this drug, if approved, would be the first genetically-targeted cardiovascular drug, and potentially the only beta-blocker approved for AF, Gencaro will be one of a number of accepted treatments for AF. In addition, ARCA's proposed prescribing information for Gencaro is expected to include a requirement for genetic testing of the patient to ascertain if they have the genotype that ARCA believes responds best to Gencaro. This additional step will add incremental cost and procedures to prescribing Gencaro, which could make it more difficult to compete against existing therapies.

ARCA does not yet know what the commercial opportunity will be, if any, for rNAPc2 if it is approved for treating COVID-19 disease. ARCA does not know how and to whom rNAPc2 would be marketed and what the commercial arrangements would be for its sales and reimbursement. While ARCA anticipates that rNAPc2, if approved, could potentially be used in combination with antiviral drugs and other therapies, there are other vaccines and therapies under development.

ARCA's commercial opportunity may be reduced or eliminated if competitors develop and commercialize products that are safer, more effective, have fewer side effects, are more convenient or are less expensive than Gencaro. If products with any of these properties are developed, or any of the existing products are better marketed, then prescriptions of Gencaro by physicians and patient use of Gencaro could be significantly reduced or rendered obsolete and noncompetitive. Further, public announcements regarding the development of any such competing drugs could adversely affect the market price of ARCA common stock and the value of ARCA's assets.

Future sales of ARCA's products may suffer if they are not accepted in the marketplace by physicians, patients and the medical community.

Gencaro, rNAPc2 or ARCA's other product candidates may not gain market acceptance among physicians, patients and the medical community. The degree of market acceptance of Gencaro, rNAPc2 or ARCA's other product candidates will depend on a number of factors, such as its effectiveness and tolerability, as compared with competitive drugs. For instance, if rNAPc2 is approved, by that time there may be superior alternatives in terms of vaccines and/or therapeutics that may significantly impact the relative medical benefits offered by rNAPc2. If

ARCA's future clinical trials for rNAPc2 do not show that rNAPc2 has a clear therapeutic benefit as compared to other therapies or vaccines that are approved in the interim, then there may be a limited or no commercial market for rNAPc2. Also, prevalence and severity of side-effects could negatively affect market acceptance of rNAPc2. Failure to achieve market acceptance of Gencaro or rNAPc2 would significantly harm ARCA's business.

If ARCA is unable to obtain acceptable prices or adequate reimbursement from third-party payors for Gencaro, rNAPc2, or any other product candidates that it may seek to commercialize, then ARCA's revenues and prospects for profitability will suffer.

ARCA's or any strategic partner's ability to commercialize Gencaro, rNAPc2, or any other product candidates that ARCA may seek to commercialize, is highly dependent on the extent to which coverage and reimbursement for these product candidates will be available from:

- governmental payors, such as Medicare and Medicaid;
- private health insurers, including managed-care organizations; and
- other third-party payors.

Many patients will not be capable of paying for ARCA's potential products themselves and will rely on third-party payors to pay for their medical needs. A primary current trend in the U.S. health care industry is toward cost containment. Large private payors, managed-care organizations, group purchasing organizations and similar organizations are exerting increasing influence on decisions regarding the use of, and reimbursement levels for, particular treatments. Such third-party payors, including Medicare, are challenging the prices charged for medical products and services, and many third-party payors limit reimbursement for newly approved health care products.

Cost-control initiatives could decrease the price ARCA might establish for products, which could result in product revenues lower than anticipated. If the prices for ARCA's product candidates decrease, or if governmental and other third-party payors do not provide adequate coverage and reimbursement levels, then ARCA's revenue and prospects for profitability will suffer.

Health care reform measures could materially and adversely affect ARCA's business.

The business and financial condition of pharmaceutical and biotechnology companies are affected by the efforts of governmental and third-party payors to contain or reduce the costs of health care. The U.S. Congress has enacted legislation to reform the health care system. While ARCA anticipates that this legislation may, over time, increase the number of patients who have insurance coverage for pharmaceutical products, it also imposes cost containment measures that may adversely affect the amount of reimbursement for pharmaceutical products. These measures include increasing the minimum rebates for products covered by Medicaid programs and extending such rebates to drugs dispensed to Medicaid beneficiaries enrolled in Medicaid managed care organizations as well as expansion of the 340(B) Public Health Services drug discount program. In addition, such legislation contains a number of provisions designed to generate the revenues necessary to fund the coverage expansion, including new fees or taxes on certain health-related industries, including medical device manufacturers. Each medical device manufacturer has to pay an excise tax (or sales tax) in an amount equal to 2.3% of the price for which such manufacturer sells its medical devices. Such excise taxes may impact any potential sales of the genetic test if it is approved for marketing. On January 22, 2018, legislation was enacted suspending the medical device tax in 2018 and 2019. In December 2019, a permanent repeal of the medical device tax was enacted. The Gencaro Test (as defined elsewhere in this proxy statement/prospectus) is likely to be subject to this tax if this tax is reinstated in the future. In foreign jurisdictions there have been, and ARCA expects that there will continue to be, a number of legislative and regulatory proposals aimed at changing the health care system. For example, in some countries other than the United States, pricing of prescription drugs is subject to government control and ARCA expects to see continued efforts to reduce healthcare costs in international markets.

Some states are also considering legislation that would control the prices of drugs, and state Medicaid programs are increasingly requesting manufacturers to pay supplemental rebates and requiring prior authorization by the state program for use of any drug for which supplemental rebates are not being paid. Managed care organizations continue to seek price discounts and, in some cases, to impose restrictions on the coverage of particular drugs.

Government efforts to reduce Medicaid expenses may lead to increased use of managed care organizations by Medicaid programs. This may result in managed care organizations influencing prescription decisions for a larger segment of the population and a corresponding constraint on prices and reimbursement for drugs. It is likely that federal and state legislatures and health agencies will continue to focus on additional health care reform in the future although ARCA is unable to predict what additional legislation or regulation, if any, relating to the health care industry or third-party coverage and reimbursement may be enacted in the future or what effect such legislation or regulation would have on ARCA's business. ARCA's or any strategic partner's ability to commercialize Gencaro, rNAPc2, or any other product candidates that ARCA may seek to commercialize, is highly dependent on the extent to which coverage and reimbursement for these product candidates will be available from government payors, such as Medicare and Medicaid, private health insurers, including managed care organizations, and other third-party payors, and any change in reimbursement levels could materially and adversely affect ARCA's business. Further, the pendency or approval of future proposals or reforms could result in a decrease in ARCA's stock price or limit ARCA's ability to raise capital or to obtain strategic partnerships or licenses.

ARCA's competitors may be better positioned in the marketplace and thereby may be more successful than ARCA at developing, manufacturing and marketing approved products.

Many of ARCA's competitors currently have significantly greater financial resources and expertise in conducting clinical trials, obtaining regulatory approvals, managing manufacturing and marketing approved products than ARCA. Other early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. In addition, these third parties compete with ARCA in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring therapies and therapy licenses complementary to ARCA's programs or advantageous to ARCA's business. ARCA expects that its ability to compete effectively will depend upon its ability to:

- successfully and rapidly complete clinical trials for any product candidates and obtain all requisite regulatory approvals in a cost-effective manner;
- build an adequate sales and marketing infrastructure, raise additional funding, or enter into strategic transactions enabling the commercialization of ARCA's products;
- develop competitive formulations of ARCA's product candidates;
- attract and retain key personnel; and
- identify and obtain other product candidates on commercially reasonable terms.

If ARCA fails to identify and license or acquire other products or product candidates, then it may be unable to expand its business, and the acquisition or licensing of other products or product candidates may put a strain on its operations and will likely require it to seek additional financing.

One of ARCA's strategies is to license or acquire clinical-stage products or product candidates and further develop them for commercialization. The market for licensing and acquiring products and product candidates is intensely competitive and many of ARCA's competitors may have greater resources than ARCA does. If ARCA undertakes any additional acquisitions, whether of product candidates or other biopharmaceutical companies, the process of integrating an acquired product candidate or complementary company into ARCA's business may put a strain on ARCA's operations, divert personnel, financial resources and management's attention. In 2020, ARCA's research and development activities were dedicated to initiating the clinical trial of rNAPc2. If ARCA is not able to substantially expand ARCA's research and development efforts, or identify, or license or acquire other products or product candidates or complete future acquisitions, then it will likely be unable expand its pipeline of product candidates. In addition, any future acquisition would give rise to additional operating costs and will likely require ARCA to seek additional financing. Future acquisitions could result in additional issuances of equity securities that would dilute the ownership of existing stockholders. Future acquisitions could also result in the incurrence of debt, contingent liabilities or the amortization of expenses related to other intangible assets, any of which could adversely affect ARCA's operating results.

ARCA would be subject to applicable regulatory approval requirements of the foreign countries in which it markets its products, which are costly and may prevent or delay ARCA from marketing its products in those countries.

In addition to regulatory requirements in the United States, ARCA would be subject to the regulatory approval requirements in each foreign country where it markets its products. In addition, ARCA might be required to identify one or more collaborators in these foreign countries to develop, seek approval for and manufacture ARCA's products and any companion genetic test for Gencaro. If ARCA decides to pursue regulatory approvals and commercialization of its product candidates internationally, it may not be able to obtain the required foreign regulatory approvals on a timely basis, if at all, and any failure to do so may cause ARCA to incur additional costs or prevent it from marketing it products in foreign countries, which may have a material adverse effect on its business, financial condition and results of operations.

If ARCA's internal control over financial reporting is not considered effective, ARCA's business and stock price could be adversely affected.

Section 404 of the Sarbanes-Oxley Act of 2002 requires ARCA to evaluate the effectiveness of its internal control over financial reporting as of the end of each fiscal year, and to include a management report assessing the effectiveness of its internal control over financial reporting in its annual report on Form 10-K for that fiscal year. ARCA's management, including ARCA's principal executive officer and principal financial officer, does not expect that ARCA's internal control over financial reporting will prevent all error and all fraud. ARCA continues to operate with a small staff for financial reporting. Though the process and design of ARCA's internal controls over financial reporting have not been altered, the small number of staff involved in financial reporting may limit ARCA's ability to properly segregate internal control procedures which could result in deficiencies or material weaknesses in ARCA's internal controls in the future. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud involving a company have been, or will be, detected. The design of any system of controls is based in part on certain assumptions about the likelihood of future events, and ARCA cannot assure you that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become ineffective because of changes in conditions or deterioration in the degree of compliance with policies or procedures. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. ARCA cannot assure you that it or its independent registered public accounting firm will not identify a material weakness in ARCA's internal control over financial reporting in the future. A material weakness in ARCA's internal control over financial reporting would require management to consider ARCA's internal control over financial reporting as ineffective. If ARCA's internal control over financial reporting is not considered effective, ARCA may experience a loss of public confidence, which could have an adverse effect on its business and on the market price of ARCA common stock.

Changes in tax laws or regulations that are applied adversely to ARCA or its customers may have a material adverse effect on ARCA's business, cash flow, financial condition or results of operations.

New income, sales, use or other tax laws, statutes, rules, regulations or ordinances could be enacted at any time, which could affect the tax treatment of ARCA's domestic and foreign earnings. Any new taxes could adversely affect ARCA's domestic and international business operations, and ARCA's business and financial performance. Further, existing tax laws, statutes, rules, regulations or ordinances could be interpreted, changed, modified or applied adversely to ARCA. For example, legislation enacted in 2017, informally titled the Tax Cuts and Jobs Act, significantly revised the Internal Revenue Code of 1986, as amended, or the Code. Future guidance from the Internal Revenue Service and other tax authorities with respect to the Tax Cuts and Jobs Act may affect ARCA, and certain aspects of the Tax Cuts and Jobs Act could be repealed or modified in future legislation. In addition, it is uncertain if and to what extent various states will conform to the Tax Cuts and Jobs Act or any newly enacted federal tax legislation. Changes in corporate tax rates, the realization of net deferred tax assets relating to ARCA's operations, the taxation of foreign earnings, and the deductibility of expenses under the Tax Cuts and Jobs Act or future reform legislation could have a material impact on the value of ARCA's deferred tax assets, could result in significant one-time charges, and could increase ARCA's future U.S. tax expense.

ARCA's ability to use ARCA's net operating losses to offset future taxable income may be subject to certain limitations.

As of December 31, 2023, ARCA had net operating loss ("NOL") carryforwards of approximately $208.1 million, and approximately $2.4 million of research and development credits that may be used to offset future taxable income. ARCA had net operating loss carryforwards of $156.4 million generated prior to 2018, which will expire beginning in 2025 if not utilized. Under the Tax Cuts and Jobs Act, ARCA's U.S. federal NOLs of $51.7 million incurred in tax years beginning after December 31, 2017, may be carried forward indefinitely, but the deductibility of federal NOLs generated in tax years beginning after December 31, 2017, is limited to 80% of taxable income. In addition, under Section 382 of the Code, a corporation that undergoes an "ownership change" (as defined under Section 382 of the Code and applicable Treasury Regulations) is subject to limitations on its ability to utilize its pre-change NOLs to offset future taxable income. ARCA has not determined whether it has experienced an ownership change in the past, and ARCA may experience ownership changes in the future as a result of subsequent shifts in ARCA's stock ownership, some of which may be outside of ARCA's control. There is also a risk that due to regulatory changes, such as suspensions on the use of NOLs or other unforeseen reasons, ARCA's existing NOLs could expire or otherwise be unavailable to reduce future income tax liabilities, including for state tax purposes. For these reasons, ARCA may not be able to utilize a material portion of the NOLs reflected on its balance sheet, offset by a full valuation, even if it attains profitability, which could potentially result in increased future tax liability to ARCA and could adversely affect its operating results and financial condition.

Security breaches, cyber-attacks, or other disruptions or incidents could expose ARCA to liability and affect its business and reputation.

ARCA is increasingly dependent on its information technology systems and infrastructure for its business. ARCA, its collaborators and its service providers collect, store, and transmit sensitive information including intellectual property, proprietary business information, clinical trial data and personal information in connection with ARCA's business operations. The secure maintenance of this information is critical to ARCA's operations and business strategy. Some of this information could be an attractive target of criminal attack by third parties with a wide range of motives and expertise, including organized criminal groups, "hacktivists," patient groups, disgruntled current or former employees, nation-state and nation-state supported actors, and others. Cyber-attacks are of ever-increasing levels of sophistication, and despite ARCA's security measures, ARCA's information technology and infrastructure may be vulnerable to such attacks or may be breached, including due to employee error or malfeasance.

ARCA has implemented information security measures to protect ARCA's systems, proprietary information and sensitive data against the risk of inappropriate and unauthorized external use and disclosure and other types of compromise. However, despite these measures, and due to the ever-changing information cyber-threat landscape, ARCA cannot guarantee that these measures will be adequate to detect, prevent or mitigate security breaches and other incidents and ARCA may be subject to data breaches through cyber-attacks, malicious code (such as viruses and worms), phishing attacks, social engineering schemes, and insider theft or misuse. Any such breach could compromise ARCA's networks and the information stored there could be accessed, modified, destroyed, publicly disclosed, lost or stolen. If ARCA's systems become compromised, ARCA may not promptly discover the intrusion.

Any security breach of other incident, whether real or perceived, could cause ARCA to suffer reputational damage. Such incidents could result in costs to respond to, investigate and remedy such incidents, notification obligations to affected individuals, government agencies, credit reporting agencies and other third parties, legal claims or proceedings, and liability under ARCA's contracts with other parties and federal and state laws that protect the privacy and security of personal information. Any one of these events could cause ARCA's business to be materially harmed and its results of operations would be adversely impacted.

Failure to comply with data protection laws and regulations could lead to government enforcement actions (which could include civil or criminal penalties), private litigation, and/or adverse publicity and could negatively affect ARCA's operating results and business.

ARCA and its partners may be subject to federal, state, and foreign data protection laws and regulations (i.e., laws and regulations that address privacy and data security). In the United States, numerous federal and state laws and regulations, including state data breach notification laws, state health information privacy laws,

and federal and state consumer protection laws and regulations (e.g., Section 5 of the FTC Act), that govern the collection, use, disclosure, and protection of health-related and other personal information could apply to ARCA's operations or the operations of ARCA's partners. In addition, ARCA may obtain health information from third parties (including research institutions from which ARCA obtains clinical trial data) that are subject to privacy and security requirements under the Health Insurance Portability and Accountability Act of 1996, as amended, or HIPAA. Depending on the facts and circumstances, ARCA could be subject to criminal penalties if it knowingly obtains, uses or discloses individually identifiable health information maintained by a HIPAA-covered entity in a manner that is not authorized or permitted by HIPAA.

In addition, the California Consumer Privacy Act, or the CCPA, became effective on January 1, 2020. The CCPA gives California residents expanded rights to access and delete their personal information, opt out of certain personal information sharing and receive detailed information about how their personal information is used by requiring covered companies to provide new disclosures to California consumers (as that term is broadly defined) and provide such consumers new ways to opt-out of certain sales of personal information. The CCPA provides for civil penalties for violations, as well as a private right of action for data breaches that is expected to increase data breach litigation. Although there are limited exemptions for clinical trial data and the CCPA's implementation standards and enforcement practices are likely to remain uncertain for the foreseeable future, the CCPA may increase ARCA's compliance costs and potential liability. Many similar privacy laws have been proposed at the federal level and in other states.

Foreign data protection laws, including, without limitation, the European Union Directive 95/46/EC (the "Directive") and the European Union's General Data Protection Regulation (the "GDPR") that became effective in May 2018, and member state data protection legislation, may also apply to health-related and other personal information obtained outside of the United States. These laws impose strict obligations on the ability to process health-related and other personal information of data subjects in the European Union and the United Kingdom, including in relation to use, collection, analysis, and transfer (including cross-border transfer) of such personal information. These laws include several requirements relating to the consent of the individuals to whom the personal data relates, limitations on data processing, establishing a legal basis for processing, notification of data processing obligations or security incidents to appropriate data protection authorities or data subjects, the security and confidentiality of the personal data and various rights that data subjects may exercise.

The Directive and the GDPR prohibit, without an appropriate legal basis, the transfer of personal data to countries outside of the European Economic Area, or EEA, such as the United States, which are not considered by the European Commission to provide an adequate level of data protection. Switzerland has adopted similar restrictions. Although there are legal mechanisms to allow for the transfer of personal data from the EEA and Switzerland to the United States, uncertainty about compliance with European Union data protection laws remains. For example, ongoing legal challenges in Europe to the mechanisms allowing companies to transfer personal data from the EEA to the United States could result in further limitations on the ability to transfer personal data across borders, particularly if governments are unable or unwilling to reach new or maintain existing agreements that support cross-border data transfers, such as the European Union-U.S. and Swiss-U.S. Privacy Shield framework. Additionally, other countries have passed or are considering passing laws requiring local data residency.

Under the GDPR, regulators may impose substantial fines and penalties for non-compliance. Companies that violate the GDPR can face fines of up to the greater of 20 million Euros or 4% of their worldwide annual turnover (revenue). The GDPR increases ARCA's responsibility and potential liability in relation to personal data that ARCA processes, and ARCA may be required to put in place additional mechanisms to ensure compliance with the GDPR and other EU and international data protection rules.

Compliance with U.S. and foreign privacy and security laws, rules and regulations could require ARCA to take on more onerous obligations in its contracts, require it to engage in costly compliance exercises, restrict its ability to collect, use and disclose data, or in some cases, impact its or its partners' or suppliers' ability to operate in certain jurisdictions. Each of these constantly evolving laws can be subject to varying interpretations. Failure to comply with U.S. and foreign data protection laws and regulations could result in government investigations and enforcement actions (which could include civil or criminal penalties), fines, private litigation, and/or adverse publicity and could negatively affect ARCA's operating results and business. Moreover, patients about whom ARCA or its partners obtain information, as well as the providers who share this information with ARCA, may contractually limit ARCA's

ability to use and disclose the information. Claims that ARCA has violated individuals' privacy rights, failed to comply with data protection laws, or breached its contractual obligations, even if ARCA is not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm ARCA's business.

Risks Related to Intellectual Property and Other Legal Matters

If product liability lawsuits are successfully brought against ARCA, then ARCA will incur substantial liabilities and may be required to limit commercialization of Gencaro, rNAPc2 or other product candidates.

ARCA faces product liability exposure related to the testing of its product candidates in human clinical trials, and may face exposure to claims by an even greater number of persons once it begins marketing and distributing ARCA's products commercially. If ARCA cannot successfully defend against product liability claims, then it will incur substantial liabilities.

Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for ARCA's products and product candidates;
- injury to ARCA's reputation;
- withdrawal of clinical trial participants;
- costs of related litigation;
- substantial monetary awards to patients and others;
- loss of revenues; and
- the inability to commercialize ARCA's products and product candidates.

ARCA has obtained limited product liability insurance coverage. Such coverage, however, may not be adequate or may not continue to be available to ARCA in sufficient amounts or at an acceptable cost, or at all. ARCA may not be able to obtain commercially reasonable product liability insurance for any product candidate.

Defending against claims relating to improper handling, storage or disposal of hazardous chemicals, radioactive or biological materials could be time consuming and expensive.

ARCA's research and development of product candidates may involve the controlled use of hazardous materials, including chemicals, radioactive and biological materials. ARCA cannot eliminate the risk of accidental contamination or discharge and any resultant injury from the materials. Various laws and regulations govern the use, manufacture, storage, handling and disposal of hazardous materials. ARCA may be sued or be required to pay fines for any injury or contamination that results from its use or the use by third parties of these materials. Compliance with environmental laws and regulations may be expensive, and current or future environmental regulations may impair ARCA's research, development and production efforts.

The loss of any rights to market key products would significantly impair ARCA's operating results.

ARCA's patent portfolios relating to Gencaro, including a patent that issued in 2021, are either owned by ARCA or are subject to licenses that impose no royalty obligations or milestone payments relating to the further development, approval and commercialization of Gencaro.

Termination of ARCA's license agreements could result in the loss of its further rights to develop and commercialize Gencaro for any indication. The termination of any such license, or of any other agreement which enables ARCA to market a key product or product candidate, could significantly and adversely affect its business.

Certain intellectual property licensed by ARCA is the subject of additional licensing arrangements to which the party that has licensed rights to ARCA is subject. If such parties were to breach the terms of such licenses or such licenses were otherwise to terminate, ARCA's and ARCA's partners' rights to use such technology and develop and commercialize their products such as the genetic test may terminate and ARCA's business would be materially harmed.

Third parties may own or control patents or patent applications that ARCA may be required to license to commercialize ARCA's product candidates or that could result in litigation that would be costly and time consuming.

ARCA's or any strategic partner's ability to commercialize Gencaro, rNAPc2 and other product candidates depends upon ARCA's ability to develop, manufacture, market and sell these drugs without infringing the proprietary rights of third parties. A number of pharmaceutical and biotechnology companies, universities and research institutions have or may be granted patents that cover technologies similar to the technologies owned by or licensed to ARCA. ARCA may choose to seek, or be required to seek, licenses under third-party patents, which would likely require the payment of license fees or royalties or both. ARCA may also be unaware of existing patents that may be infringed by Gencaro or rNAPc2, the genetic testing ARCA intends to use in connection with Gencaro or its other product candidates. Because patent applications can take many years to issue, there may be other currently pending applications that may later result in issued patents that are infringed by Gencaro, rNAPc2 or ARCA's other product candidates. Moreover, a license may not be available to ARCA on commercially reasonable terms, or at all.

There is a substantial amount of litigation involving patent and other intellectual property rights in the biotechnology and biopharmaceutical industries generally. If a third party claims that ARCA is infringing on its technology, then ARCA's business and results of operations could be harmed by a number of factors, including:

- infringement and other intellectual property claims, even if without merit, are expensive and time-consuming to litigate and can divert management's attention from ARCA's core business;
- monetary damage awards for past infringement can be substantial;
- a court may prohibit ARCA from selling or licensing product candidates unless the patent holder chooses to license the patent to ARCA; and
- if a license is available from a patent holder, ARCA may have to pay substantial royalties.

ARCA may also be forced to bring an infringement action if its believes that a competitor is infringing ARCA's protected intellectual property. Any such litigation will be costly, time-consuming and divert management's attention, and the outcome of any such litigation may not be favorable to ARCA.

ARCA's intellectual property rights may not preclude competitors from developing competing products and ARCA's business may suffer.

ARCA's competitive success will depend, in part, on ARCA's ability to obtain and maintain patent protection for its inventions, technologies and discoveries, including intellectual property that ARCA licenses. The patent positions of biotechnology companies involve complex legal and factual questions, and ARCA cannot be certain that its patents and licenses will successfully preclude others from using its technology. Consequently, ARCA cannot be certain that any of its patents will provide significant market protection or will not be circumvented or challenged and found to be unenforceable or invalid. In some cases, patent applications in the United States and certain other jurisdictions are maintained in secrecy until patents issue, and since publication of discoveries in the scientific or patent literature often lags behind actual discoveries, ARCA cannot be certain of the priority of inventions covered by pending patent applications. Moreover, ARCA may have to participate in interference proceedings declared by the U.S. Patent and Trademark Office to determine priority of invention, in opposition proceedings in a foreign patent office, or in a post-grant challenge proceeding such as an *ex parte* reexamination or *inter partes* review at the U.S. Patent and Trademark Office, any of which could result in substantial cost to ARCA, even if the eventual outcome is favorable. There can be no assurance that a court of competent jurisdiction would hold any claims in any issued patent to be valid and enforceable. An adverse outcome could subject ARCA to significant liabilities to third parties, require disputed rights to be licensed from third parties or require ARCA to cease using such technology.

ARCA owns the clinical development program of rNAPc2, including Phase 2b clinical trials. If rNAPc2 is successfully developed, ARCA believes it will have intellectual property protection for a specific use, including 12 years of market exclusivity as an innovative biologic product under FDA law in the United States, 10 years data protection exclusivity in the EU, and potentially patent protection in addition to this. However, another competitor could develop a compound with similar biological properties to rNAPc2 that may not be barred by ARCA's exclusivity. ARCA has also filed a patent application for rNAPc2 and its use for COVID-19 disease, but there is no assurance that this application will ultimately result in an issued patent.

Regardless of merit, the listing of patents in the FDA Orange Book for Gencaro may be challenged as being improperly listed. ARCA may have to defend against such claims and possible associated antitrust issues. ARCA could also incur substantial costs in seeking to enforce its proprietary rights against infringement.

While the composition of matter patents on the compound that comprises Gencaro have expired, ARCA holds intellectual property concerning the interaction of Gencaro with the polymorphisms of the beta-1 and alpha-2C receptors. ARCA has obtained patents that claim methods involving Gencaro after a patient's receptor genotype has been determined. ARCA anticipates that any NDA for Gencaro will request a label including a claim that efficacy varies based on receptor genotype and a recommendation in the prescribing information that prospective patients be tested for their receptor genotype. ARCA believes that under applicable law, a generic bucindolol label would likely be required to include this recommendation as it pertains directly to the safe or efficacious use of the drug. Such a label may be considered as inducing infringement, carrying the same liability as direct infringement. If the label with the genotype information for Gencaro is not approved or it is approved after the relevant patents expire, or if generic labels are not required to copy the approved label, competitors could have an easier path to introduce competing products and ARCA's business may suffer. The approved label may not contain language covered by the patents, or ARCA may be unsuccessful in enforcing them.

ARCA also has obtained intellectual property related to the use of Gencaro for various cardiovascular indications in the genetic population it plans to study in Phase 3. The approved label may not contain language covered by ARCA's patents and it is possible the intellectual property may not preclude others from commercializing a generic version of Gencaro, which could cause ARCA's business to suffer. Additionally, the patents may be invalidated and/or ARCA may be unsuccessful in enforcing them.

ARCA may not be able to effectively protect its intellectual property rights in some foreign countries, as its patents are limited by jurisdiction and many countries do not offer the same level of legal protection for intellectual property as the United States.

ARCA requires its employees, consultants, business partners and members of its scientific advisory board to execute confidentiality agreements upon the commencement of employment, consulting or business relationships with ARCA. These agreements provide that all confidential information developed or made known during the course of the relationship with ARCA be kept confidential and not disclosed to third parties except in specific circumstances. In the case of employees, the agreements provide that all inventions resulting from work performed for ARCA, utilizing the property or relating to ARCA's business and conceived or completed by the individual during employment shall be ARCA's exclusive property to the extent permitted by applicable law.

Third parties may breach these and other agreements with ARCA regarding its intellectual property and ARCA may not have adequate remedies for the breach. Third parties could also fail to take necessary steps to protect ARCA's licensed intellectual property, which could seriously harm ARCA's intellectual property position.

If ARCA is not able to protect its proprietary technology, trade secrets and know-how, then its competitors may develop competing products. Any issued patent may not be sufficient to prevent others from competing with ARCA. Further, ARCA has trade secrets relating to rNAPc2 and Gencaro, and such trade secrets may become known or independently discovered. ARCA's issued patents and those that may issue in the future, or those licensed to ARCA, may be challenged, opposed, invalidated or circumvented, which could allow competitors to market similar products or limit the patent protection term of ARCA's product candidates. All of these factors may affect ARCA's competitive position.

If the manufacture, use or sale of ARCA's products infringe on the intellectual property rights of others, ARCA could face costly litigation, which could cause it to pay substantial damages or licensing fees and limit its ability to sell some or all of its products.

Extensive litigation regarding patents and other intellectual property rights has been common in the biopharmaceutical industry. Litigation may be necessary to assert infringement claims, enforce patent rights, protect trade secrets or know-how and determine the enforceability, scope and validity of certain proprietary rights. Litigation may even be necessary to defend disputes of inventorship or ownership of proprietary rights. The defense and prosecution of intellectual property lawsuits, U.S. Patent and Trademark Office interference proceedings, and related legal and administrative proceedings (e.g., a reexamination, *inter partes* review, or post-grant review) in the United States and internationally involve complex legal and factual questions. As a result, such proceedings are costly and time-consuming to pursue, and their outcome is uncertain.

Regardless of merit or outcome, ARCA's involvement in any litigation, interference or other administrative proceedings could cause it to incur substantial expense and could significantly divert the efforts of its technical and management personnel. Any public announcements related to litigation or interference proceedings initiated or threatened against ARCA could cause ARCA's stock price to decline. Adverse outcomes in patent litigation may potentially subject ARCA to antitrust litigation which, regardless of the outcome, would adversely affect ARCA's business. An adverse determination may subject ARCA to the loss of its proprietary position or to significant liabilities, or require it to seek licenses that may include substantial cost and ongoing royalties. Licenses may not be available from third parties, or may not be obtainable on satisfactory terms. An adverse determination or a failure to obtain necessary licenses may restrict or prevent ARCA from manufacturing and selling its products, if any. These outcomes could materially harm ARCA's business, financial condition and results of operations.

Risks Related to Ownership of ARCA Common Stock and Stock Price Volatility

ARCA's stock price has been and is expected to be volatile.

ARCA common stock has in the past been, and in the future could be, subject to significant fluctuations. Market prices for securities of early-stage pharmaceutical, biotechnology and other life sciences companies have historically been particularly volatile. Some of the factors that may cause the market price of ARCA common stock to fluctuate include:

- failure to complete, or delays in completing, the Merger;
- the regulatory status of Gencaro, rNAPc2 and the genetic test, and whether and when they are approved for sale, if at all, and the labeling or other conditions of use imposed by the FDA;
- ARCA's ability to secure additional funding or complete a strategic transaction or to complete development of and commercialize Gencaro or rNAPc2;
- progress of any future clinical trials for Gencaro, rNAPc2 or ARCA's other product candidate, including enrollment and any data that may become available;
- the results of ARCA's future clinical trials and any future NDAs of ARCA's current and future product candidates;
- the entry into, or termination of, key agreements, including key strategic alliance agreements;
- the results and timing of regulatory reviews relating to ARCA's product candidates;
- failure of any of ARCA's product candidates, if approved, to achieve commercial success;
- general and industry-specific economic conditions that may affect ARCA's research and development expenditures;
- the results of clinical trials conducted by others on drugs that would compete with ARCA's product candidates;
- issues in manufacturing or testing ARCA's product candidates or any approved products;
- the initiation of or material developments in or the conclusion of litigation to enforce or defend any of ARCA's intellectual property rights;
- the loss of key employees;
- the introduction of technological innovations or new commercial products by ARCA's competitors;
- changes in estimates or recommendations by securities analysts, if any, who cover ARCA common stock;
- future sales of ARCA common stock;
- changes in the structure of health care payment systems;
- period-to-period fluctuations in ARCA's financial results; and
- ARCA's ability to retain the listing of ARCA common stock on the Nasdaq Capital Market.

Moreover, the stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies, including as a result of deteriorating market conditions due to investor concerns regarding inflation, adverse developments affecting the financial services industry, continued hostilities between Russia and Ukraine and Hamas' attack against Israel and the ensuing conflict. These broad market fluctuations may also adversely affect the trading price of ARCA common stock. In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted class action securities litigation against those companies. Such litigation, if instituted, could result in substantial costs and diversion of management attention and resources, which could significantly harm ARCA's profitability and reputation.

Future sales or the possibility of future sales of ARCA common stock may depress the market price of ARCA common stock.

Sales in the public market of substantial amounts of ARCA common stock could depress prevailing market prices of ARCA common stock. As of March 31, 2024, approximately 14.5 million shares of common stock were outstanding, and all of these shares are freely transferable without restriction or further registration under the Securities Act of 1933, as amended, or the Securities Act, except for shares held by ARCA's directors, officers and other affiliates and unregistered shares held by non-affiliates. The sale of these additional shares, or the perception that such sales may occur, could depress the market price of ARCA common stock.

As of March 31, 2024, there were approximately 646,000 shares of ARCA common stock which may be issued upon the exercise of outstanding stock options, and ARCA anticipates that it will continue to issue stock option and restricted stock unit awards to its employees and consultants in the fiscal year ended December 31, 2024 and thereafter. If and when these options are exercised, such shares will be available for sale in the open market without further registration under the Securities Act. The existence of these outstanding options may negatively affect ARCA's ability to complete future equity financings at acceptable prices and on acceptable terms. The exercise of those options, and the prompt resale of shares of ARCA common stock received, may also result in downward pressure on the price of ARCA common stock.

In the absence of a significant strategic transaction, ARCA will need to raise significant additional capital to finance the research, development and commercialization of Gencaro, rNAPc2 and its other product candidate. If future securities offerings occur, they would dilute ARCA's current stockholders' equity interests and could reduce the market price of ARCA common stock.

ARCA does not expect to pay cash dividends, and accordingly, stockholders must rely on stock appreciation for any return on their investment.

ARCA has never paid cash dividends on any of its capital stock. As a result, other than the potential special cash dividend described below, only appreciation of the price of ARCA common stock will provide a return to stockholders. Investors seeking cash dividends should not invest in ARCA common stock. In addition, pursuant to the terms of the Merger Agreement, ARCA may declare and pay a special cash dividend to ARCA stockholders of record prior to the closing of the Merger consisting of cash up to an amount equal in the aggregate of the amount by which ARCA's net cash will exceed $5.0 million. See, "ARCA has never paid and, other than in connection with the Merger with Oruka, do not intend to pay any cash dividends in the foreseeable future" for further discussion on the special cash dividend.

ARCA's business could be negatively affected as a result of actions of activist shareholders.

Responding to actions by activist shareholders could be costly and time-consuming, disrupt ARCA's operations and divert the attention of management and ARCA's employees. For example, in connection with the negotiation and entry into a cooperation agreement in June 2022 with Cable Car Capital LLC, The Funicular Fund, LP, Funicular Funds, LP and Jacob Ma-Weaver, collectively, Cable Car, one of ARCA's stockholders, ARCA appointed two new directors in 2022. Activist shareholders may advocate for certain governance and strategic changes at ARCA. In the event of stockholder activism, particularly with respect to matters which ARCA's board of directors, in exercising their fiduciary duties, disagree with or have determined not to pursue, ARCA's business could be adversely affected because responding to actions by activist stockholders can be costly and time-consuming, disrupting ARCA's

operations and diverting the attention of management, and perceived uncertainties as to ARCA's future direction may result in the loss of potential business opportunities and may make it more difficult to attract and retain qualified personnel, business partners, and customers.

Additionally, if faced with a consent solicitation or proxy contest, ARCA may not be able to respond successfully to the contest or dispute, which would be disruptive to its business. If individuals are elected to ARCA's board of directors with a differing agenda, ARCA's ability to effectively and timely implement its strategic plan and create additional value for ARCA stockholders may be adversely affected. In addition, ARCA's share price could experience periods of increased volatility as a result of shareholder activism.

ARCA has implemented anti-takeover provisions that could discourage, prevent or delay a takeover, even if the acquisition would be beneficial to ARCA stockholders.

Provisions of the ARCA Charter and ARCA Bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire ARCA, even if doing so would benefit ARCA stockholders. These provisions:

- establish a classified board of directors so that not all members of ARCA's board may be elected at one time;
- authorize the issuance of up to approximately 5 million additional shares of preferred stock that could be issued by ARCA's board of directors to increase the number of outstanding shares and hinder a takeover attempt;
- limit who may call a special meeting of stockholders;
- prohibit stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of ARCA stockholders; and
- establish advance notice requirements for nominations for election to ARCA's board of directors or for proposing matters that can be acted upon at a stockholder meeting.

Specifically, the ARCA Charter provides that all stockholder action must be effected at a duly called meeting and not by a written consent. The ARCA Bylaws provide, however, that ARCA stockholders may call a special meeting of stockholders only upon a request of stockholders owning at least 50% of ARCA's outstanding common stock. These provisions of the ARCA Charter and ARCA Bylaws could discourage potential acquisition proposals and could delay or prevent a change in control. ARCA designed these provisions to reduce its vulnerability to unsolicited acquisition proposals and to discourage certain tactics that may be used in proxy fights. These provisions, however, could also have the effect of discouraging others from making tender offers for ARCA's shares. As a consequence, they also may inhibit fluctuations in the market price of ARCA's shares that could result from actual or rumored takeover attempts. Such provisions also may have the effect of preventing changes in ARCA's management.

ARCA is permitted to issue shares of ARCA preferred stock without stockholder approval upon such terms as ARCA's board of directors determines. Therefore, the rights of the holders of ARCA common stock are subject to, and may be adversely affected by, the rights of the holders of ARCA preferred stock that may be issued in the future. In addition, the issuance of preferred stock could have a dilutive effect on the holdings of ARCA's current stockholders.

ARCA is subject to the Delaware anti-takeover laws regulating corporate takeovers. These anti-takeover laws prevent a Delaware corporation from engaging in a merger or sale of more than 10% of its assets with any stockholder, including all affiliates and associates of the stockholder, who owns 15% or more of the corporation's outstanding voting stock, for three years following the date that the stockholder acquired 15% or more of the corporation's stock unless:

- the board of directors approved the transaction where the stockholder acquired 15% or more of the corporation's stock;
- after the transaction in which the stockholder acquired 15% or more of the corporation's stock, the stockholder owned at least 85% of the corporation's outstanding voting stock, excluding shares owned

by directors, officers and employee stock plans in which employee participants do not have the right to determine confidentially whether shares held under the plan will be tendered in a tender or exchange offer; or

- on or after this date, the merger or sale is approved by the board of directors and the holders of at least two-thirds of the outstanding voting stock that is not owned by the stockholder.

The provisions of ARCA's governing documents and current Delaware law may, collectively:

- lengthen the time required for a person or entity to acquire control of ARCA through a proxy contest for the election of a majority of ARCA's board of directors;
- discourage bids for ARCA common stock at a premium over market price; and
- generally deter efforts to obtain control of ARCA.

Risks Related to Oruka

Risks Related to Oruka's Financial Condition and Capital Requirements

Even if the Merger and Oruka pre-closing financing are successful, Oruka will need to raise additional capital, and if it is unable to do so when needed, that will raise substantial doubt about Oruka's ability to continue as a going concern.

As of March 31, 2024, Oruka had $27.7 million of cash. Should this financing be successful, Oruka will need to raise additional capital to continue to fund its operations and service its debt obligations in the future. If Oruka is unable to raise additional capital when needed, that will raise substantial doubt about Oruka's ability to continue as a going concern. As a result, Oruka has concluded there is substantial doubt about its ability to continue as a going concern for at least twelve months from the date its financial statement as of February 6, 2024 is available to be issued. In light of these concerns, Oruka's independent registered public accounting firm included in its opinion on the financial statement an explanatory paragraph expressing substantial doubt about Oruka's ability to continue as a going concern beyond twelve months from the date Oruka's financial statement is available to be issued.

Developing Oruka's product candidates requires a substantial amount of capital. Following the Merger and Oruka pre-closing financing, the combined company will also incur additional costs associated with operating as a public company. Oruka expects its research and development expenses to increase in connection with its ongoing activities, particularly as it advances its product candidates through clinical trials. Oruka will need to raise additional capital to fund its operations and such funding may not be available to Oruka on acceptable terms, or at all, and such funding may become even more difficult to obtain due to rising interest rates and the current downturn in the U.S. capital markets and the biotechnology sector in general. Competition for additional capital among biotechnology companies may be particularly intense during this present economic downturn. Oruka may be unable to raise capital through public offerings of its common stock and may need to turn to alternative financing arrangements. Such arrangements, if Oruka pursues them, could involve issuances of one or more types of securities, including common stock, preferred stock, convertible debt, warrants to acquire common stock or other securities. These securities could be issued at or below the then prevailing market price for Oruka common stock. In addition, if Oruka issues debt securities, the holders of the debt would have a claim to Oruka's assets that would be superior to the rights of stockholders until the principal, accrued and unpaid interest and any premium or make-whole has been paid. Interest on any newly-issued debt securities and/or newly-incurred borrowings would increase Oruka's operating costs and reduce its net income (or increase its net loss), and these impacts may be material. If the issuance of new securities results in diminished rights to holders of Oruka common stock, the market price of Oruka common stock could be materially and adversely affected.

Oruka does not currently have any products approved for sale and does not generate any revenue from product sales. Accordingly, Oruka expects to rely primarily on equity and/or debt financings to fund its continued operations. Oruka's ability to raise additional funds will depend, in part, on the success of its preclinical studies and clinical trials and other product development activities, regulatory events, its ability to identify and enter into licensing or other strategic arrangements, and other events or conditions that may affect its value or prospects, as well as factors related to financial, economic and market conditions, many of which are beyond Oruka's control. There can be no assurances that sufficient funds will be available to Oruka when required or on acceptable terms, if at all.

If Oruka is unable to raise additional capital when required or on acceptable terms, it may be required to:

- significantly delay, scale back, or discontinue the development or commercialization of its product candidates;
- seek strategic partnerships, or amend existing partnerships, for research and development programs at an earlier stage than otherwise would be desirable or that Oruka otherwise would have sought to develop independently, or on terms that are less favorable than might otherwise be available in the future;
- dispose of technology assets, or relinquish or license on unfavorable terms, Oruka's rights to technologies or any of its product candidates that it otherwise would seek to develop or commercialize itself;
- pursue the sale of the company to a third party at a price that may result in a loss on investment for Oruka's stockholders; or
- file for bankruptcy or cease operations altogether (and face any related legal proceedings).

Any of these events could have a material adverse effect on Oruka's business, operating results, and prospects.

Even if successful in raising new capital, Oruka could be limited in the amount of capital it raises due to investor demand restrictions placed on the amount of capital it raises or other reasons.

Additionally, any capital raising efforts are subject to significant risks and contingencies, as described in more detail under the risk factor titled "*Raising additional capital may cause dilution to Oruka's stockholders, restrict its operations, or require it to relinquish rights.*"

Oruka has never generated any revenue from product sales and may never be profitable.

Oruka has no products approved for commercialization and has never generated any revenue from product sales. Oruka's ability to generate revenue and achieve profitability depends on its ability, alone or with strategic collaborators, to successfully complete the development of, and obtain the regulatory and marketing approvals necessary to commercialize one or more of its product candidates. Oruka does not anticipate generating revenue from product sales for the foreseeable future. Oruka's ability to generate future revenue from product sales depends heavily on its success in many areas, including but not limited to:

- completing research and development of its product candidates;
- obtaining regulatory and marketing approvals for its product candidates for which it completes clinical trials;
- manufacturing product candidates and establishing and maintaining supply and manufacturing relationships with third parties that are commercially feasible, meet regulatory requirements and Oruka's supply needs in sufficient quantities to meet market demand for its product candidates, if approved;
- qualifying for adequate coverage and reimbursement by government and third-party payors for any product candidates for which Oruka obtains regulatory and marketing approval;
- marketing, launching, and commercializing product candidates for which Oruka obtains regulatory and marketing approval, either directly or with a collaborator or distributor;
- gaining market acceptance of Oruka's product candidates as treatment options;
- addressing any competing products and technological and market developments;
- implementing internal systems and infrastructure, as needed;
- protecting and enforcing Oruka's intellectual property rights, including patents, trade secrets, and know-how;
- negotiating favorable terms in any collaboration, licensing, or other arrangements into which Oruka may enter;

- obtaining coverage and adequate reimbursement from third-party payors and maintaining pricing for Oruka's product candidates that supports profitability; and
- attracting, hiring, and retaining qualified personnel.

Even if one or more of the product candidates that Oruka develops is approved for commercial sale, Oruka anticipates incurring significant costs associated with commercializing any approved product candidate. Oruka's expenses could increase beyond expectations if it is required by regulatory authorities to perform clinical and other studies in addition to those that Oruka anticipates. Even if Oruka is able to generate revenues from the sale of any approved products, it may not become profitable and may need to obtain additional funding to continue operations. Oruka will also have to develop or acquire manufacturing capabilities or continue to contract with contract manufacturers in order to continue development and potential commercialization of its product candidates. For instance, if the costs of manufacturing Oruka's drug product are not commercially feasible, Oruka will need to develop or procure its drug product in a commercially feasible manner in order to successfully commercialize a future approved product, if any. Additionally, if Oruka is not able to generate revenue from the sale of any approved products, it may never become profitable.

Oruka is a preclinical stage biopharmaceutical company with a limited operating history on which to assess its business; it has not initiated, conducted or completed any clinical trials, has no products approved for commercial sale, has historically incurred losses, and anticipates that it will continue to incur significant losses for the foreseeable future.

Oruka is a preclinical stage biopharmaceutical company with a limited operating history. Since February 6, 2024 (inception), Oruka has incurred significant operating losses. For the period between February 6, 2024 (inception) to March 31, 2024, Oruka reported a net loss of $7.1 million and had an accumulated deficit of $7.1 million. Oruka will need to raise substantial additional capital to continue to fund its operations in the future. Failure to raise capital as and when needed, on favorable terms or at all, would have a negative impact on Oruka's financial condition and its ability to develop its product candidates. Changing circumstances may cause Oruka to consume capital significantly faster or slower than it currently anticipates. If Oruka is unable to acquire additional capital or resources, it will be required to modify its operational plans to complete future milestones and it may be required to delay, limit, reduce or eliminate development or future commercialization efforts of product candidates and/or programs. Oruka has based these estimates on assumptions that may prove to be wrong, and it could exhaust its available financial resources sooner than it currently anticipates. Oruka may be forced to reduce its operating expenses and raise additional funds to meet its working capital needs, principally through the additional sales of its securities or debt financings or entering into strategic collaborations.

Oruka has devoted substantially all of its financial resources to identify, acquire, and develop its product candidates, organizing and staffing its company, and providing general and administrative support for its operations. To date, Oruka has funded its operations primarily from the sale and issuance of convertible preferred and common equity securities and unsecured convertible notes. The amount of Oruka's future net losses will depend, in part, on the rate of its future expenditures and its ability to obtain funding through equity or debt financings, strategic collaborations, or grants.

Biopharmaceutical product development is a highly speculative undertaking and involves a substantial degree of risk. Oruka expects its losses to increase as its product candidates enter more advanced clinical trials. It may be several years, if ever, before Oruka completes pivotal clinical trials or has a product candidate approved for commercialization. Oruka expects to invest significant funds into the research and development of its current programs to determine the potential to advance product candidates to regulatory approval. If Oruka obtains regulatory approval to market a product candidate, its future revenue will depend upon the size of any markets in which its product candidates may receive approval, and its ability to achieve sufficient market acceptance, pricing, coverage and adequate reimbursement from third-party payors, and adequate market share for its product candidates in those markets. Even if Oruka obtains adequate market share for its product candidates, because the potential markets in which its product candidates may ultimately receive regulatory approval could be very small, Oruka may never become profitable despite obtaining such market share and acceptance of its products.

Oruka expects to continue to incur significant expenses and increasing operating losses for the foreseeable future and its expenses will increase substantially if and as it:

- continues the preclinical development and initiates the clinical development of its product candidates;
- continues efforts to discover and develop new product candidates;
- continues the manufacturing of its product candidates or increases volumes manufactured by third parties;
- advances its product candidates into larger, more expensive clinical trials;
- initiates additional preclinical studies or clinical trials for its product candidates;
- seeks regulatory and marketing approvals and reimbursement for its product candidates;
- establishes a sales, marketing, and distribution infrastructure to commercialize any products for which it may obtain marketing approval and market for itself;
- seeks to identify, assess, acquire, and/or develop other product candidates;
- makes milestone, royalty, or other payments under third-party license agreements;
- seeks to maintain, protect, and expand its intellectual property portfolio;
- is required to pay penalties under its registration rights agreement for failing to timely register the applicable securities;
- seeks to attract and retain skilled personnel; and
- experiences any delays or encounters issues with the development and potential regulatory approval of its clinical and product candidates such as safety issues, manufacturing delays, clinical trial accrual delays, longer follow-up for planned studies or trials, additional major studies or trials, or supportive trials necessary to support marketing approval.

Oruka has no significant experience as a company in initiating, conducting or completing clinical trials. In part because of this lack of experience, Oruka cannot be certain that its planned clinical trials will begin or be completed on time, if at all. In addition, Oruka has not yet demonstrated an ability to obtain marketing approvals, manufacture a commercial-scale product or arrange for a third party to do so on its behalf, or conduct sales, marketing and distribution activities necessary for successful product commercialization. Consequently, any predictions you make about Oruka's future success or viability may not be as accurate as they could be if Oruka had a longer operating history. Further, the net losses Oruka incurs may fluctuate significantly from quarter to quarter and year to year, such that a period-to-period comparison of its results of operations may not be a good indication of its future performance.

Raising additional capital may cause dilution to Oruka's stockholders, restrict its operations, or require it to relinquish rights.

Until such time, if ever, as Oruka can generate substantial revenue from the sale of its product candidates, Oruka expects to finance its cash needs through a combination of equity offerings, debt financings and license and development agreements. To the extent that Oruka raises additional capital through the sale of equity securities or convertible debt securities, the ownership interest of its stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of holders of Oruka common stock. Debt financing and preferred equity financing, if available, may involve agreements that include covenants limiting or restricting Oruka's ability to take specific actions, such as incurring additional debt, making capital expenditures, or declaring dividends.

If Oruka raises additional funds through collaborations, strategic alliances or marketing, distribution or licensing arrangements with third parties, it may be required to relinquish valuable rights to its research programs or product candidates or grant licenses on terms that may not be favorable to it. If Oruka is unable to raise additional

funds through equity or debt financings or other arrangements with third parties when needed, it may be required to delay, limit, reduce or terminate its product development or future commercialization efforts or grant rights to third parties to develop and market product candidates that Oruka would otherwise prefer to develop and market itself.

To the extent that Oruka raises additional capital through the sale of equity, including pursuant to any sales under convertible debt or other securities convertible into equity, the ownership interest of its stockholders will be diluted, and the terms of these new securities may include liquidation or other preferences that adversely affect the rights of its stockholders. For instance, in March 2024, Oruka sold an aggregate of 20,000,000 shares of Series A preferred stock and the Convertible Note to Fairmount Fund II for gross proceeds of $28.0 million.

Debt financing, if available, would likely involve agreements that include covenants limiting or restricting Oruka's ability to take specific actions, such as incurring additional debt, making capital expenditures, making additional product acquisitions, or declaring dividends. If Oruka raises additional funds through strategic collaborations or licensing arrangements with third parties, Oruka may have to relinquish valuable rights to its product candidates or future revenue streams or grant licenses on terms that are not favorable to Oruka. Oruka cannot assure that it will be able to obtain additional funding if and when necessary to fund its entire portfolio of product candidates to meet its projected plans. If Oruka is unable to obtain funding on a timely basis, it may be required to delay or discontinue one or more of its development programs or the commercialization of any product candidates or be unable to expand its operations or otherwise capitalize on potential business opportunities, which could materially harm Oruka's business, financial condition, and results of operations.

Risks Related to Discovery, Development and Commercialization

Oruka faces competition from entities that have developed or may develop programs for the diseases addressed by product candidates developed by Oruka.

The development and commercialization of drugs is highly competitive. Product candidates developed by Oruka, if approved, will face significant competition and Oruka's failure to effectively compete may prevent it from achieving significant market penetration. Oruka competes with a variety of multinational biopharmaceutical companies, specialized biotechnology companies and emerging biotechnology companies, as well as academic institutions, governmental agencies, and public and private research institutions, among others. Many of the companies with which Oruka is currently competing or will compete against in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, clinical trial conduct, regulatory approvals, and marketing than Oruka does. Mergers and acquisitions in the pharmaceutical and biotechnology industry may result in even more resources being concentrated among a smaller number of Oruka's competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with Oruka in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites, recruiting participants for clinical trials, as well as in acquiring technologies complementary to, or necessary for, Oruka's product candidates.

Oruka's competitors have developed, are developing or will develop programs and processes competitive with its programs and processes. Competitive therapeutic treatments include those that have already been approved and accepted by the medical community and any new treatments. Oruka's success will depend partially on its ability to develop and commercialize products that have a competitive safety, efficacy, dosing and/or presentation profile. Oruka's commercial opportunity and success will be reduced or eliminated if competing products are safer, more effective, have a more attractive dosing profile or presentation or are less expensive than the products Oruka develops, or if Oruka's competitors develop competing products or if biosimilars enter the market more quickly than Oruka does and are able to gain market acceptance. See the section titled "*Oruka's Business — Competition*" for more discussion about Oruka's competitors.

In addition, because of the competitive landscape for I&I indications, Oruka may also face competition for clinical trial enrollment. Clinical trial enrollment will depend on many factors, including if potential clinical trial participants choose to undergo treatment with approved products or enroll in competitors' ongoing clinical trials for programs that are under development for the same indications as Oruka's programs. An increase in the number of

approved products for the indications Oruka is targeting with its programs may further exacerbate this competition. Oruka's inability to enroll a sufficient number of participants could, among other things, delay its development timeline, which may further harm its competitive position.

Oruka's programs are in preclinical stages of development and may fail in development or suffer delays that materially and adversely affect their commercial viability. If Oruka or its current or future collaborators are unable to complete development of or commercialize Oruka's product candidates, or experience significant delays in doing so, Oruka's business will be materially harmed.

Oruka has no products on the market, and all of its programs are in preclinical stages of development and have not been tested in humans. As a result, Oruka expects it will be many years before it commercializes any product candidate, if ever. Oruka's ability to achieve and sustain profitability depends on obtaining regulatory approvals for, and successfully commercializing, its product candidates, either alone or with third parties, and Oruka cannot guarantee you that it will ever obtain regulatory approval for any of its product candidates. Oruka has not yet demonstrated its ability to initiate or complete any clinical trials, obtain regulatory approvals, manufacture a clinical or commercial scale product or arrange for a third party to do so on its behalf, or conduct sales and marketing activities necessary for successful product commercialization. Before obtaining regulatory approval for the commercial distribution of Oruka's product candidates, Oruka or an existing or future collaborator must conduct extensive preclinical tests and clinical trials to demonstrate the safety and efficacy in humans of Oruka's programs and product candidates.

Oruka or its collaborators may experience delays in initiating or completing clinical trials. Oruka or its collaborators also may experience numerous unforeseen events during, or as a result of, any clinical trials that they could conduct that could delay or prevent Oruka's ability to receive marketing approval or commercialize its product candidates, including:

- regulators or institutional review boards ("IRBs"), the FDA or ethics committees may not authorize Oruka or its investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- Oruka may experience delays in reaching, or fail to reach, agreement on acceptable terms with prospective trial sites and prospective contract research organizations ("CROs"), the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- clinical trial sites deviating from trial protocol or dropping out of a trial;
- clinical trials of any product candidates may fail to show safety or efficacy, produce negative or inconclusive results, and Oruka may decide, or regulators may require it, to conduct additional preclinical studies or clinical trials or Oruka may decide to abandon product development programs;
- the number of subjects required for clinical trials of any product candidates may be larger than Oruka anticipates, especially if regulatory bodies require completion of non-inferiority or superiority trials, enrollment in these clinical trials may be slower than Oruka anticipates or subjects may drop out of these clinical trials or fail to return for post-treatment follow-up at a higher rate than Oruka anticipates;
- Oruka's third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to Oruka in a timely manner, or at all, or may deviate from the clinical trial protocol or drop out of the trial, which may require that Oruka add new clinical trial sites or investigators;
- Oruka may elect to, or regulators, IRBs or ethics committees may require that Oruka or its investigators, suspend or terminate clinical research or trials for various reasons, including noncompliance with regulatory requirements or a finding that the participants in Oruka's trials are being exposed to unacceptable health risks;
- the cost of clinical trials of any of Oruka's programs may be greater than Oruka anticipates;
- the quality of Oruka's product candidates or other materials necessary to conduct clinical trials of Oruka's product candidates may be inadequate to initiate or complete a given clinical trial;
- Oruka's inability to manufacture sufficient quantities of its product candidates for use in clinical trials;

- reports from clinical testing of other therapies may raise safety or efficacy concerns about Oruka's programs;
- Oruka's failure to establish an appropriate safety profile for a product candidate based on clinical or preclinical data for such product candidates as well as data emerging from other therapies in the same class as Oruka's product candidates; and
- the FDA or other regulatory authorities may require Oruka to submit additional data such as long-term toxicology studies, or impose other requirements before permitting Oruka to initiate a clinical trial.

Commencing clinical trials in the United States is subject to acceptance by the FDA of an investigational new drug application ("IND"), biologics license application ("BLA") or similar application and finalizing the trial design based on discussions with the FDA and other regulatory authorities. In the event that the FDA requires Oruka to complete additional preclinical studies or it is required to satisfy other FDA requests prior to commencing clinical trials, the start of Oruka's first clinical trials may be delayed. Even after Oruka receives and incorporates guidance from these regulatory authorities, the FDA or other regulatory authorities could disagree that Oruka has satisfied their requirements to commence any clinical trial or change their position on the acceptability of Oruka's trial design or the clinical endpoints selected, which may require Oruka to complete additional preclinical studies or clinical trials, delay the enrollment of Oruka's clinical trials or impose stricter approval conditions than Oruka currently expects. There are equivalent processes and risks applicable to clinical trial applications in other countries, including countries in the European Union ("EU").

Oruka may not have the financial resources to continue development of, or to modify existing or enter into new collaborations for, a product candidate if it experiences any issues that delay or prevent regulatory approval of, or its ability to commercialize, its product candidates. Oruka or its current or future collaborators' inability to complete development of, or commercialize Oruka's product candidates, or significant delays in doing so, could have a material and adverse effect on Oruka's business, financial condition, results of operations and prospects.

Oruka is substantially dependent on the success of its two most advanced programs, ORKA-001 and ORKA-002, and its anticipated clinical trials of such programs may not be successful.

Oruka's future success is substantially dependent on its ability to timely obtain marketing approval for, and then successfully commercialize, its two most advanced programs, ORKA-001 and ORKA-002. Oruka is investing a majority of its efforts and financial resources into the research and development of these programs. Oruka anticipates initiating a Phase 1 clinical trial in healthy volunteers of ORKA-001 in the first half of 2025 and of ORKA-002 in the second half of 2025, each subject to the filing of an IND or foreign equivalent and regulatory approval. The success of Oruka's programs is dependent on observing a longer half-life of Oruka's product candidates in humans than other extended half-life monoclonal antibodies ("mAbs") currently marketed and in development as Oruka believes this longer half-life has the potential to result in a more favorable dosing schedule for Oruka's product candidates, assuming they successfully complete clinical development and obtain marketing approval. This is based in part on the assumption that the longer half-life Oruka has observed in non-human primates ("NHPs") will translate into an extended half-life of Oruka's product candidates in humans. To the extent Oruka does not observe this extended half-life when it doses humans with its product candidates, it would significantly and adversely affect the clinical and commercial potential of its product candidates.

Oruka's programs will require additional clinical development, evaluation of clinical, preclinical and manufacturing activities, product development, marketing approval in multiple jurisdictions, substantial investment and significant marketing efforts before Oruka generates any revenues from product sales. Oruka is not permitted to market or promote these programs, or any other programs, before it receives marketing approval from the FDA and comparable foreign regulatory authorities, and Oruka may never receive such marketing approvals.

The success of Oruka's product candidates will depend on a variety of factors. Oruka does not have complete control over many of these factors, including certain aspects of clinical development and the regulatory submission process, potential threats to Oruka's intellectual property rights and the manufacturing, marketing, distribution and sales efforts of any current or future collaborator. Accordingly, Oruka cannot assure you that it will ever be able to generate revenue through the sale of these product candidates, even if approved. If Oruka is not successful in commercializing its ORKA-001 or ORKA-002 programs, or is significantly delayed in doing so, Oruka's business will be materially harmed.

If Oruka does not achieve its projected development goals in the time frames it announces and expects, the commercialization of Oruka's product candidates may be delayed and its expenses may increase and, as a result, its stock price may decline.

From time to time, Oruka estimates the timing of the anticipated accomplishment of various scientific, clinical, regulatory and other product development goals, which it sometimes refers to as milestones. These milestones may include the commencement or completion of scientific studies and clinical trials, such as the expected timing for the anticipated commencement of Oruka's Phase 1 studies, clinical trials in PsO and other target indications, as well as the submission of regulatory filings. From time to time, Oruka may publicly announce the expected timing of some of these milestones. All of these milestones are and will be based on numerous assumptions. The actual timing of these milestones can vary dramatically compared to Oruka's estimates, in some cases for reasons beyond Oruka's control. If Oruka does not meet these milestones as publicly announced, or at all, the commercialization of its product candidates may be delayed or never achieved and, as a result, its stock price may decline. Additionally, delays relative to Oruka's projected timelines are likely to cause overall expenses to increase, which may require Oruka to raise additional capital sooner than expected and prior to achieving targeted development milestones.

Any drug delivery device that Oruka potentially uses to deliver its product candidates may have its own regulatory, development, supply and other risks.

Oruka expects to deliver its product candidates via a drug delivery device, such as an injector or other delivery system. There may be unforeseen technical complications related to the development activities required to bring such a product to market, including primary container compatibility and/or dose volume requirements. Oruka's product candidates may not be approved or may be substantially delayed in receiving approval if the devices that Oruka chooses to develop do not gain and/or maintain their own regulatory approvals or clearances. Where approval of the drug product and device is sought under a single application, the increased complexity of the review process may delay approval. In addition, some drug delivery devices are provided by single-source unaffiliated third-party companies. Oruka may be dependent on the sustained cooperation and effort of those third-party companies both to supply the devices and, in some cases, to conduct the studies required for approval or other regulatory clearance of the devices. Even if approval is obtained, Oruka may also be dependent on those third-party companies continuing to maintain such approvals or clearances once they have been received. Failure of third-party companies to supply the devices, to successfully complete studies on the devices in a timely manner, or to obtain or maintain required approvals or clearances of the devices could result in increased development costs, delays in or failure to obtain regulatory approval and delays in product candidates reaching the market or in gaining approval or clearance for expanded labels for new indications.

Oruka's approach to the discovery and development of its programs is unproven, and Oruka may not be successful in its efforts to build a pipeline of programs with commercial value.

Oruka's approach to the discovery and development of the research programs with respect to which it has the option to acquire intellectual property license rights to pursuant to the Paragon Option Agreements leverages clinically validated mechanisms of action and incorporates advanced antibody engineering to optimize half-life and other properties designed to overcome limitations of existing therapies. Oruka's programs are purposefully designed to improve upon existing product candidates and products while maintaining the same, well-established mechanisms of action. However, the scientific research that forms the basis of Oruka's efforts to develop programs using half-life extension technologies is ongoing and may not result in viable programs. There is limited clinical data available on product candidates utilizing half-life extension technologies, especially in I&I indications, demonstrating whether they are safe or effective for long-term treatment in humans. The long-term safety and efficacy of these technologies and the extended half-life and exposure profile of Oruka's programs compared to currently approved products is unknown.

Oruka may ultimately discover that utilizing half-life extension technologies for its specific targets and indications and any programs resulting therefrom does not possess certain properties required for therapeutic effectiveness. Oruka currently has only preclinical data regarding the increased half-life properties of its programs and the same results may not be seen in humans. In addition, programs using half-life extension technologies may

demonstrate different chemical and pharmacological properties in participants than they do in laboratory studies. This technology and any programs resulting therefrom may not demonstrate the same chemical and pharmacological properties in humans and may interact with human biological systems in unforeseen, ineffective or harmful ways.

In addition, Oruka may in the future seek to discover and develop programs that are based on novel targets and technologies that are unproven. If Oruka's discovery activities fail to identify novel targets or technologies for drug discovery, or such targets prove to be unsuitable for treating human disease, Oruka may not be able to develop viable additional programs. Oruka and its existing or future collaborators may never receive approval to market and commercialize any product candidate. Even if Oruka or an existing or future collaborator obtains regulatory approval, the approval may be for targets, disease indications or patient populations that are not as broad as Oruka intended or desired or may require labeling that includes significant use or distribution restrictions or safety warnings. If the products resulting from the research programs with respect to which Oruka has the option to acquire intellectual property license rights to pursuant to the Paragon Option Agreements prove to be ineffective, unsafe or commercially unviable, such programs would have little, if any, value, which would have a material and adverse effect on Oruka's business, financial condition, results of operations and prospects.

Preclinical and clinical development involves a lengthy and expensive process that is subject to delays and uncertain outcomes, and results of earlier studies and trials may not be predictive of future clinical trial results. If Oruka's preclinical studies and clinical trials are not sufficient to support regulatory approval of any of its product candidates, Oruka may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development of such product candidate.

Before obtaining marketing approval from regulatory authorities for the sale of any product candidate, Oruka must complete preclinical studies and then conduct extensive clinical trials to demonstrate the safety and efficacy of such product candidate in humans. Oruka's clinical trials may not be conducted as planned or completed on schedule, if at all, and failure can occur at any time during the preclinical study or clinical trial process. For example, Oruka depends on the availability of NHPs to conduct certain preclinical studies that it is required to complete prior to submitting an IND and initiating clinical development. There is currently a global shortage of NHPs available for drug development. This could cause the cost of obtaining NHPs for Oruka's future preclinical studies to increase significantly and, if the shortage continues, could also result in delays to Oruka's development timelines.

Furthermore, a failure of one or more clinical trials can occur at any stage of testing. The outcome of preclinical studies and early-stage clinical trials may not be predictive of the success of later clinical trials. Moreover, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain marketing approval of their product candidates. In addition, Oruka expects to rely on participants to provide feedback on measures such as measures of quality of life, which are subjective and inherently difficult to evaluate. These measures can be influenced by factors outside of Oruka's control, and can vary widely from day-to-day for a particular participant, and from participant to participant and from site to site within a clinical trial.

Oruka cannot be sure that the FDA will agree with its clinical development plan. Oruka plans to use the data from its planned Phase 1 trials of its ORKA-001 and ORKA-002 programs in healthy volunteers to support Phase 2 trials in PsO and other I&I indications. If the FDA requires Oruka to conduct additional trials or enroll additional participants, Oruka's development timelines may be delayed. Oruka cannot be sure that submission of an IND, BLA or similar application will result in the FDA or comparable foreign regulatory authorities, as applicable, allowing clinical trials to begin in a timely manner, if at all. Moreover, even if these trials begin, issues may arise that could cause regulatory authorities to suspend or terminate such clinical trials. Events that may prevent successful or timely initiation or completion of clinical trials include: inability to generate sufficient preclinical, toxicology or other *in vivo* or *in vitro* data to support the initiation or continuation of clinical trials; delays in reaching a consensus with regulatory authorities on study design or implementation of the clinical trials; delays or failure in obtaining regulatory authorization to commence a trial; delays in reaching agreement on acceptable terms with prospective CROs and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and clinical trial sites; delays in identifying, recruiting and training suitable clinical investigators; delays in obtaining required IRB approval at each clinical trial site; delays in manufacturing,

testing, releasing, validating or importing/exporting sufficient stable quantities of Oruka's product candidates for use in clinical trials or the inability to do any of the foregoing; failure by Oruka's CROs, other third parties or Oruka to adhere to clinical trial protocols; failure to perform in accordance with the FDA's or any other regulatory authority's current Good Clinical Practice requirements ("GCPs") or applicable regulatory guidelines in other countries; changes to the clinical trial protocols; clinical sites deviating from trial protocol or dropping out of a trial; changes in regulatory requirements and guidance that require amending or submitting new clinical protocols; selection of clinical endpoints that require prolonged periods of observation or analyses of resulting data; transfer of manufacturing processes to facilities operated by a contract manufacturing organization ("CMO") and delays or failure by Oruka's CMOs or Oruka to make any necessary changes to such manufacturing process; and third parties being unwilling or unable to satisfy their contractual obligations to Oruka.

Oruka could also encounter delays if a clinical trial is suspended or terminated by it, by the IRBs of the institutions in which such clinical trials are being conducted, by the Data Safety Monitoring Board, if any, for such clinical trial or by the FDA or comparable foreign regulatory authorities. Such authorities may suspend or terminate a clinical trial due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or Oruka's clinical trial protocols, inspection of the clinical trial operations or trial site by the FDA or comparable foreign regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from the programs, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial. If Oruka is required to conduct additional clinical trials or other testing of its product candidates beyond those that Oruka currently contemplates, if Oruka is unable to successfully complete clinical trials of its product candidates, if the results of these trials are not positive or are only moderately positive or if there are safety concerns, Oruka's business and results of operations may be adversely affected and it may incur significant additional costs.

If Oruka encounters difficulties enrolling participants in its future clinical trials, its clinical development activities could be delayed or otherwise adversely affected.

Oruka may experience difficulties in patient participant enrollment in its future clinical trials for a variety of reasons. The timely completion of clinical trials in accordance with their protocols depends, among other things, on Oruka's ability to enroll a sufficient number of participants who remain in the trial until its conclusion. The enrollment of participants in future trials for any of Oruka's programs will depend on many factors, including if participants choose to enroll in clinical trials, rather than using approved products, or if Oruka's competitors have ongoing clinical trials for programs that are under development for the same indications as its programs, and participants instead enroll in such clinical trials. Additionally, the number of participants required for clinical trials of Oruka's programs may be larger than Oruka anticipates, especially if regulatory bodies require the completion of non-inferiority or superiority trials. Even if Oruka is able to enroll a sufficient number of participants for its future clinical trials, it may have difficulty maintaining participants in its clinical trials. Oruka's inability to enroll or maintain a sufficient number of participants would result in significant delays in completing clinical trials or receipt of marketing approvals and increased development costs or may require Oruka to abandon one or more clinical trials altogether.

Preliminary, "topline" or interim data from Oruka's clinical trials that it announces or publishes from time to time may change as more participant data become available and are subject to audit and verification procedures.

From time to time, Oruka may publicly disclose preliminary or topline data from its preclinical studies and clinical trials, which are based on a preliminary analysis of then-available data, and the results and related findings and conclusions are subject to change following a more comprehensive review of the data. Oruka also makes assumptions, estimations, calculations and conclusions as part of its analyses of these data without the opportunity to fully and carefully evaluate complete data. As a result, the preliminary or topline results that Oruka reports may differ from future results of the same studies, or different conclusions or considerations may qualify such results, once additional data have been received and fully evaluated or subsequently made subject to audit and verification procedures.

Any preliminary or topline data should be viewed with caution until the final data are available. From time to time, Oruka may also disclose interim data from its preclinical studies and clinical trials. Interim data are subject to the risk that one or more of the clinical outcomes may materially change as participant enrollment continues and more participant data become available or as participants from Oruka's clinical trials continue other treatments. Further, others, including regulatory agencies, may not accept or agree with Oruka's assumptions, estimates,

calculations, conclusions or analyses or may interpret or weigh the importance of data differently, which could impact the value of the particular product candidate, the approvability or commercialization of the particular product candidate and Oruka's company in general. In addition, the information Oruka chooses to publicly disclose regarding a particular preclinical study or clinical trial is based on what is typically extensive information, and you or others may not agree with what Oruka determines is material or otherwise appropriate information to include in its disclosure. If the preliminary, topline or interim data that Oruka reports differ from actual results, or if others, including regulatory authorities, disagree with the conclusions reached, Oruka's ability to obtain approval for, and commercialize, its product candidates may be harmed, which could harm its business, operating results, prospects or financial condition.

Oruka's future clinical trials or those of its future collaborators may reveal significant adverse events or undesirable side effects not seen in Oruka's preclinical studies and may result in a safety profile that could halt clinical development, inhibit regulatory approval or limit commercial potential or market acceptance of any of Oruka's product candidates.

Results of Oruka's clinical trials could reveal a high and unacceptable severity and prevalence of side effects, adverse events or unexpected characteristics. While preclinical studies in NHPs conducted with respect to Oruka's programs have not shown any such characteristics to date, Oruka has not yet initiated any clinical trials in humans. If significant adverse events or other side effects are observed in any of Oruka's future clinical trials, Oruka may have difficulty recruiting participants to such trials, participants may drop out of the trials, or Oruka may be required to abandon the trials or its development efforts of one or more programs altogether. Oruka, the FDA or other applicable regulatory authorities, or an IRB, may suspend any clinical trials of any program at any time for various reasons, including a belief that subjects or patients in such trials are being exposed to unacceptable health risks or adverse side effects. Some potential products developed in the biotechnology industry that initially showed therapeutic promise in early-stage studies and trials have later been found to cause side effects that prevented their further development. Other potential products have shown side effects in preclinical studies, which side effects do not present themselves in clinical trials in humans. Even if the side effects do not preclude the product candidate from obtaining or maintaining marketing approval, undesirable side effects may inhibit market acceptance of the approved product due to its tolerability versus other therapies. In addition, an extended half-life could prolong the duration of undesirable side effects, which could also inhibit market acceptance. Treatment-emergent adverse events could also affect participant recruitment or the ability of enrolled subjects to complete Oruka's clinical trials or could result in potential product liability claims. Potential side effects associated with Oruka's product candidates may not be appropriately recognized or managed by the treating medical staff, as toxicities resulting from Oruka's product candidates may not be normally encountered in the general patient population and by medical personnel. Any of these occurrences could harm Oruka's business, financial condition, results of operations and prospects significantly.

In addition, even if Oruka successfully advances its product candidates or any future product candidates through clinical trials, such trials will only include a limited number of participants and limited duration of exposure to Oruka's product candidates. As a result, Oruka cannot be assured that adverse effects of its product candidates will not be uncovered when a significantly larger number of participants are exposed to the product candidate after approval. Further, any clinical trials may not be sufficient to determine the effect and safety consequences of using Oruka's product candidates over a multi-year period.

If any of the foregoing events occur or if one or more of the research programs with respect to which Oruka has the option to acquire intellectual property license rights to pursuant to the Paragon Option Agreements prove to be unsafe, Oruka's entire pipeline could be affected, which would have a material adverse effect on its business, financial condition, results of operations and prospects.

Oruka may expend its limited resources to pursue a particular program and fail to capitalize on programs that may be more profitable or for which there is a greater likelihood of success.

Because Oruka has limited financial and managerial resources, it focuses its research and development efforts on certain selected programs. For example, Oruka is initially focused on its most advanced programs, ORKA-001 and ORKA-002. As a result, Oruka may forgo or delay pursuit of opportunities with other programs that later prove to have greater commercial potential. Oruka's resource allocation decisions may cause it to fail to capitalize on viable commercial products or profitable market opportunities. Oruka's spending on current and future research and development programs for specific indications may not yield any commercially viable product candidates. If Oruka

does not accurately evaluate the commercial potential or target market for a particular product candidate, it may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been more advantageous for it to retain sole development and commercialization rights to such product candidate.

Any approved products resulting from Oruka's current programs or any future program may not achieve adequate market acceptance among clinicians, patients, healthcare third-party payors and others in the medical community necessary for commercial success and Oruka may not generate any future revenue from the sale or licensing of such products.

Even if regulatory approval is obtained for a product candidate resulting from one of Oruka's current or future programs, they may not gain market acceptance among physicians, patients, healthcare payors or the medical community. Oruka may not generate or sustain revenue from sales of the product due to factors such as whether the product can be sold at a competitive cost and whether it will otherwise be accepted in the market. There are several approved products and product candidates in later stages of development for the treatment of PsO. However, Oruka's programs incorporate advanced antibody engineering to optimize the half-life and formulation of antibodies; to date, no such antibody has been approved by the FDA for the treatment of PsO. Market participants with significant influence over acceptance of new treatments, such as clinicians and third-party payors, may not adopt a biologic that incorporates half-life extension for Oruka's targeted indications, and Oruka may not be able to convince the medical community and third-party payors to accept and use, or to provide favorable reimbursement for, any programs developed by it or its existing or future collaborators. An extended half-life may make it more difficult for patients to change treatments and there is a perception that half-life extension could exacerbate side effects, each of which may adversely affect Oruka's ability to gain market acceptance. Market acceptance of Oruka's product candidates will depend on many factors, including factors that are not within Oruka's control.

Sales of medical products also depend on the willingness of clinicians to prescribe the treatment. Oruka cannot predict whether clinicians, clinicians' organizations, hospitals, other healthcare providers, government agencies or private insurers will determine that its product is safe, therapeutically effective, cost effective or less burdensome as compared with competing treatments. If any of Oruka's product candidates is approved but does not achieve an adequate level of acceptance by such parties, Oruka may not generate or derive sufficient revenue from that product candidate and may not become or remain profitable.

Certain of Oruka's programs may compete with its other programs, which could negatively impact Oruka's business and reduce its future revenue.

Oruka is developing product candidates for the same indication, PsO, and may in the future develop its programs for other I&I indications. Each such program targets a different mechanism of action. However, developing multiple programs for a single indication may negatively impact Oruka's business if the programs compete with each other. For example, if multiple programs are conducting clinical trials at the same time, they could compete for the enrollment of participants. In addition, if multiple product candidates are approved for the same indication, they may compete for market share, which could limit Oruka's future revenue.

Oruka may conduct clinical trials for programs at sites outside the United States, and the FDA may not accept data from trials conducted in such locations.

Oruka may choose to conduct one or more of its future clinical trials outside the United States. Although the FDA may accept data from clinical trials conducted outside the United States, acceptance of this data is subject to conditions imposed by the FDA. For example, the clinical trial must be well designed and conducted and performed by qualified investigators in accordance with ethical principles. The trial population must also adequately represent the U.S. population, and the data must be applicable to the U.S. population and U.S. medical practice in ways that the FDA deems clinically meaningful. In addition, while these clinical trials are subject to the applicable local laws, FDA acceptance of the data will depend on its determination that the trials also complied with all applicable U.S. laws and regulations. If the FDA does not accept the data from any trial that Oruka conducts outside the United States, it would likely result in the need for additional trials, which would be costly and time-consuming and would delay or permanently halt Oruka's development of the applicable product candidates. Even if the FDA accepted such data, it could require Oruka to modify its planned clinical trials to receive clearance to initiate such trials in the United States or to continue such trials once initiated.

Further, conducting international clinical trials presents additional risks that may delay completion of Oruka's clinical trials. These risks include the failure of enrolled participants in foreign countries to adhere to clinical protocol as a result of differences in healthcare services or cultural customs that could restrict or limit Oruka's ability to conduct its clinical trials, the administrative burdens of conducting clinical trials under multiple sets of foreign regulations, foreign exchange fluctuations, diminished protection of intellectual property in some countries, as well as political and economic risks relevant to foreign countries.

Risks Related to Government Regulation

The regulatory approval processes of the FDA and other comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable. If Oruka is not able to obtain, or if there are delays in obtaining, required regulatory approvals for its product candidates, Oruka will not be able to commercialize, or will be delayed in commercializing, its product candidates, and its ability to generate revenue will be materially impaired.

The process of obtaining regulatory approvals, both in the United States and abroad, is unpredictable, expensive and typically takes many years following commencement of clinical trials, if approval is obtained at all, and can vary substantially based upon a variety of factors, including the type, complexity and novelty of the product candidates involved. Oruka cannot commercialize product candidates in the United States without first obtaining regulatory approval from the FDA. Similarly, Oruka cannot commercialize product candidates outside of the United States without obtaining regulatory approval from comparable foreign regulatory authorities. Before obtaining regulatory approvals for the commercial sale of Oruka's product candidates, including its most advanced programs, ORKA-001 and ORKA-002, Oruka must demonstrate through lengthy, complex and expensive preclinical studies and clinical trials that its product candidates are both safe and effective for each targeted indication. Securing regulatory approval also requires the submission of information about the drug manufacturing process to, and inspection of manufacturing facilities by, the relevant regulatory authority. Further, Oruka's product candidates may not be effective, may be only moderately effective or may prove to have undesirable or unintended side effects, toxicities or other characteristics that may preclude Oruka's obtaining marketing approval. The FDA and comparable foreign regulatory authorities have substantial discretion in the approval process and may refuse to accept any application or may decide that Oruka's data are insufficient for approval and require additional preclinical, clinical or other data. Oruka's product candidates could be delayed in receiving, or fail to receive, regulatory approval for many reasons, including: the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of Oruka's clinical trials; Oruka may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication; the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval; serious and unexpected drug-related side effects may be experienced by participants in Oruka's clinical trials or by individuals using drugs similar to Oruka's product candidates; Oruka may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks; the FDA or comparable foreign regulatory authorities may disagree with Oruka's interpretation of data from preclinical studies or clinical trials; the data collected from clinical trials of Oruka's product candidates may not be acceptable or sufficient to support the submission of a BLA or other submission or to obtain regulatory approval in the United States or elsewhere, and Oruka may be required to conduct additional clinical trials; the FDA or the applicable foreign regulatory authority may disagree regarding the formulation, labeling and/or the specifications of Oruka's product candidates; the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which Oruka contracts for clinical and commercial supplies; and the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering Oruka's clinical data insufficient for approval.

Of the large number of drugs in development, only a small percentage successfully complete the FDA or foreign regulatory approval processes and are commercialized. The lengthy approval process as well as the unpredictability of future clinical trial results may result in Oruka's failing to obtain regulatory approval to market its product candidates, which would significantly harm Oruka's business, results of operations and prospects.

If Oruka were to obtain approval, regulatory authorities may approve any of Oruka's product candidates for fewer or more limited indications than Oruka requests, including failing to approve the most commercially promising indications, may grant approval contingent on the performance of costly post-marketing clinical trials, or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for

the successful commercialization of that product candidate. If Oruka is not able to obtain, or if there are delays in obtaining, required regulatory approvals for its product candidates, Oruka will not be able to commercialize, or will be delayed in commercializing, its product candidates and its ability to generate revenue will be materially impaired.

Oruka may not be able to meet requirements for the chemistry, manufacturing and control of its programs.

In order to receive approval of its products by the FDA and comparable foreign regulatory authorities, Oruka must show that it and its contract manufacturing partners are able to characterize, control and manufacture its drug products safely and in accordance with regulatory requirements. This includes manufacturing the active ingredient, developing an acceptable formulation, manufacturing the drug product, performing tests to adequately characterize the formulated product, documenting a repeatable manufacturing process, and demonstrating that Oruka's drug products meet stability requirements. Meeting these chemistry, manufacturing and control requirements is a complex task that requires specialized expertise. If Oruka is not able to meet the chemistry, manufacturing and control requirements, it may not be successful in getting its products approved.

Oruka's product candidates for which it intends to seek approval as biologics may face competition sooner than anticipated.

The Patient Protection and Affordable Act, as amended by the Healthcare and Education Reconciliation Act (the "ACA"), includes a subtitle called the Biologics Price Competition and Innovation Act of 2009 ("BPCIA"), which created an abbreviated approval pathway for biological products that are biosimilar to or interchangeable with an FDA-licensed reference biological product. Under the BPCIA, an application for a highly similar or "biosimilar" product may not be submitted to the FDA until four years following the date that the reference product was first approved by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first approved. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing the sponsor's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of their product.

Oruka believes that any of its product candidates approved as biologics under a BLA should qualify for the 12-year period of exclusivity. However, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider Oruka's product candidates to be reference products for competing products, potentially creating the opportunity for competition sooner than anticipated. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. Moreover, the extent to which a biosimilar, once approved, will be substituted for any reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

Even if Oruka receives regulatory approval of its product candidates, Oruka will be subject to extensive ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and Oruka may be subject to penalties if it fails to comply with regulatory requirements or experiences unanticipated problems with its product candidates.

Any regulatory approvals that Oruka may receive for its product candidates will require the submission of reports to regulatory authorities and surveillance to monitor the safety and efficacy of the product candidate, may contain significant limitations related to use restrictions for specified age groups, warnings, precautions or contraindications, and may include burdensome post-approval study or risk management requirements. For example, the FDA may require a risk evaluation and mitigation strategy ("REMS") in order to approve Oruka's product candidates, which could entail requirements for a medication guide, physician training and communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. In addition, if the FDA or comparable foreign regulatory authorities approve Oruka's product candidates, its product candidates and the activities associated with their development and commercialization, including their design, testing, manufacture, safety, efficacy, recordkeeping, labeling, storage, approval, advertising, promotion, sale, distribution, import and export will be subject to comprehensive regulation by the FDA and other regulatory agencies in the United States and by comparable foreign regulatory authorities. These requirements include submissions of safety and other post-marketing information and reports, registration, as

well as on-going compliance with current cGMPs and GCPs for any clinical trials that Oruka conducts following approval. In addition, manufacturers of drug products and their facilities are subject to continual review and periodic, unannounced inspections by the FDA and other regulatory authorities for compliance with cGMPs.

If Oruka or a regulatory authority discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facilities where the product is manufactured, a regulatory authority may impose restrictions on that product, the manufacturing facility or Oruka, including requiring recall or withdrawal of the product from the market or suspension of manufacturing, restrictions on Oruka's ability to conduct clinical trials, including full or partial clinical holds on ongoing or planned trials, restrictions on the manufacturing process, warning or untitled letters, civil and criminal penalties, injunctions, product seizures, detentions or import bans, voluntary or mandatory publicity requirements and imposition of restrictions on operations, including costly new manufacturing requirements. The occurrence of any event or penalty described above may inhibit Oruka's ability to commercialize its product candidates and generate revenue and could require Oruka to expend significant time and resources in response and could generate negative publicity.

Oruka may face difficulties from healthcare legislative reform measures.

Existing regulatory policies may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of Oruka's product candidates. Oruka cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If Oruka is slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if it is not able to maintain regulatory compliance, Oruka may lose any marketing approval that it may have obtained and it may not achieve or sustain profitability. See the section titled "*Oruka's Business — Government Regulation — Healthcare Reform*" for a more detailed description of healthcare reform measures that may prevent or limit Oruka's ability to generate revenue, attain profitability, or commercialize its product candidates.

Oruka's business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers will be subject to applicable healthcare regulatory laws, which could expose Oruka to penalties.

Oruka's business operations and current and future arrangements with investigators, healthcare professionals, consultants, third-party payors, patient organizations and customers may expose Oruka to broadly applicable fraud and abuse and other healthcare laws and regulations. These laws may constrain the business or financial arrangements and relationships through which Oruka conducts its operations, including how Oruka researches, markets, sells and distributes its product candidates, if approved. See the section titled "*Oruka's Business — Government Regulation — Other Healthcare Laws and Compliance Requirements*" for a more detailed description of the laws that may affect Oruka's ability to operate.

Ensuring that Oruka's internal operations and future business arrangements with third parties comply with applicable healthcare laws and regulations will involve substantial costs. If Oruka's operations are found to be in violation of any of these laws or any other governmental laws and regulations that may apply to it, Oruka may be subject to significant penalties, including civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of Oruka's operations. Further, defending against any such actions can be costly and time-consuming and may require significant personnel resources. Therefore, even if Oruka is successful in defending against any such actions that may be brought against it, its business may be impaired.

Even if Oruka is able to commercialize any product candidates, due to unfavorable pricing regulations and/or third-party coverage and reimbursement policies, it may not be able to offer such product candidates at competitive prices which would seriously harm its business.

Oruka intends to seek approval to market its product candidates in both the United States and in selected foreign jurisdictions. If Oruka obtains approval in one or more foreign jurisdictions for its product candidates, Oruka will be subject to rules and regulations in those jurisdictions. Oruka's ability to successfully commercialize any product candidates that it may develop will depend in part on the extent to which reimbursement for these product

candidates and related treatments will be available from government health administration authorities, private health insurers and other organizations. Government authorities and other third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels. Government authorities and other third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. These entities may create preferential access policies for a competitor's product, including a branded or generic/biosimilar product, over Oruka's products in an attempt to reduce their costs, which may reduce Oruka's commercial opportunity. Additionally, if any of Oruka's product candidates are approved and Oruka is found to have improperly promoted off-label uses of those product candidates, Oruka may become subject to significant liability, which would materially adversely affect its business and financial condition. See the sections titled "*Oruka's Business — Government Regulation — Coverage and Reimbursement*" and "*Oruka's Business — Other Government Regulation Outside of the United States — Regulation in the European Union*" for a more detailed description of the government regulations and third-party payor practices that may affect Oruka's ability to commercialize its product candidates.

Oruka is subject to U.S. and certain foreign export and import controls, sanctions, embargoes, anti-corruption laws, and anti-money laundering laws and regulations. Oruka can face criminal liability and other serious consequences for violations, which can harm its business.

Oruka is subject to export control and import laws and regulations, including the U.S. Export Administration Regulations, U.S. Customs regulations, various economic and trade sanctions regulations administered by the U.S. Treasury Department's Office of Foreign Assets Controls, the U.S. Foreign Corrupt Practices Act of 1977, as amended, the U.S. domestic bribery statute contained in 18 U.S.C. § 201, the U.S. Travel Act, the USA PATRIOT Act, and other state and national anti-bribery and anti-money laundering laws in the countries in which Oruka conducts activities. Anti-corruption laws are interpreted broadly and prohibit companies and their employees, agents, contractors, and other collaborators from authorizing, promising, offering, or providing, directly or indirectly, improper payments or anything else of value to or from recipients in the public or private sector. Oruka may engage third parties to sell its products outside the United States, to conduct clinical trials, and/or to obtain necessary permits, licenses, patent registrations, and other regulatory approvals. Oruka has direct or indirect interactions with officials and employees of government agencies or government-affiliated hospitals, universities, and other organizations. Oruka can be held liable for the corrupt or other illegal activities of its employees, agents, contractors, and other collaborators, even if Oruka does not explicitly authorize or have actual knowledge of such activities. Any violations of the laws and regulations described above may result in substantial civil and criminal fines and penalties, imprisonment, the loss of export or import privileges, debarment, tax reassessments, breach of contract and fraud litigation, reputational harm, and other consequences.

Governments outside the United States tend to impose strict price controls, which may adversely affect Oruka's revenue, if any.

In some countries, particularly member states of the EU ("EU Member States"), the pricing of prescription drugs is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after receipt of marketing approval for a therapeutic. In addition, there can be considerable pressure by governments and other stakeholders on prices and reimbursement levels, including as part of cost containment measures. Political, economic and regulatory developments may further complicate pricing negotiations, and pricing negotiations may continue after reimbursement has been obtained. Reference pricing used by various EU Member States and parallel distribution, or arbitrage between low-priced and high-priced EU Member States, can further reduce prices. To obtain coverage and reimbursement or pricing approvals in some countries, Oruka or current or future collaborators may be required to conduct a clinical trial or other studies that compare the cost-effectiveness of Oruka's product candidates to other available therapies in order to obtain or maintain reimbursement or pricing approval. Publication of discounts by third-party payors or authorities may lead to further pressure on the prices or reimbursement levels within the country of publication and other countries. If reimbursement of any product candidate approved for marketing is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, Oruka's business, financial condition, results of operations or prospects could be materially and adversely affected. Brexit could lead to legal uncertainty and potentially divergent national laws and regulations, including those related to the pricing of prescription pharmaceuticals, as the United Kingdom ("UK") determines which EU laws to replicate or replace. If the UK were to significantly alter its regulations affecting the pricing of prescription pharmaceuticals, Oruka could face significant new costs.

A breakthrough therapy, fast track, or other expedited designation for Oruka's product candidates may not lead to a faster development or regulatory review or approval process, and it does not increase the likelihood that those product candidates will receive marketing approval.

Oruka may seek a breakthrough therapy, fast track, or other designation for appropriate product candidates. Designations such as these are within the discretion of the FDA, or other comparable regulatory authorities. The receipt of a designation for a product candidate may not result in a faster development process, review or approval compared to products considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, even if one or more of Oruka's product candidates qualifies under one of FDA's designation programs, the FDA may later decide that the products no longer meet the conditions for qualification or decide that the time period for FDA review or approval will not be shortened. See the section titled "*Oruka's Business — Government Regulation — Expedited Development and Review Programs*" for a more detailed description of the process for seeking expedited designations such as fast track or breakthrough therapy designations.

Risks Related to Oruka's Intellectual Property

Oruka's ability to obtain and protect its patents and other proprietary rights is uncertain, exposing Oruka to the possible loss of competitive advantage.

Oruka relies upon a combination of patents, trademarks, trade secret protection, confidentiality agreements and the Paragon Option Agreements to protect the intellectual property related to its programs and technologies and to prevent third parties from competing unfairly with it. Oruka's success depends in large part on its ability to obtain and maintain patent protection for its platform technologies, programs and their uses, as well as its ability to operate without infringing on or violating the proprietary rights of others. Paragon has filed provisional patent applications and intends to file one or more additional provisional patent applications directed to antibodies that target IL-23, including applications covering composition of matter, pharmaceutical formulations, and methods of using such antibodies, including ORKA-001. In addition, Paragon has filed provisional patent applications and intends to file one or more additional provisional patent applications directed to antibodies that target IL-17, including applications covering composition of matter, pharmaceutical formulations, and methods of using such antibodies, including ORKA-002. However, Oruka may not be able to protect its intellectual property rights throughout the world and the legal systems in certain countries may not favor enforcement or protection of patents, trade secrets and other intellectual property. Filing, prosecuting and defending patents on programs worldwide would be expensive and Oruka's intellectual property rights in some foreign jurisdictions can be less extensive than those in the United States; the reverse may also occur. As such, Oruka may not have patents in all countries or all major markets and may not be able to obtain patents in all jurisdictions even if it applies for them. Oruka's competitors may operate in countries where Oruka does not have patent protection and can freely use Oruka's technologies and discoveries in such countries to the extent such technologies and discoveries are publicly known or disclosed in countries where Oruka does have patent protection or pending patent applications.

Oruka's pending and future patent applications may not result in patents being issued. Any issued patents may not afford sufficient protection of Oruka's programs or their intended uses against competitors, nor can there be any assurance that the patents issued will not be infringed, designed around, invalidated by third parties, or effectively prevent others from commercializing competitive technologies, products or programs. Even if these patents are granted, they may be difficult to enforce. Further, any issued patents that Oruka may license or own covering Oruka's programs could be narrowed or found invalid or unenforceable if challenged in court or before administrative bodies in the United States or abroad, including the United States Patent and Trademark Office ("USPTO"). Further, if Oruka encounters delays in its clinical trials or delays in obtaining regulatory approval, the period of time during which Oruka could market its product candidates under patent protection would be reduced. Thus, the patents that Oruka may own and license may not afford Oruka any meaningful competitive advantage.

In addition to seeking patents for some of its technology and programs, Oruka may also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain its competitive position. Any disclosure, either intentional or unintentional, by Oruka's employees, the employees of third parties with whom Oruka shares its facilities or third-party consultants and vendors that Oruka engages to perform research, clinical trials or manufacturing activities, or misappropriation by third parties (such as through a cybersecurity breach) of Oruka's trade secrets or proprietary information could enable competitors to duplicate or surpass Oruka's technological achievements, thus eroding Oruka's competitive position in its market. In order to protect

Oruka's proprietary technology and processes, it relies in part on confidentiality agreements with its collaborators, employees, consultants, outside scientific collaborators and sponsored researchers and other advisors. These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. Oruka may need to share its proprietary information, including trade secrets, with future business partners, collaborators, contractors and others located in countries at heightened risk of theft of trade secrets, including through direct intrusion by private parties or state actors and those affiliated with or controlled by state actors. In addition, while Oruka undertakes efforts to protect its trade secrets and other confidential information from disclosure, others may independently discover trade secrets and proprietary information, and in such cases, Oruka may not be able to assert any trade secret rights against such party. Costly and time-consuming litigation could be necessary to enforce and determine the scope of Oruka's proprietary rights and failure to obtain or maintain trade secret protection could adversely affect Oruka's competitive business position.

Lastly, if Oruka's trademarks and trade names are not registered or adequately protected, then Oruka may not be able to build name recognition in its markets of interest and its business may be adversely affected.

Oruka may not be successful in obtaining or maintaining necessary rights to its programs through acquisitions and in-licenses.

Because Oruka's development programs currently do and may in the future require the use of proprietary rights held by third parties, the growth of Oruka's business may depend in part on its ability to acquire, in-license, or use these third-party proprietary rights. Oruka may be unable to acquire or in-license any compositions, methods of use, processes or other third-party intellectual property rights from third parties that it identifies as necessary for its programs. The licensing and acquisition of third-party intellectual property rights is a competitive area, and a number of more established companies may pursue strategies to license or acquire third-party intellectual property rights that Oruka may consider attractive or necessary. These established companies may have a competitive advantage over Oruka due to their size, capital resources and greater clinical development and commercialization capabilities. In addition, companies that perceive Oruka to be a competitor may be unwilling to assign or license rights to Oruka. Oruka also may be unable to license or acquire third-party intellectual property rights on terms that would allow it to make an appropriate return on Oruka's investment or at all. If Oruka is unable to successfully obtain rights to required third-party intellectual property rights or maintain the existing intellectual property rights it does obtain, Oruka may have to abandon development of the relevant program, which could have a material adverse effect on its business, financial condition, results of operations, and prospects.

While Oruka plans to obtain the right to control prosecution, maintenance and enforcement of the patents relating to its programs, there may be times when the filing and prosecution activities for patents and patent applications relating to Oruka's programs are controlled by its current and future licensors or collaboration partners. If any of Oruka's current and future licensors or collaboration partners fail to prosecute, maintain and enforce such patents and patent applications in a manner consistent with the best interests of Oruka's business, including by payment of all applicable fees for patents covering its product candidates, Oruka could lose its rights to the intellectual property or its exclusivity with respect to those rights, its ability to develop and commercialize those product candidates may be adversely affected and it may not be able to prevent competitors from making, using and selling competing products. In addition, even where Oruka has the right to control patent prosecution of patents and patent applications it has licensed to and from third parties, Oruka may still be adversely affected or prejudiced by actions or inactions of its licensees, its future licensors and their counsel that took place prior to the date upon which Oruka assumed control over patent prosecution.

Oruka's future licensors may rely on third-party consultants or collaborators or on funds from third parties such that Oruka's future licensors are not the sole and exclusive owners of the patents Oruka in-licenses. If other third parties have ownership rights to Oruka's future in-licensed patents, they may be able to license such patents to Oruka's competitors, and Oruka's competitors could market competing products and technology. This could have a material adverse effect on Oruka's competitive position, business, financial conditions, results of operations, and prospects.

It is possible that Oruka may be unable to obtain licenses at a reasonable cost or on reasonable terms, if at all. Even if Oruka is able to obtain a license, it may be non-exclusive, thereby giving Oruka's competitors access to the same technologies licensed to Oruka. In that event, Oruka may be required to expend significant time and resources

to redesign its technology, programs, or the methods for manufacturing them or to develop or license replacement technology, all of which may not be feasible on a technical or commercial basis. If Oruka is unable to do so, it may be unable to develop or commercialize the affected product candidates, which could harm its business, financial condition, results of operations, and prospects significantly. Oruka cannot provide any assurances that third-party patents do not exist which might be enforced against Oruka's current technology, manufacturing methods, programs, or future methods or products resulting in either an injunction prohibiting Oruka's manufacture or future sales, or, with respect to its future sales, an obligation on Oruka's part to pay royalties and/or other forms of compensation to third parties, which could be significant.

Disputes may arise between Oruka and its future licensors regarding intellectual property subject to a license agreement, including: the scope of rights granted under the license agreement and other interpretation-related issues; whether and the extent to which Oruka's technology and processes infringe on intellectual property of the licensor that is not subject to the licensing agreement; Oruka's right to sublicense patents and other rights to third parties; Oruka's right to transfer or assign the license; the inventorship and ownership of inventions and know-how resulting from the joint creation or use of intellectual property by Oruka's future licensors and it and its partners; and the priority of invention of patented technology.

Oruka may be subject to patent infringement claims or may need to file claims to protect its intellectual property, which could result in substantial costs and liability and prevent Oruka from commercializing its potential products.

Because the intellectual property landscape in the biotechnology industry is rapidly evolving and interdisciplinary, it is difficult to conclusively assess Oruka's freedom to operate and guarantee that Oruka can operate without infringing on or violating third-party rights. If certain of Oruka's product candidates are ultimately granted regulatory approval, patent rights held by third parties, if found to be valid and enforceable, could be alleged to render one or more of Oruka's product candidates infringing. If a third party successfully brings a claim against Oruka, Oruka may be required to pay substantial damages, be forced to abandon any affected product candidate and/or seek a license from the patent holder. In addition, any intellectual property claims (e.g., patent infringement or trade secret theft) brought against Oruka, whether or not successful, may cause Oruka to incur significant legal expenses and divert the attention of its management and key personnel from other business concerns. Oruka cannot be certain that patents owned or licensed by it will not be challenged by others in the course of litigation. Some of Oruka's competitors may be able to sustain the costs of complex intellectual property litigation more effectively than Oruka can because they have substantially greater resources. In addition, any uncertainties resulting from the initiation and continuation of any litigation could have a material adverse effect on Oruka's ability to raise funds.

Competitors may infringe or otherwise violate Oruka's patents, trademarks, copyrights or other intellectual property. To counter infringement or other violations, Oruka may be required to file claims, which can be expensive and time-consuming. Any such claims could provoke these parties to assert counterclaims against Oruka, including claims alleging that Oruka infringes their patents or other intellectual property rights. In addition, in a patent infringement proceeding, a court or administrative body may decide that one or more of the patents Oruka asserts is invalid or unenforceable, in whole or in part, construe the patent's claims narrowly or refuse to prevent the other party from using the technology at issue on the grounds that Oruka's patents do not cover the technology. Similarly, if Oruka asserts trademark infringement claims, a court or administrative body may determine that the marks Oruka has asserted are invalid or unenforceable or that the party against whom Oruka has asserted trademark infringement has superior rights to the marks in question. In such a case, Oruka could ultimately be forced to cease use of such marks. In any intellectual property litigation, even if Oruka is successful, any award of monetary damages or other remedy Oruka receives may not be commercially valuable.

Further, Oruka may be required to protect its patents through procedures created to attack the validity of a patent at the USPTO. An adverse determination in any such submission or proceeding could reduce the scope or enforceability of, or invalidate, Oruka's patent rights, which could adversely affect Oruka's competitive position. Because of a lower evidentiary standard in USPTO proceedings compared to the evidentiary standard in U.S. federal courts necessary to invalidate a patent claim, a third party could potentially provide evidence in a USPTO proceeding sufficient for the USPTO to hold a claim invalid even though the same evidence would be insufficient to invalidate the claim if first presented in a district court action.

In addition, if Oruka's programs are found to infringe the intellectual property rights of third parties, these third parties may assert infringement claims against Oruka's future licensees and other parties with whom Oruka has business relationships and Oruka may be required to indemnify those parties for any damages they suffer as a result of these claims, which may require Oruka to initiate or defend protracted and costly litigation on behalf of licensees and other parties regardless of the merits of such claims. If any of these claims succeed, Oruka may be forced to pay damages on behalf of those parties or may be required to obtain licenses for the products they use.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or other legal proceedings relating to Oruka's intellectual property rights, there is a risk that some of Oruka's confidential information could be compromised by disclosure during this type of litigation or other proceedings.

Oruka may be subject to claims that it has wrongfully hired an employee from a competitor or that its employees, consultants or independent contractors have wrongfully used or disclosed confidential information of third parties.

As is common in the biotechnology industry, in addition to Oruka's employees, Oruka engages the services of consultants to assist it in the development of its programs. Many of these consultants, and many of Oruka's employees, were previously employed at, or may have previously provided or may be currently providing consulting services to, other biotechnology or pharmaceutical companies including Oruka's competitors or potential competitors. Oruka could in the future be subject to claims that it or its employees have inadvertently or otherwise used or disclosed alleged trade secrets or other confidential information of former employers or competitors. Although Oruka tries to ensure that its employees and consultants do not use the intellectual property, proprietary information, know-how or trade secrets of others in their work for Oruka, Oruka may become subject to claims that it caused an employee to breach the terms of his or her non-competition or non-solicitation agreement, or that Oruka or these individuals have, inadvertently or otherwise, used or disclosed the alleged trade secrets or other proprietary information of a former employer or competitor.

While Oruka may litigate to defend itself against these claims, even if it is successful, litigation could result in substantial costs and could be a distraction to management. If Oruka's defenses to these claims fail, in addition to requiring it to pay monetary damages, a court could prohibit Oruka from using technologies or features that are essential to its programs, if such technologies or features are found to incorporate or be derived from the trade secrets or other proprietary information of the former employers. Moreover, any such litigation or the threat thereof may adversely affect Oruka's reputation, its ability to form strategic alliances or sublicense its rights to collaborators, engage with scientific advisors or hire employees or consultants, each of which would have an adverse effect on Oruka's business, results of operations and financial condition. Even if Oruka is successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

Changes to patent laws in the United States and other jurisdictions could diminish the value of patents in general, thereby impairing Oruka's ability to protect its products.

Changes in either the patent laws or interpretation of patent laws in the United States, including patent reform legislation such as the Leahy-Smith America Invents Act (the "Leahy-Smith Act") could increase the uncertainties and costs surrounding the prosecution of Oruka's owned and in-licensed patent applications and the maintenance, enforcement or defense of its owned and in-licensed issued patents. The Leahy-Smith Act includes a number of significant changes to United States patent law. These changes include provisions that affect the way patent applications are prosecuted, redefine prior art, provide more efficient and cost-effective avenues for competitors to challenge the validity of patents, and enable third-party submission of prior art to the USPTO during patent prosecution and additional procedures to attack the validity of a patent at USPTO-administered post-grant proceedings, including post-grant review, inter partes review and derivation proceedings. Assuming that other requirements for patentability are met, prior to March 2013, in the United States, the first to invent the claimed invention was entitled to the patent, while outside the United States, the first to file a patent application was entitled to the patent. After March 2013, under the Leahy-Smith Act, the United States transitioned to a first-to-file system in which, assuming that the other statutory requirements for patentability are met, the first inventor to file a patent application will be entitled to the patent on an invention regardless of whether a third party was the first to invent the

claimed invention. As such, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of Oruka's patent applications and the enforcement or defense of its issued patents, all of which could have a material adverse effect on Oruka's business, financial condition, results of operations and prospects.

In addition, the patent positions of companies in the development and commercialization of biologics and pharmaceuticals are particularly uncertain. U.S. Supreme Court and U.S. Court of Appeals for the Federal Circuit rulings have narrowed the scope of patent protection available in certain circumstances and weakened the rights of patent owners in certain situations, including in the antibody arts. For example, the United States Supreme Court in *Amgen, Inc. v. Sanofi* (*Amgen*) recently held that Amgen's patent claims to a class of antibodies functionally defined by their ability to bind a particular antigen were invalid for lack of enablement where the patent specification provided twenty-six exemplary antibodies, but the claimed class of antibodies covered a "vast number" of additional antibodies not disclosed in the specification. The Court stated that if patent claims are directed to an entire class of compositions of matter, then the patent specification must enable a person skilled in the art to make and use the entire class of compositions. This decision makes it unlikely that Oruka will be granted U.S. patents with composition of matter claims directed to antibodies functionally defined by their ability to bind a particular antigen. Even if Oruka is granted claims directed to functionally defined antibodies, it is possible that a third party may challenge Oruka's patents, when issued, relying on the reasoning in *Amgen* or other recent precedential court decisions. Additionally, there have been proposals for additional changes to the patent laws of the United States and other countries that, if adopted, could impact Oruka's ability to enforce its proprietary technology. This combination of events has created uncertainty with respect to the validity and enforceability of patents once obtained. Depending on future actions by the U.S. Congress, the federal courts and the USPTO, the laws and regulations governing patents could change in unpredictable ways that could have a material adverse effect on Oruka's patent rights and its ability to protect, defend and enforce its patent rights in the future.

Geopolitical instability in the United States and in foreign countries could increase the uncertainties and costs surrounding the prosecution or maintenance of patent applications and the maintenance, enforcement or defense of issued patents. For example, the United States and foreign government actions related to Russia's invasion of Ukraine may limit or prevent filing, prosecution and maintenance of patent applications in Russia. Government actions may also prevent maintenance of issued patents in Russia. These actions could result in abandonment or lapse of patents or patent applications, resulting in partial or complete loss of patent rights in Russia. If such an event were to occur, it could have a material adverse effect on Oruka's business. In addition, a decree was adopted by the Russian government in March 2022 allowing Russian companies and individuals to exploit inventions owned by patentees that have citizenship or nationality in, are registered in, or have predominately primary place of business or profit-making activities in the United States and other countries that Russia has deemed unfriendly without consent or compensation. Consequently, Oruka would not be able to prevent third parties from practicing its inventions in Russia or from selling or importing products made using its inventions in and into Russia. Accordingly, Oruka's competitive position may be impaired, and its business, financial condition, results of operations and prospects may be adversely affected.

In addition, a European Unified Patent Court ("UPC") entered into force on June 1, 2023. The UPC is a common patent court that hears patent infringement and revocation proceedings effective for EU Member States. This could enable third parties to seek revocation of a European patent in a single proceeding at the UPC rather than through multiple proceedings in each of the jurisdictions in which the European patent is validated.

Although Oruka does not currently own any European patents or applications, if it obtains such patents and applications in the future, any such revocation and loss of patent protection could have a material adverse impact on Oruka's business and its ability to commercialize or license its technology and products. Moreover, the controlling laws and regulations of the UPC will develop over time, and may adversely affect Oruka's ability to enforce or defend the validity of any European patents it may obtain. Oruka may decide to opt out from the UPC any future European patent applications that it may file and any patents it may obtain. If certain formalities and requirements are not met, however, such European patents and patent applications could be challenged for non-compliance and brought under the jurisdiction of the UPC. Oruka cannot be certain that future European patents and patent applications will avoid falling under the jurisdiction of the UPC, if Oruka decides to opt out of the UPC.

Obtaining and maintaining patent protection depends on compliance with various procedural, document submissions, fee payment and other requirements imposed by governmental patent agencies, and Oruka's patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance fees, renewal fees, annuities fees and various other governmental fees on patents and/or patent applications are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent and/or patent application. The USPTO and various foreign governmental patent agencies also require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If Oruka fails to maintain the patents and patent applications covering its programs, Oruka's competitive position would be adversely affected.

Oruka may not identify relevant third-party patents or may incorrectly interpret the relevance, scope or expiration of a third-party patent, which might adversely affect Oruka's ability to develop and market its products.

Oruka cannot guarantee that any of its patent searches or analyses, including the identification of relevant patents, the scope of patent claims or the expiration of relevant patents, are complete or thorough, nor can Oruka be certain that it has identified each and every third-party patent and pending application in the United States and abroad that is relevant to or necessary for the commercialization of its product candidates in any jurisdiction. The scope of a patent claim is determined by an interpretation of the law, the written disclosure in a patent and the patent's prosecution history. Oruka's interpretation of the relevance or the scope of a patent or a pending application may be incorrect. For example, Oruka may incorrectly determine that its products are not covered by a third-party patent or may incorrectly predict whether a third-party's pending application will issue with claims of relevant scope. Oruka's determination of the expiration date of any patent in the United States or abroad that it considers relevant may be incorrect. Oruka's failure to identify and correctly interpret relevant patents may negatively impact its ability to develop and market its products.

In addition, because some patent applications in the United States may be maintained in secrecy until the patents are issued, patent applications in the United States and many foreign jurisdictions are typically not published until 18 months after filing, and publications in the scientific literature often lag behind actual discoveries, Oruka cannot be certain that others have not filed patent applications for technology covered by its issued patents or its pending applications, or that Oruka was the first to invent the technology. Oruka's competitors may have filed, and may in the future file, patent applications covering products or technology similar to Oruka's. Any such patent application may have priority over Oruka's patent applications or patents, which could require Oruka to obtain rights to issued patents covering such technologies.

Oruka may become subject to claims challenging the inventorship or ownership of its patents and other intellectual property.

Oruka may be subject to claims that former employees, collaborators or other third parties have an interest in Oruka's patents or other intellectual property as an inventor or co-inventor. The failure to name the proper inventors on a patent application can result in the patents issuing thereon being unenforceable. Inventorship disputes may arise from conflicting views regarding the contributions of different individuals named as inventors, the effects of foreign laws where foreign nationals are involved in the development of the subject matter of the patent, conflicting obligations of third parties involved in developing Oruka's programs or as a result of questions regarding co-ownership of potential joint inventions. Litigation may be necessary to resolve these and other claims challenging inventorship and/or ownership. Alternatively, or additionally, Oruka may enter into agreements to clarify the scope of its rights in such intellectual property. If Oruka fails in defending any such claims, in addition to paying monetary damages, it may lose valuable intellectual property rights, such as exclusive ownership of, or right to use, valuable intellectual property. Such an outcome could have a material adverse effect on Oruka's business. Even if Oruka is successful in defending against such claims, litigation could result in substantial costs and be a distraction to management and other employees.

Oruka's future licensors may rely on third-party consultants or collaborators or on funds from third parties, such as the U.S. government, such that Oruka's licensors would not be the sole and exclusive owners of any patents Oruka in-licenses. If other third parties have ownership rights or other rights to Oruka's in-licensed patents, they may be able to license such patents to Oruka's competitors, and Oruka's competitors could market competing products and technology. This could have a material adverse effect on Oruka's competitive position, business, financial conditions, results of operations, and prospects.

Patent terms may be inadequate to protect the competitive position of Oruka's product candidates for an adequate amount of time.

Patents have a limited lifespan. In the United States, if all maintenance fees are timely paid, the natural expiration of a patent is generally 20 years from its earliest United States non-provisional filing date. Various extensions may be available, but the life of a patent, and the protection it affords, is limited. Even if patents covering Oruka's product candidates are obtained, once the patent life has expired, Oruka may be open to competition from competitive products, including generics or biosimilars. Given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such product candidates might expire before or shortly after such product candidates are commercialized. As a result, Oruka's owned and licensed patent portfolio may not provide it with sufficient rights to exclude others from commercializing products similar or identical to Oruka's.

Oruka's technology licensed from various third parties may be subject to retained rights.

Oruka's future licensors may retain certain rights under the relevant agreements with Oruka, including the right to use the underlying technology for noncommercial academic and research use, to publish general scientific findings from research related to the technology, and to make customary scientific and scholarly disclosures of information relating to the technology. It is difficult to monitor whether Oruka's licensors limit their use of the technology to these uses, and Oruka could incur substantial expenses to enforce its rights to its licensed technology in the event of misuse.

Risks Related to Oruka's Reliance on Third Parties

Oruka currently relies on licensing arrangements with Paragon through the Paragon Option Agreements. If Oruka is unable to maintain collaborations or licensing arrangements, or if its collaborations or licensing arrangements are not successful, Oruka's business could be negatively impacted.

Oruka currently relies on its licensing arrangements with Paragon through the Paragon Option Agreements for a substantial portion of its discovery capabilities and in-licenses.

Collaborations or licensing arrangements that Oruka enters into may not be successful, and any success will depend heavily on the efforts and activities of such collaborators or licensors. If any of Oruka's current or future collaborators or licensors experiences delays in performance of, or fails to perform its obligations under their agreement with Oruka, disagrees with Oruka's interpretation of the terms of such agreement or terminates their agreement with Oruka, the research programs with respect to which Oruka has the option to acquire intellectual property license rights to pursuant to the Paragon Option Agreements and development timeline could be adversely affected. If Oruka fails to comply with any of the obligations under its collaborations or license agreements, including payment terms and diligence terms, Oruka's collaborators or licensors may have the right to terminate such agreements, in which event Oruka may lose intellectual property rights and may not be able to develop, manufacture, market or sell the products covered by its agreements or may face other penalties under its agreements. Oruka's collaborators and licensors may also fail to properly maintain or defend the intellectual property Oruka has licensed from them, if required by Oruka's agreement with them, or even infringe upon, Oruka's intellectual property rights, leading to the potential invalidation of Oruka's intellectual property or subjecting it to litigation or arbitration, any of which would be time-consuming and expensive and could harm Oruka's ability to commercialize its product candidates. In addition, collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with Oruka's programs and products if the collaborators believe that the competitive products are more likely to be successfully developed or can be commercialized under terms that are more economically attractive than Oruka's.

As part of Oruka's strategy, Oruka plans to evaluate additional opportunities to enhance its capabilities and expand its development pipeline or provide development or commercialization capabilities that complement Oruka's. Oruka may not realize the benefits of such collaborations, alliances or licensing arrangements. Any of these relationships may require Oruka to incur non-recurring and other charges, increase its near and long-term expenditures, issue securities that dilute its existing stockholders or disrupt its management and business.

Oruka may face significant competition in attracting appropriate collaborators, and more established companies may also be pursuing strategies to license or acquire third-party intellectual property rights that Oruka considers attractive. These companies may have a competitive advantage over Oruka due to their size, financial resources and greater clinical development and commercialization capabilities. In addition, companies that perceive Oruka to be a competitor may be unwilling to assign or license rights to Oruka. Whether Oruka reaches a definitive agreement for a collaboration will depend upon, among other things, its assessment of the collaborator's resources and expertise, the terms and conditions of the proposed collaboration and the proposed collaborator's evaluation of a number of factors. Collaborations are complex and time-consuming to negotiate, document and execute. In addition, consolidation among large pharmaceutical and biotechnology companies has reduced the number of potential future collaborators. Oruka may not be able to negotiate additional collaborations on a timely basis, on acceptable terms or at all. If Oruka fails to enter into collaborations and does not have sufficient funds or expertise to undertake the necessary development and commercialization activities, it may not be able to further develop its product candidates or bring them to market.

Oruka currently relies, and plans to rely in the future, on third parties to conduct and support its preclinical studies and clinical trials. If these third parties do not properly and successfully carry out their contractual duties or meet expected deadlines, Oruka may not be able to obtain regulatory approval of or commercialize its product candidates.

Oruka has utilized and plans to continue to utilize and depend upon independent investigators and collaborators, such as medical institutions, CROs, contract testing labs and strategic partners, to conduct and support its preclinical studies and clinical trials under agreements with Oruka. Oruka will rely heavily on these third parties over the course of its preclinical studies and clinical trials, and Oruka controls only certain aspects of their activities. As a result, Oruka will have less direct control over the conduct, timing and completion of these preclinical studies and clinical trials and the management of data developed through preclinical studies and clinical trials than would be the case if it were relying entirely upon its own staff. Nevertheless, Oruka is responsible for ensuring that each of its studies and trials is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and its reliance on these third parties does not relieve Oruka of its regulatory responsibilities. Oruka and its third-party contractors and CROs are required to comply with GCP regulations, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for all of Oruka's programs in clinical development. If Oruka or any of these third parties fail to comply with applicable GCP regulations, the clinical data generated in Oruka's clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require Oruka to perform additional clinical trials before approving Oruka's marketing applications. Oruka cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of Oruka's clinical trials comply with GCP regulations. In addition, Oruka's clinical trials must be conducted with products produced under cGMP regulations. Oruka's failure to comply with these regulations may require it to repeat clinical trials, which would delay the regulatory approval process. Moreover, Oruka's business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting Oruka's clinical trials will not be Oruka's employees and, except for remedies available to Oruka under its agreements with such third parties, Oruka cannot control whether they devote sufficient time and resources to Oruka's programs. These third parties may be involved in mergers, acquisitions or similar transactions and may have relationships with other commercial entities, including Oruka's competitors, for whom they may also be conducting clinical trials or other product development activities, which could negatively affect their performance on Oruka's behalf and the timing thereof and could lead to products that compete directly or indirectly with Oruka's product candidates. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to Oruka's clinical protocols or regulatory requirements or for other reasons, Oruka's clinical trials may be extended, delayed or terminated and Oruka may not be able to complete development of, obtain regulatory approval of or successfully commercialize its product candidates.

In addition, Oruka currently relies on foreign CROs and CMOs, including WuXi Biologics (Hong Kong) Limited ("WuXi") for formulation and manufacturing of Oruka's stage 1 clinical trial materials, and will likely continue to rely on foreign CROs and CMOs in the future. WuXi is a subsidiary or affiliate of WuXi Biologics, which is identified in the proposed U.S. legislation known as the BIOSECURE Act as a biotechnology "company of concern." The BIOSECURE Act, if passed, would prohibit federal agencies from entering into procurement contracts with an entity that uses biotechnology equipment or services from a biotechnology company of concern. Foreign CMOs may be subject to U.S. legislation, including the proposed BIOSECURE Act, trade restrictions and other foreign regulatory requirements which could increase the cost or reduce the supply of material available to Oruka, delay the procurement or supply of such material or have an adverse effect on Oruka's ability to secure significant commitments from governments to purchase its potential therapies.

For example, the biopharmaceutical industry in China is strictly regulated by the Chinese government. Changes to Chinese regulations or government policies affecting biopharmaceutical companies are unpredictable and may have a material adverse effect on Oruka's collaborators in China which could have an adverse effect on Oruka's business, financial condition, results of operations and prospects. Evolving changes in China's public health, economic, political, and social conditions and the uncertainty around China's relationship with other governments, such as the United States and the UK, could also negatively impact Oruka's ability to manufacture its product candidates for its planned clinical trials or have an adverse effect on its ability to secure government funding, which could adversely affect Oruka's financial condition and cause it to delay its clinical development programs. Furthermore, if the BIOSECURE Act is passed and one or more of Oruka's collaborators or vendors in China, including WuXi, is deemed to be a biotechnology company of concern, Oruka's operations and financial condition may be negatively impacted as a result of any delays or increased costs arising from the trade restrictions and other foreign regulatory requirements affecting such collaborators. In addition, while Oruka has established relationships with CROs and CMOs outside of China, moving to those suppliers in the event of a geopolitical instability affecting Oruka's collaborators in China could introduce delays into the development program.

Oruka currently relies and expects to rely in the future on the use of manufacturing suites in third-party facilities or on third parties to manufacture its product candidates, and Oruka may rely on third parties to produce and process its products, if approved. Oruka's business could be adversely affected if it is unable to use third-party manufacturing suites or if the third-party manufacturers encounter difficulties in production.

Oruka does not currently own any facility that may be used as its clinical or commercial manufacturing and processing facility and must currently rely on CMOs to manufacture its product candidates. Oruka has not yet caused any product candidates to be manufactured on a commercial scale and may not be able to do so for any of its product candidates, if approved. Oruka currently has a sole source relationship for its supply of the ORKA-001 and ORKA-002 program. If there should be any disruption in such supply arrangement, including any adverse events affecting Oruka's sole supplier, it could have a negative effect on the clinical development of Oruka's programs and other operations while Oruka works to identify and qualify an alternate supply source. Oruka may not control the manufacturing process of, and may be completely dependent on, its contract manufacturing partners for compliance with cGMP requirements and any other regulatory requirements of the FDA or comparable foreign regulatory authorities for the manufacture of its product candidates. Beyond periodic audits, Oruka has limited control over the ability of its CMOs to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of Oruka's product candidates or if it withdraws any approval in the future, Oruka may need to find alternative manufacturing facilities, which would require the incurrence of significant additional costs, delays, and materially adversely affect Oruka's ability to develop, obtain regulatory approval for or market its product candidates, if approved. Similarly, Oruka's failure, or the failure of its CMOs, to comply with applicable regulations could result in sanctions being imposed on Oruka, including fines, injunctions, civil penalties, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or drugs, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of Oruka's product candidates or drugs and harm Oruka's business and results of operations.

Moreover, Oruka's CMOs may experience manufacturing difficulties due to resource constraints, supply chain issues, or as a result of labor disputes or unstable political environments. If any CMOs on which Oruka will rely fail to manufacture quantities of Oruka's product candidates at quality levels necessary to meet regulatory requirements and at a scale sufficient to meet anticipated demand at a cost that allows Oruka to achieve profitability, Oruka's business, financial condition and prospects could be materially and adversely affected. In addition, Oruka's CMOs

are responsible for transporting temperature-controlled materials that can be inadvertently degraded during transport due to several factors, rendering certain batches unsuitable for trial use for failure to meet, among others, Oruka's integrity and purity specifications. Oruka and any of its CMOs may also face product seizure or detention or refusal to permit the import or export of products. Oruka's business could be materially adversely affected by business disruptions to its third-party providers that could materially adversely affect its anticipated timelines, potential future revenue and financial condition and increase its costs and expenses. Each of these risks could delay or prevent the completion of Oruka's preclinical studies and clinical trials or the approval of any of its product candidates by the FDA, result in higher costs or adversely impact commercialization of its product candidates. See the section titled "*Oruka's Business — Manufacturing*" for a more detailed description of Oruka's manufacturing plans and assumptions and the factors that may affect the success of Oruka's programs.

Risks Related to Employee Matters, Managing Growth and Other Risks Related to Oruka's Business

In order to successfully implement Oruka's plans and strategies, Oruka will need to grow the size of its organization and it may experience difficulties in managing this growth.

Oruka expects to experience significant growth in the number of its employees and the scope of its operations, particularly in the areas of preclinical and clinical drug development, technical operations, clinical operations, regulatory affairs and, potentially, sales and marketing. To manage Oruka's anticipated future growth, Oruka must continue to implement and improve its managerial, operational and financial personnel and systems, expand its facilities and continue to recruit and train additional qualified personnel. Due to Oruka's limited financial resources and the limited experience of its management team working together in managing a company with such anticipated growth, Oruka may not be able to effectively manage the expansion of its operations or recruit and train additional qualified personnel.

Oruka is highly dependent on its key personnel and anticipates hiring new key personnel. If Oruka is not successful in attracting and retaining highly qualified personnel, it may not be able to successfully implement its business strategy.

Oruka is a preclinical stage biotechnology company with a limited operating history, and, as of May 3, 2024, it had ten full-time employees. Oruka has been and will continue to be highly dependent on the research and development, clinical and business development expertise of its executive officers, as well as the other principal members of its management, scientific and clinical team. Any of Oruka's management team members may terminate their employment with Oruka at any time. Oruka does not maintain "key person" insurance for any of its executives or other employees.

Attracting and retaining qualified personnel will also be critical to Oruka's success, including with respect to any strategic transaction that it may pursue. The loss of the services of Oruka's executive officers or other key employees could impede the achievement of its research, development and commercialization objectives and seriously harm its ability to successfully implement its business strategy. Furthermore, replacing executive officers and key employees may be difficult and may take an extended period of time because of the limited number of individuals in Oruka's industry with the breadth of skills and experience required to successfully develop, facilitate regulatory approval of and commercialize product candidates. Competition to hire from this limited pool is intense, and Oruka may be unable to hire, train, retain or motivate these key personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. Oruka also experiences competition for the hiring of scientific and clinical personnel from universities and research institutions.

In addition, Oruka relies on consultants and advisors, including scientific and clinical advisors, to assist it in formulating its discovery and nonclinical and clinical development and commercialization strategy. Oruka's consultants and advisors may be employed by employers other than Oruka and may have commitments under consulting or advisory contracts with other entities that may limit their availability to Oruka. If Oruka is unable to continue to attract and retain high quality personnel, its ability to pursue its growth strategy will be limited.

Oruka's future growth may depend, in part, on its ability to operate in foreign markets, where it would be subject to additional regulatory burdens and other risks and uncertainties.

Oruka's future growth may depend, in part, on its ability to develop and commercialize its product candidates in foreign markets for which it may rely on collaboration with third parties. Oruka is not permitted to market or promote any of its product candidates before it receives regulatory approval from the applicable foreign regulatory authority, and may never receive such regulatory approval for any of its product candidates. To obtain separate regulatory approval in many other countries, Oruka must comply with numerous and varying regulatory requirements of such countries regarding safety and efficacy and governing, among other things, clinical trials and commercial sales, pricing and distribution of its product candidates, and Oruka cannot predict success in these jurisdictions. If Oruka fails to comply with the regulatory requirements in international markets and receive applicable marketing approvals, its target market will be reduced and its ability to realize the full market potential of its product candidates will be harmed and its business will be adversely affected. Moreover, even if Oruka obtains approval of its product candidates and ultimately commercializes its product candidates in foreign markets, Oruka would be subject to the risks and uncertainties, including the burden of complying with complex and changing foreign regulatory, tax, accounting and legal requirements and reduced protection of intellectual property rights in some foreign countries.

Oruka's estimates of market opportunity and forecasts of market growth may prove to be inaccurate, and even if the markets in which Oruka competes achieve the forecasted growth, its business may not grow at similar rates, or at all.

Oruka's market opportunity estimates and growth forecasts are subject to significant uncertainty and are based on assumptions and estimates which may not prove to be accurate. Oruka's estimates and forecasts relating to size and expected growth of its target market may prove to be inaccurate. Even if the markets in which Oruka competes meet Oruka's size estimates and growth forecasts, Oruka's business may not grow at similar rates, or at all. Oruka's growth is subject to many factors, including its success in implementing its business strategy, which is subject to many risks and uncertainties.

Oruka's revenue will be dependent, in part, upon the size of the markets in the territories for which it gains regulatory approval, the accepted price for the product, the ability to obtain coverage and reimbursement and whether Oruka owns the commercial rights for that territory. If the number of Oruka's addressable patients is not as significant as it estimates, the indication approved by regulatory authorities is narrower than it expects or the treatment population is narrowed by competition, physician choice or treatment guidelines, Oruka may not generate significant revenue from sales of such products, even if approved.

Oruka's employees, independent contractors, consultants, commercial collaborators, principal investigators, CROs, CMOs, suppliers and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

Oruka is exposed to the risk that its employees, independent contractors, consultants, commercial collaborators, principal investigators, CROs, CMOs, suppliers and vendors acting for or on its behalf may engage in misconduct or other improper activities. Oruka has adopted a code of conduct and ethics, but it is not always possible to identify and deter misconduct by these parties and the precautions Oruka takes to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting Oruka from governmental investigations or other actions or lawsuits stemming from a failure to comply with these laws or regulations.

Oruka's internal information technology systems, or those of any of its CROs, manufacturers, other contractors or consultants, third-party service providers, or potential future collaborators, may fail or suffer security or data privacy breaches or other unauthorized or improper access to, use of, or destruction of Oruka's proprietary or confidential data, employee data or personal data, which could result in additional costs, loss of revenue, significant liabilities, harm to Oruka's brand and material disruption of its operations.

In the ordinary course of its business, Oruka and the third parties upon which it relies collect, receive, store, process, generate, use, transfer, disclose, make accessible, protect, secure, dispose of, transmit, and share (collectively, process) proprietary, confidential, and sensitive data, including personal data, intellectual property, trade secrets, and other sensitive data (collectively, sensitive information).

Despite the implementation of security measures in an effort to protect systems that store Oruka's information, given their size and complexity and the increasing amounts of information maintained on Oruka's internal information technology systems and those of its third-party CROs, other contractors (including sites performing Oruka's clinical trials), third-party service providers and supply chain companies, and consultants, these systems are potentially vulnerable to breakdown or other damage or interruption from service interruptions, system malfunction, natural disasters, terrorism, war and telecommunication and electrical failures, as well as security breaches from inadvertent or intentional actions by Oruka's employees, contractors, consultants, business partners and/or other third parties, or from cyber-attacks by malicious third parties, which may compromise Oruka's system infrastructure or lead to the loss, destruction, alteration or dissemination of, or damage to, Oruka's data.

Some actors now engage and are expected to continue to engage in cyber-attacks, including without limitation nation-state actors for geopolitical reasons and in conjunction with military conflicts and defense activities. During times of war and other major conflicts, Oruka, and the third parties upon which it relies, may be vulnerable to a heightened risk of these attacks, including retaliatory cyber-attacks, that could materially disrupt Oruka's systems and operations, supply chain, and ability to produce, sell and distribute its goods and services. In particular, severe ransomware attacks are becoming increasingly prevalent and can lead to significant interruptions in Oruka's operations, ability to provide its products or services, loss of sensitive data and income, reputational harm, and diversion of funds. Extortion payments may alleviate the negative impact of a ransomware attack, but Oruka may be unwilling or unable to make such payments due to, for example, applicable laws or regulations prohibiting such payments.

To the extent that any disruption or security breach were to result in loss, destruction, unavailability, alteration or dissemination of, or damage to, Oruka's data or applications, or for it to be believed or reported that any of these occurred, Oruka could incur liability and reputational damage and the development and commercialization of its product candidates could be delayed. Further, Oruka's insurance policies may not be adequate to compensate it for the potential losses arising from any such disruption in, or failure or security breach of, its systems or third-party systems where information important to Oruka's business operations or commercial development is stored.

Oruka's fully-remote workforce may create additional risks for its information technology systems and data because its employees work remotely and utilize network connections, computers, and devices working at home, while in transit and in public locations. Additionally, business transactions (such as acquisitions or integrations) could expose Oruka to additional cybersecurity risks and vulnerabilities, as its systems could be negatively affected by vulnerabilities present in acquired or integrated entities' systems and technologies.

While Oruka has implemented security measures designed to protect against security incidents, there can be no assurance that these measures will be effective. Oruka may be unable in the future to detect vulnerabilities in its information technology systems because such threats and techniques change frequently, are often sophisticated in nature, and may not be detected until after a security incident has occurred. Further, Oruka may experience delays in developing and deploying remedial measures designed to address any such identified vulnerabilities. Applicable data privacy and security obligations may require Oruka to notify relevant stakeholders of security incidents. Such disclosures are costly, and the disclosure or the failure to comply with such requirements could lead to adverse consequences.

Oruka relies on third-party service providers and technologies to operate critical business systems to process sensitive information in a variety of contexts. Oruka's ability to monitor these third parties' information security practices is limited, and these third parties may not have adequate information security measures in place. If Oruka's third-party service providers experience a security incident or other interruption, Oruka could experience adverse

consequences. While Oruka may be entitled to damages if its third-party service providers fail to satisfy their privacy or security-related obligations to it, any award may be insufficient to cover Oruka's damages, or Oruka may be unable to recover such award. In addition, supply-chain attacks have increased in frequency and severity, and Oruka cannot guarantee that third parties' infrastructure in its supply chain or its third-party partners' supply chains have not been compromised.

If Oruka (or a third party upon whom it relies) experiences a security incident or are perceived to have experienced a security incident, Oruka may experience adverse consequences, such as government enforcement actions (for example, investigations, fines, penalties, audits, and inspections); additional reporting requirements and/or oversight; restrictions on processing sensitive information (including personal data); litigation (including class claims); indemnification obligations; negative publicity; reputational harm; monetary fund diversions; interruptions in Oruka's operations (including availability of data); financial loss; and other similar harms. Security incidents and attendant consequences may cause stakeholders (including investors and potential customers) to stop supporting Oruka's platform, deter new customers from products, and negatively impact Oruka's ability to grow and operate its business.

Oruka's contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in Oruka's contracts are sufficient to protect Oruka from liabilities, damages, or claims related to its data privacy and security obligations. Oruka cannot be sure that its insurance coverage will be adequate or sufficient to protect it from or to mitigate liabilities arising out of its privacy and security practices, that such coverage will continue to be available on commercially reasonable terms or at all, or that such coverage will pay future claims.

Oruka is subject to stringent and changing laws, regulations and standards, and contractual obligations relating to privacy, data protection, and data security. The actual or perceived failure to comply with such obligations could lead to government enforcement actions (which could include civil or criminal penalties), fines and sanctions, private litigation and/or adverse publicity and could negatively affect Oruka's operating results and business.

Oruka and third parties who it works with are or may become subject to numerous domestic and foreign laws, regulations, and standards relating to privacy, data protection, and data security, the scope of which is changing, subject to differing applications and interpretations, and may be inconsistent among countries, or conflict with other rules. Oruka is or may become subject to the terms of contractual obligations related to privacy, data protection and data security. Oruka's obligations may also change or expand as its business grows. The actual or perceived failure by Oruka or third parties related to Oruka to comply with such laws, regulations and obligations could increase Oruka's compliance and operational costs, expose it to regulatory scrutiny, actions, fines and penalties, result in reputational harm, lead to a loss of customers, result in litigation and liability, and otherwise cause a material adverse effect on its business, financial condition, and results of operations. See the section titled "*Oruka's Business — Government Regulation — Data Privacy and Security*" for a more detailed description of the laws that may affect Oruka's ability to operate.

If Oruka fails to comply with environmental, health and safety laws and regulations, it could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of its business.

Oruka is subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Oruka's operations may involve the use of hazardous and flammable materials, including chemicals and biological and radioactive materials. In addition, Oruka may incur substantial costs in order to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair Oruka's research, development or commercialization efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Oruka may be subject to adverse legislative or regulatory tax changes that could negatively impact its financial condition.

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which may have retroactive application) could adversely affect Oruka's stockholders or Oruka. Oruka assesses the impact of various tax reform proposals and modifications to existing tax treaties in all jurisdictions

where it has operations to determine the potential effect on its business and any assumptions it has made about its future taxable income. Oruka cannot predict whether any specific proposals will be enacted, the terms of any such proposals or what effect, if any, such proposals would have on its business if they were to be enacted. For example, the United States recently enacted the Inflation Reduction Act of 2022 ("IRA"), which implements, among other changes, a 1% excise tax on certain stock buybacks. In addition, beginning in 2022, the Tax Cuts and Jobs Act eliminated the previously available option to deduct research and development expenditures and requires taxpayers to amortize them generally over five years for research activities conducted in the United States and over 15 years for research activities conducted outside the United States. The U.S. Congress is considering legislation that would restore the current deductibility of research and development expenditures; however, Oruka has no assurance that the provision will be repealed or otherwise modified. Such changes, among others, may adversely affect Oruka's effective tax rate, results of operation and general business condition.

Oruka may acquire businesses or products, or form strategic alliances, in the future, and may not realize the benefits of such acquisitions.

Oruka may acquire additional businesses or products, form strategic alliances, or create joint ventures with third parties that it believes will complement or augment its existing business. If Oruka acquires businesses with promising markets or technologies, it may not be able to realize the benefit of acquiring such businesses if it is unable to successfully integrate them with its existing operations and company culture. Oruka may encounter numerous difficulties in developing, manufacturing and marketing any new product candidates or products resulting from a strategic alliance or acquisition that delay or prevent it from realizing their expected benefits or enhancing Oruka's business. There is no assurance that, following any such acquisition, Oruka will achieve the synergies expected in order to justify the transaction, which could result in a material adverse effect on Oruka's business and prospects.

Oruka maintains its cash at financial institutions, often in balances that exceed federally-insured limits. The failure of financial institutions could adversely affect Oruka's ability to pay its operational expenses or make other payments.

Oruka's cash held in non-interest-bearing and interest-bearing accounts exceeds the Federal Deposit Insurance Corporation ("FDIC") insurance limits. If such banking institutions were to fail, Oruka could lose all or a portion of those amounts held in excess of such insurance limitations. For example, the FDIC took control of Silicon Valley Bank on March 10, 2023. The Federal Reserve subsequently announced that account holders would be made whole. However, the FDIC may not make all account holders whole in the event of future bank failures. In addition, even if account holders are ultimately made whole with respect to a future bank failure, account holders' access to their accounts and assets held in their accounts may be substantially delayed. Any material loss that Oruka may experience in the future or inability for a material time period to access its cash and cash equivalents could have an adverse effect on its ability to pay its operational expenses or make other payments, which could adversely affect its business.

General Risk Factors

Oruka's estimates of market opportunity and forecasts of market growth may prove to be inaccurate, and even if the markets in which Oruka competes achieve the forecasted growth, its business may not grow at similar rates, or at all.

Oruka's market opportunity estimates and growth forecasts are subject to significant uncertainty and are based on assumptions and estimates which may not prove to be accurate. Oruka's estimates and forecasts relating to size and expected growth of its target market may prove to be inaccurate. Even if the markets in which Oruka competes meet its size estimates and growth forecasts, Oruka's business may not grow at similar rates, or at all. Oruka's growth is subject to many factors, including its success in implementing its business strategy, which is subject to many risks and uncertainties.

Oruka's revenue will be dependent, in part, upon the size of the markets in the territories for which Oruka gains regulatory approval, the accepted price for the product, the ability to obtain coverage and reimbursement and whether Oruka owns the commercial rights for that territory. If the number of its addressable patients is not as

significant as Oruka estimates, the indication approved by regulatory authorities is narrower than Oruka expects or the treatment population is narrowed by competition, physician choice or treatment guidelines, Oruka may not generate significant revenue from sales of such products, even if approved.

Oruka may become exposed to costly and damaging liability claims, either when testing a product candidate in the clinical or at the commercial stage, and its product liability insurance may not cover all damages from such claims.

Oruka is exposed to potential product liability and professional indemnity risks that are inherent in the research, development, manufacturing, marketing, and use of pharmaceutical products. While Oruka currently has no products that have been approved for commercial sale, the future use of a product candidate in clinical trials, and the sale of any approved products in the future, may expose Oruka to liability claims. These claims may be made by patients that use the product, healthcare providers, pharmaceutical companies, or others selling such product. Any claims against Oruka, regardless of their merit, could be difficult and costly to defend and could materially and adversely affect the market for Oruka's products or any prospects for commercialization of its products. Although Oruka intends to obtain product liability insurance for its future clinical trials, it is possible that any liabilities could exceed Oruka's insurance coverage or that in the future Oruka may not be able to maintain insurance coverage at a reasonable cost or obtain insurance coverage that will be adequate to satisfy any liability that may arise. If a successful product liability claim or series of claims is brought against Oruka for uninsured liabilities or in excess of insured liabilities, Oruka's assets may not be sufficient to cover such claims and its business operations could be impaired.

Litigation costs and the outcome of litigation could have a material adverse effect on Oruka's business.

From time to time Oruka may be subject to litigation claims through the ordinary course of its business operations regarding, but not limited to, employment matters, security of patient and employee personal information, contractual relations with collaborators and intellectual property rights. Litigation to defend itself against claims by third parties, or to enforce any rights that Oruka may have against third parties, may continue to be necessary, which could result in substantial costs and diversion of its resources, causing a material adverse effect on its business, financial condition, results of operations or cash flows.

Oruka's business could be adversely affected by economic downturns, inflation, increases in interest rates, natural disasters, public health crises, political crises, geopolitical events, or other macroeconomic conditions, which could have a material and adverse effect on its results of operations and financial condition.

The global economy, including credit and financial markets, has experienced extreme volatility and disruptions, including, among other things, diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, supply chain shortages, increases in inflation rates, higher interest rates, and uncertainty about economic stability. For example, the COVID-19 pandemic resulted in widespread unemployment, economic slowdown and extreme volatility in the capital markets. The Federal Reserve has raised interest rates multiple times in response to concerns about inflation and it may raise them again. Higher interest rates, coupled with reduced government spending and volatility in financial markets, may increase economic uncertainty and affect consumer spending. Similarly, the ongoing military conflict between Russia and Ukraine and in the Middle East and rising tensions with China have created extreme volatility in the global capital markets and may have further global economic consequences, including disruptions of the global supply chain. Any such volatility and disruptions may adversely affect Oruka's business or the third parties on whom Oruka relies. If the equity and credit markets deteriorate, including as a result of political unrest or war, it may make any necessary debt or equity financing more costly, more dilutive, or more difficult to obtain in a timely manner or on favorable terms, if at all. Increased inflation rates can adversely affect Oruka by increasing its costs, including labor and employee benefit costs.

Oruka may in the future experience disruptions as a result of such macroeconomic conditions, including delays or difficulties in initiating or expanding clinical trials and manufacturing sufficient quantities of materials. Any one or a combination of these events could have a material and adverse effect on Oruka's results of operations and financial condition.

Risks Related to the Combined Company

If any of the events described in "Risks Related to ARCA" or "Risks Related to Oruka" occur, those events could cause potential benefits of the Merger not to be realized.

Following completion of the Merger, the combined company will be susceptible to many of the risks described in the sections herein entitled "*Risks Related to ARCA*" and "*Risks Related to Oruka*." To the extent any of the events in the risks described in those sections occur, the potential benefits of the Merger may not be realized and the results of operations and financial condition of the combined company could be adversely affected in a material way. This could cause the market price of the combined company's common stock to decline.

The market price of the combined company's common stock is expected to be volatile, and the market price of the common stock may drop following the Merger.

The market price of the combined company's common stock following the Merger could be subject to significant fluctuations. Some of the factors that may cause the market price of the combined company's common stock to fluctuate include:

- results of clinical trials and preclinical studies of the combined company's product candidates, or those of the combined company's competitors or the combined company's existing or future collaborators;
- failure to meet or exceed financial and development projections the combined company may provide to the public;
- failure to meet or exceed the financial and development projections of the investment community;
- if the combined company does not achieve the perceived benefits of the Merger as rapidly or to the extent anticipated by financial or industry analysts;
- announcements of significant acquisitions, strategic collaborations, joint ventures or capital commitments by the combined company or its competitors;
- actions taken by regulatory agencies with respect to the combined company's product candidates, clinical studies, manufacturing process or sales and marketing terms;
- disputes or other developments relating to proprietary rights, including patents, litigation matters, and the combined company's ability to obtain patent protection for its technologies;
- additions or departures of key personnel;
- significant lawsuits, including patent or stockholder litigation;
- if securities or industry analysts do not publish research or reports about the combined company's business, or if they issue adverse or misleading opinions regarding its business and stock;
- changes in the market valuations of similar companies;
- general market or macroeconomic conditions or market conditions in the pharmaceutical and biotechnology sectors;
- sales of securities by the combined company or its securityholders in the future;
- if the combined company fails to raise an adequate amount of capital to fund its operations or continued development of its product candidates;
- trading volume of the combined company's common stock;
- announcements by competitors of new commercial products, clinical progress or lack thereof, significant contracts, commercial relationships or capital commitments;

- adverse publicity relating to precision medicine product candidates, including with respect to other products in such markets;
- the introduction of technological innovations or new therapies that compete with the products and services of the combined company; and
- period-to-period fluctuations in the combined company's financial results.

Moreover, the stock markets in general have experienced substantial volatility that has often been unrelated to the operating performance of individual companies. These broad market fluctuations may also adversely affect the trading price of the combined company's common stock. In addition, a recession, depression or other sustained adverse market event could materially and adversely affect the combined company's business and the value of its common stock. In the past, following periods of volatility in the market price of a company's securities, stockholders have often instituted class action securities litigation against such companies. Furthermore, market volatility may lead to increased shareholder activism if the combined company experiences a market valuation that activists believe is not reflective of its intrinsic value. Activist campaigns that contest or conflict with the combined company's strategic direction or seek changes in the composition of its board of directors could have an adverse effect on its operating results, financial condition and cash flows.

The combined company may incur losses for the foreseeable future and may never achieve profitability.

The combined company may never become profitable, even if it is able to complete clinical development for one or more product candidates and eventually commercialize such product candidates. The combined company will need to successfully complete significant research, development, testing and regulatory compliance activities that, together with projected general and administrative expenses, is expected to result in substantial increased operating losses for at least the next several years. Even if the combined company does achieve profitability, it may not be able to sustain or increase profitability on a quarterly or annual basis.

If the combined company fails to attract and retain management and other key personnel, it may be unable to continue to successfully develop or commercialize its product candidates or otherwise implement its business plan.

The combined company's ability to compete in the highly competitive pharmaceuticals industry depends on its ability to attract and retain highly qualified managerial, scientific, medical, legal, sales and marketing and other personnel. The combined company will be highly dependent on its management and scientific personnel. The loss of the services of any of these individuals could impede, delay, or prevent the successful development of the combined company's product pipeline, completion of its planned clinical trials, commercialization of its product candidates or in-licensing or acquisition of new assets and could impact negatively its ability to implement successfully its business plan. If the combined company loses the services of any of these individuals, it might not be able to find suitable replacements on a timely basis or at all, and its business could be harmed as a result. The combined company might not be able to attract or retain qualified management and other key personnel in the future due to the intense competition for qualified personnel among biotechnology, pharmaceutical and other businesses.

The combined company will need to raise additional financing in the future to fund its operations, which may not be available to it on favorable terms or at all.

The combined company will require substantial additional funds to conduct the costly and time-consuming clinical efficacy trials necessary to pursue regulatory approval of each potential product candidate and to continue the development of ORKA-001, ORKA-002 and Oruka's other programs and future product candidates. The combined company's future capital requirements will depend upon a number of factors, including: the number and timing of future product candidates in the pipeline; progress with and results from preclinical testing and clinical trials; the ability to manufacture sufficient drug supplies to complete preclinical and clinical trials; the costs involved in preparing, filing, acquiring, prosecuting, maintaining and enforcing patent and other intellectual property claims; and the time and costs involved in obtaining regulatory approvals and favorable reimbursement or formulary acceptance. Raising additional capital may be costly or difficult to obtain and could, for example, through the sale of common stock or securities convertible or exchangeable into common stock, significantly dilute the combined company's stockholders' ownership interests or inhibit the combined company's ability to achieve its business objectives. If the combined company raises additional funds through public or private equity offerings, the terms of

these securities may include liquidation or other preferences that adversely the rights of its common stockholders. In addition, any debt financing may subject the combined company to fixed payment obligations and covenants limiting or restricting its ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If the combined company raises additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, the combined company may have to relinquish certain valuable intellectual property or other rights to its product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to it. Even if the combined company were to obtain sufficient funding, there can be no assurance that it will be available on terms acceptable to the combined company or its stockholders.

The combined company will incur additional costs and increased demands upon management as a result of complying with the laws and regulations affecting public companies.

The combined company will incur significant legal, accounting and other expenses as a public company that Oruka did not incur as a private company, including costs associated with public company reporting obligations under the Securities Exchange Act of 1934, as amended (the "Exchange Act"). The combined company's management team will consist of the executive officers of Oruka prior to the Merger. These executive officers and other personnel will need to devote substantial time to gaining expertise related to public company reporting requirements and compliance with applicable laws and regulations to ensure that the combined company complies with all of these requirements. Any changes the combined company makes to comply with these obligations may not be sufficient to allow it to satisfy its obligations as a public company on a timely basis, or at all. These reporting requirements, rules and regulations, coupled with the increase in potential litigation exposure associated with being a public company, could also make it more difficult for the combined company to attract and retain qualified persons to serve on the board of directors or on board committees or to serve as executive officers, or to obtain certain types of insurance, including directors' and officers' insurance, on acceptable terms.

Upon completion of the Merger, failure by the combined company to comply with the initial listing standards of Nasdaq will prevent its stock from being listed on Nasdaq.

Upon completion of the Merger, ARCA, under the new name "Oruka Therapeutics, Inc.," will be required to meet the initial listing requirements to maintain the listing and continued trading of its shares on Nasdaq. These initial listing requirements are more difficult to achieve than the continued listing requirements. Pursuant to the Merger Agreement, ARCA agreed to use its commercially reasonable efforts to cause the shares of ARCA common stock being issued in the Merger (including any common stock issuable upon conversion of the ARCA Series B Preferred Stock) to be approved for listing on Nasdaq at or prior to the effective time of the Merger. Based on information currently available to ARCA, ARCA anticipates that its stock will be unable to meet the $4.00 minimum bid price initial listing requirement at the closing of the Merger unless it effects a reverse stock split. ARCA's board of directors intends to effect a reverse stock split of the shares of ARCA common stock at a ratio of between 6:1 to 12:1. In addition, often times a reverse stock split will not result in a trading price for the affected common stock that is proportional to the ratio of the split. Following the Merger, if the combined company is unable to satisfy Nasdaq listing requirements, Nasdaq may notify the combined company that its shares of common stock will not be listed on Nasdaq.

Upon a potential delisting from Nasdaq, if the common stock of the combined company is not then eligible for quotation on another market or exchange, trading of the shares could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it is likely that there would be significantly less liquidity in the trading of the common stock of the combined company; decreases in institutional and other investor demand for the shares, coverage by securities analysts, market making activity and information available concerning trading prices and volume; and fewer broker dealers willing to execute trades in the common stock of the combined company. Also, it may be difficult for the combined company to raise additional capital if the combined company's common stock is not listed on a major exchange. The occurrence of any of these events could result in a further decline in the market price of the common stock of the combined company and could have a material adverse effect on the combined company.

Once the combined company is no longer a smaller reporting company or otherwise no longer qualifies for applicable exemptions, the combined company will be subject to additional laws and regulations affecting public companies that will increase the combined company's costs and the demands on management and could harm the combined company's operating results and cash flows.

The combined company will be subject to the reporting requirements of the Exchange Act, which requires, among other things, that the combined company file with the SEC, annual, quarterly and current reports with respect to the combined company's business and financial condition as well as other disclosure and corporate governance requirements. However, as a "smaller reporting company," as such term is defined in Rule 12b-2 under the Exchange Act, in at least the near term, the combined company may take advantage of exemptions from disclosure requirements, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this proxy statement/prospectus and in the combined company's periodic reports and proxy statements. Once the combined company is no longer a smaller reporting company or otherwise no longer qualifies for these exemptions, the combined company will be required to comply with these additional legal and regulatory requirements applicable to public companies and will incur significant legal, accounting and other expenses to do so. If the combined company is not able to comply with the requirements in a timely manner or at all, the combined company's financial condition or the market price of the combined company's common stock may be harmed. For example, if the combined company or its independent auditor identifies deficiencies in the combined company's internal control over financial reporting that are deemed to be material weaknesses the combined company could face additional costs to remedy those deficiencies, the market price of the combined company's stock could decline or the combined company could be subject to sanctions or investigations by the SEC or other regulatory authorities, which would require additional financial and management resources.

If the combined company fails to maintain proper and effective internal controls, its ability to produce accurate financial statements on a timely basis could be impaired.

Provided the combined company continues to be listed on Nasdaq, the combined company will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the rules and regulations of Nasdaq. The Sarbanes-Oxley Act requires, among other things, that the combined company maintain effective disclosure controls and procedures and internal control over financial reporting. The combined company must perform system and process evaluation and testing of its internal control over financial reporting to allow management to report on the effectiveness of its internal controls over financial reporting in its Annual Report on Form 10-K filing for that year, as required by Section 404 of the Sarbanes-Oxley Act. As a private company, Oruka has not been required to document and test its internal controls over financial reporting nor has its management been required to certify the effectiveness of its internal controls and its auditors have not been required to opine on the effectiveness of its internal control over financial reporting. Following the Merger, the combined company will be required to incur substantial professional fees and internal costs to expand its accounting and finance functions and expend significant management efforts. The combined company may experience difficulty in meeting these reporting requirements in a timely manner.

The combined company may discover weaknesses in its system of internal financial and accounting controls and procedures that could result in a material misstatement of its financial statements. The combined company's internal control over financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

If the combined company is not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act, or if it is unable to maintain proper and effective internal controls, the combined company may not be able to produce timely and accurate financial statements. If that were to happen, the market price of its common stock could decline and it could be subject to sanctions or investigations by Nasdaq, the SEC or other regulatory authorities.

The unaudited pro forma condensed combined financial information for ARCA and Oruka included in this proxy statement/prospectus are preliminary, and the combined company's actual financial position and operations after the Merger may differ materially from the unaudited pro forma financial information included in this proxy statement/prospectus.

The unaudited pro forma financial information for ARCA and Oruka included in this proxy statement/prospectus are presented for illustrative purposes only and is not necessarily indicative of the combined company's actual financial condition or results of operations of future periods, or the financial condition or results of operations that would have been realized had the entities been combined during the period presented. The combined company's actual results and financial position after the Merger may differ materially and adversely from the unaudited pro forma financial information included in this proxy statement/prospectus. The exchange ratio reflected in this proxy statement/prospectus is preliminary. The final exchange ratio could differ materially from the preliminary exchange ratio used to prepare the pro forma adjustments. For more information see the section titled "*Unaudited Pro Forma Condensed Combined Financial Information*" beginning on page 284.

Provisions that will be in the combined company's certificate of incorporation and bylaws and provisions under Delaware law could make an acquisition of the combined company more difficult and may prevent attempts by its stockholders to replace or remove its management.

Provisions that will be included in the combined company's certificate of incorporation and bylaws may discourage, delay or prevent a merger, acquisition or other change in control of the combined company that stockholders may consider favorable, including transactions in which its common stockholders might otherwise receive a premium price for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of the combined company's common stock, thereby depressing the market price of its common stock. In addition, because the combined company's board of directors will be responsible for appointing the members of the combined company's management team, these provisions may frustrate or prevent any attempts by the combined company's stockholders to replace or remove its current management by making it more difficult for stockholders to replace members of the combined company's board of directors. Among other things, these provisions will:

- continue the use of a classified board of directors such that not all members of the combined company board of directors are elected at one time;
- allow the authorized number of the combined company's directors to be changed only by resolution of its board of directors;
- limit the manner in which stockholders can remove directors from the combined company's board of directors;
- provide for advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted on at stockholder meetings;
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit actions by its stockholders by written consent;
- limit who may call a special meeting of stockholders;
- authorize the combined company's board of directors to issue preferred stock without stockholder approval, which could be used to institute a "poison pill" that would work to dilute the stock ownership of a potential hostile acquirer, effectively preventing acquisitions that have not been approved by the combined company's board of directors; and
- require the approval of the holders of at least 66 2/3% of the votes that all combined company stockholders would be entitled to cast to amend or repeal certain provisions of the combined company's certificate of incorporation or bylaws.

Moreover, because the combined company will be incorporated in Delaware, it is governed by the provisions of Section 203 of the DGCL, which prohibits stockholders owning in excess of 15% of the outstanding combined company voting stock from merging or combining with the combined company. Although ARCA and Oruka believe these provisions collectively will provide for an opportunity to receive higher bids by requiring potential acquirors to negotiate with the combined company's board of directors, they would apply even if the offer may be considered

beneficial by some stockholders. In addition, these provisions may frustrate or prevent any attempts by the combined company's stockholders to replace or remove then current management by making it more difficult for stockholders to replace members of the board of directors, which is responsible for appointing the members of management.

ARCA and Oruka expect the combined company to amend its bylaws to provide that, unless the combined company consents in writing to the selection of an alternative forum, certain designated courts will be the sole and exclusive forum for certain legal actions between the combined company and its stockholders, which could limit its stockholders' ability to obtain a favorable judicial forum for disputes with the combined company or its directors, officers, employees or stockholders.

ARCA and Oruka expect the combined company to amend its bylaws to provide that, unless the combined company consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery does not have jurisdiction, the federal district court for the District of Delaware or other state courts of the State of Delaware) is the sole and exclusive forum for the following types of proceedings (i) any derivative action or proceeding brought on the combined company's behalf, (ii) any action asserting a claim of or based on a breach of a fiduciary duty owed by any of the combined company's current or former directors, officers, employees or stockholders to the combined company or its stockholders, (iii) any action asserting a claim arising pursuant to any provision of the DGCL or as to which the DGCL confers jurisdiction on the Court of Chancery of the State of Delaware or (iv) any action asserting a claim arising pursuant to any provision of the combined company's certificate of incorporation or its bylaws (in each case, as they may be amended from time to time) or that is governed by the internal affairs doctrine, in each case subject to the Court of Chancery having personal jurisdiction over the indispensable parties named as defendants therein, which for purposes of this risk factor refers to herein as the "Delaware Forum Provision." The Delaware Forum Provision will not apply to any causes of action arising under the Securities Act and the Exchange Act. ARCA and Oruka expect the combined company to also amend its bylaws to provide that, unless it consents in writing to an alternative forum, federal district courts of the United States will be the sole and exclusive forum for any complaint asserting a cause of action arising under the Securities Act, which for purposes of this risk factor is referred to herein as the "Federal Forum Provision." There is uncertainty as to whether a court would enforce such a provision. In addition, the bylaws of the combined company will provide that any person or entity purchasing or otherwise acquiring any interest in shares of its capital stock is deemed to have notice of and consented to the foregoing Delaware Forum Provision and Federal Forum Provision; provided, however, that stockholders cannot and will not be deemed to have waived the combined company's compliance with the U.S. federal securities laws and the rules and regulations thereunder.

The Delaware Forum Provision and the Federal Forum Provision may impose additional costs on stockholders of the combined company in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware or were permitted to select another jurisdiction. Additionally, the forum selection clauses in the bylaws of the combined company may limit its stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with the combined company or its directors, officers, employees or stockholders, which may discourage such lawsuits against the combined company and its directors, officers, employees and stockholders even though an action, if successful, might benefit its stockholders. Alternatively, if a court were to find the Delaware Forum Provision or the Federal Forum Provision contained in the combined company's bylaws to be inapplicable or unenforceable in an action, the combined company may incur additional costs associated with resolving such action in other jurisdictions, which could materially and adversely affect its business, financial condition and results of operations.

ARCA and Oruka do not anticipate that the combined company will pay any cash dividends in the foreseeable future.

The current expectation is that the combined company will retain its future earnings, if any, to fund the growth of the combined company's business as opposed to paying dividends. As a result, capital appreciation, if any, of the common stock of the combined company will be your sole source of gain, if any, for the foreseeable future.

An active trading market for the combined company's common stock may not develop and its stockholders may not be able to resell their shares of common stock for a profit, if at all.

Prior to the Merger, there had been no public market for shares of Oruka capital stock. An active trading market for the combined company's shares of common stock may never develop or be sustained. If an active market for the combined company's common stock does not develop or is not sustained, it may be difficult for the combined company's stockholders to sell their shares at an attractive price or at all.

Future sales of shares by existing stockholders could cause the combined company's stock price to decline.

If existing securityholders of ARCA and Oruka sell, or indicate an intention to sell, substantial amounts of the combined company's common stock in the public market after legal restrictions on resale discussed in this proxy statement/prospectus lapse, the trading price of the common stock of the combined company could decline. Based on shares outstanding as of July 16, 2024, after giving effect to the estimated exchange ratio and the shares of Oruka common stock to be issued in the Oruka pre-closing financing and shares expected to be issued upon completion of the Merger and prior to giving effect to the anticipated ARCA reverse stock split, the combined company is expected to have outstanding a total of approximately 354.5 million shares of common stock immediately following the completion of the Merger (or approximately 592.6 million shares of common stock after giving effect to the conversion of the ARCA Series B Preferred Stock and the exercise of the Oruka pre-funded warrants to be issued in the Oruka pre-closing financing). Approximately 308.9 million shares will be freely tradeable upon completion of the Merger and approximately 45.6 million shares (or approximately 183 million, if the ARCA Series B Preferred Stock is converted and the Oruka pre-funded warrants are exercised) will become available for sale in the public market beginning 180 days after the closing of the Merger as a result of the expiration of lock-up agreements between ARCA on the one hand and certain securityholders of Oruka on the other hand (and without giving effect to any restrictions on resale under securities laws). In addition, shares of common stock that are subject to outstanding options or warrants of Oruka (excluding the pre-funded warrants issued in the Oruka pre-closing financing) will become eligible for sale in the public market to the extent permitted by the provisions of various vesting agreements and Rules 144 and 701 under the Securities Act. If these shares are sold, the trading price of the combined company's common stock could decline.

After completion of the Merger, the combined company's executive officers, directors and principal stockholders will have the ability to control or significantly influence all matters submitted to the combined company's stockholders for approval.

Upon the completion of the Merger, and giving effect to the issuance of the shares of Oruka common stock and the Oruka pre-funded warrants prior to the closing of the Merger pursuant to the Oruka pre-closing financing, it is anticipated that the combined company's executive officers, directors and principal stockholders will, in the aggregate, beneficially own approximately 47% of the combined company's outstanding shares of common stock (on a fully-diluted basis), subject to certain assumptions, including, but not limited to, ARCA's net cash as of closing being $5.0 million. ARCA management currently anticipates ARCA's net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, and the currently estimated ownership percentages reflect this projection. As a result, if these stockholders were to choose to act together, they would be able to control or significantly influence all matters submitted to the combined company's stockholders for approval, as well as the combined company's management and affairs. For example, these stockholders, if they choose to act together, would control or significantly influence the election of directors and approval of any merger, consolidation or sale of all or substantially all of the combined company's assets. This concentration of voting power could delay or prevent an acquisition of the combined company on terms that other stockholders may desire.

If equity research analysts do not publish research or reports, or publish unfavorable research or reports, about the combined company, its business or its market, its stock price and trading volume could decline.

The trading market for the combined company's common stock will be influenced by the research and reports that equity research analysts publish about it and its business. Equity research analysts may elect to not provide research coverage of the combined company's common stock after the completion of the Merger, and such lack of research coverage may adversely affect the market price of its common stock. In the event it does have equity research analyst coverage, the combined company will not have any control over the analysts or the content and opinions included in their reports. The price of the combined company's common stock could decline if one or more equity research analysts downgrade its stock or issue other unfavorable commentary or research. If one or more equity research analysts ceases coverage of the combined company or fails to publish reports on it regularly, demand for its common stock could decrease, which in turn could cause its stock price or trading volume to decline.

The combined company will have broad discretion in the use of the cash and cash equivalents of the combined company and the proceeds from the Oruka pre-closing financing and may invest or spend the proceeds in ways with which you do not agree and in ways that may not increase the value of your investment.

The combined company will have broad discretion over the use of the cash and cash equivalents of the combined company and the proceeds from the Oruka pre-closing financing. You may not agree with the combined company's decisions, and its use of the proceeds may not yield any return on your investment. The combined

company's failure to apply these resources effectively could compromise its ability to pursue its growth strategy and the combined company might not be able to yield a significant return, if any, on its investment of these net proceeds. You will not have the opportunity to influence its decisions on how to use the combined company's cash resources.

The combined company may be subject to adverse legislative or regulatory tax changes that could negatively impact its financial condition.

The rules dealing with U.S. federal, state and local income taxation are constantly under review by persons involved in the legislative process and by the Internal Revenue Service and the U.S. Treasury Department. Changes to tax laws (which changes may have retroactive application) could adversely affect the combined company or its stockholders. The combined company will assess the impact of various tax reform proposals and modifications to existing tax treaties in all jurisdictions where the combined company has operations to determine the potential effect on its business and any assumptions the combined company will make about its future taxable income. It cannot predict whether any specific proposals will be enacted, the terms of any such proposals or what effect, if any, such proposals would have on its business if they were to be enacted. For example, the United States recently enacted the IRA, which implements, among other changes, a 1% excise tax on certain stock buybacks. In addition, beginning in 2022, the Tax Act eliminates the currently available option to deduct research and development expenditures and requires taxpayers to amortize them generally over five years. The U.S. Congress is considering legislation that would restore the current deductibility of research and development expenditures, however, there is no assurance that the provision will be repealed or otherwise modified. Such changes, among others, may adversely affect its effective tax rate, results of operation and general business condition.

The combined company's ability to use NOL carryforwards and other tax attributes may be limited, including as a result of the Merger.

As discussed above, ARCA has incurred losses during its history, and the combined company does not expect to become profitable in the near future and may never achieve profitability. As of December 31, 2023, ARCA had NOL carryforwards of approximately $208.1 million, and approximately $2.4 million of research and development credits that may be used to offset future taxable income. ARCA had operating loss carryforwards of $156.4 million generated prior to 2018, which will expire beginning in 2025 if not utilized. Under current law, ARCA's U.S. federal NOLs of $51.7 million incurred in tax years beginning after December 31, 2017 may be carried forward indefinitely, but the deductibility of such net operating loss carryforwards is limited to 80% of taxable income. It is uncertain if and to what extent various states will conform to federal law. In addition, under Sections 382 and 383 of the Code, U.S. federal net operating loss carryforwards and other tax attributes may become subject to an annual limitation in the event of certain cumulative changes in ownership. An "ownership change" pursuant to Section 382 of the Code generally occurs if one or more stockholders or groups of stockholders who own at least 5% of a company's stock increase their ownership by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. The combined company's ability to utilize its net operating loss carryforwards and other tax attributes to offset future taxable income or tax liabilities may be limited as a result of ownership changes, including, as discussed above, in connection with the Merger or other transactions. Similar rules may apply under state tax laws. If the combined company earns taxable income, such limitations could result in increased future income tax liability to the combined company, and the combined company's future cash flows could be adversely affected.

Unfavorable global economic conditions could adversely affect the combined company's business, financial condition, results of operations or cash flows.

The combined company's results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. A severe or prolonged economic downturn could result in a variety of risks to the combined company's business, including, weakened demand for the combined company's product candidates and the combined company's ability to raise additional capital when needed on acceptable terms, if at all. A weak or declining economy could also strain the combined company's suppliers, possibly resulting in supply disruption, or cause the combined company's customers to delay making payments for its services. Any of the foregoing could harm the combined company's business and the combined company cannot anticipate all of the ways in which the current economic climate and financial market conditions could adversely impact its business.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This proxy statement/prospectus contains or incorporates statements that constitute forward-looking statements within the meaning of the federal securities laws in relation to ARCA, Oruka, the Merger and the other proposed transactions contemplated thereby. Any express or implied statements that do not relate to historical or current facts or matters are forward-looking statements. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. These forward-looking statements include, but are not limited to, express or implied statements regarding ARCA's or Oruka's expectations, hopes, beliefs, intentions or strategies regarding the future. In some cases, you can identify forward-looking statements by terminology such as "may," "might," "will," "could," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "projects," "seeks," "target," "endeavor," "possible," "potential," "continue," "contemplate" or the negative of these terms or other comparable terminology, but the absence of these words does not mean that a statement is not forward-looking. These forward-looking statements are based on current expectations and beliefs concerning future developments and their potential effects. There can be no assurance that future developments affecting ARCA, Oruka or the proposed transaction will be those that have been anticipated. These forward-looking statements involve a number of risks, uncertainties (some of which are beyond ARCA's or Oruka's control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. In addition to other factors and matters contained in or incorporated by reference in this document, ARCA and Oruka believe the following factors could cause actual results to differ materially from those discussed in the forward-looking statements:

- the risk that the conditions to the closing of the Merger are not satisfied, including the failure to obtain stockholder approval required to complete the Merger and transactions contemplated thereby;
- ARCA's and Oruka's ability to meet expectations regarding the timing and completion of the Merger;
- the risk that the Oruka pre-closing financing is not completed;
- uncertainties as to the timing and costs of the consummation of the Merger and the ability of each of ARCA and Oruka to consummate the Merger and the transactions contemplated thereby, including the Oruka pre-closing financing;
- statements regarding the special cash dividend that ARCA may pay to ARCA stockholders in connection with the completion of the Merger;
- risks related to ARCA's continued listing on the Nasdaq until closing of the proposed Merger;
- expectations regarding the strategies, prospects, plans expectations and objectives of management of ARCA or Oruka for future operations of the combined company following the closing of the Merger;
- the ability of the combined company to recognize the benefits that may be derived from the Merger, including the commercial or market opportunity of the product candidates of ARCA, Oruka and the combined company;
- risks related to ARCA's and Oruka's ability to correctly estimate their respective operating expenses and expenses associated with the transaction, uncertainties regarding the impact any delay in the closing of the Merger would have on the anticipated cash resources of the combined company upon closing and other events and unanticipated spending and costs that could reduce the combined company's cash resources;
- the accuracy of the parties' estimates regarding expenses, future revenue, capital requirements and needs for additional financing;
- the occurrence of any event, change or other circumstance or condition that could give rise to the termination of the Merger Agreement;
- the fact that under the terms of the Merger Agreement, ARCA and Oruka are restrained from soliciting other acquisition proposals during the pendency of the Merger, except in certain circumstances;

- the effect of the announcement or pendency of the Merger on ARCA's or Oruka's business relationships, operating results and business generally, including disruption of ARCA's and Oruka's management's attention from ongoing business operations due to the Merger and potential adverse reactions or changes to business relationships resulting from the announcement or completion of the transaction;
- the risk that the Merger Agreement may be terminated in circumstances that require ARCA or Oruka to pay a termination fee;
- the outcome of any legal proceedings that may be instituted against ARCA, Oruka or any of their respective directors or officers related to the Merger Agreement or the transactions contemplated thereby;
- the ability of ARCA and Oruka to protect their respective intellectual property rights;
- competitive responses to the Merger;
- legislative, regulatory, political and economic developments beyond the parties' control;
- the initiation, timing and success of clinical trials for ARCA's and Oruka's product candidates;
- success in retaining, or changes required in, ARCA's and Oruka's officers, key employees or directors;
- ARCA's public securities' potential liquidity and trading;
- regulatory actions with respect to ARCA's and Oruka's product candidates or their respective competitors' products and product candidates;
- ARCA's and Oruka's ability to manufacture their product candidates in conformity with the FDA's requirements and to scale up manufacturing of their product candidates to commercial scale, if approved;
- ARCA's and Oruka's reliance on third-party contract development and manufacturer organizations to manufacture and supply product candidates;
- the beneficial characteristics, and the potential safety, efficacy and therapeutic effects of ARCA's and Oruka's product candidates;
- the expected potential benefits of strategic collaboration with third parties and ARCA's and Oruka's ability to attract collaborators with development, regulatory and commercialization expertise;
- ARCA's and Oruka's ability to successfully commercialize product candidates, if approved, and the rate and degree of market acceptance of such product candidates; and
- developments and projections relating to ARCA's and Oruka's competitors or industry.

Should one or more of these risks or uncertainties materialize, or should any of ARCA's or Oruka's assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. There may be additional risks that ARCA or Oruka considers immaterial or which are unknown. You are urged to carefully review the disclosures ARCA and Oruka make concerning these risks and other factors that may affect ARCA's and Oruka's business and operating results under the section titled "*Risk Factors*" beginning on page 15 of this proxy statement/prospectus. Additional factors that could cause actual results to differ materially from those expressed in the forward-looking statements are discussed in reports filed with the SEC by ARCA and incorporated by reference herein. Please see the section titled "*Where You Can Find More Information*" beginning on page 321 of this proxy statement/prospectus. There can be no assurance that the Merger will be completed, or if it is completed, that it will be completed within the anticipated time period or that the expected benefits of the Merger will be realized.

If any of these risks or uncertainties materialize or any of these assumptions prove incorrect, the results of ARCA, Oruka or the combined company could differ materially from the forward-looking statements. Any public statements or disclosures by ARCA and Oruka following this proxy statement/prospectus that modify or impact any of the forward-looking statements contained in this proxy statement/prospectus will be deemed to modify or supersede such statements in this proxy statement/prospectus. You are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this document and are qualified in their entirety by reference to the cautionary statements herein. ARCA and Oruka do not intend, and undertake no obligation, to update any forward-looking information to reflect events or circumstances after the date of this document or to reflect the occurrence of unanticipated events, unless required by law to do so.

THE SPECIAL MEETING IN LIEU OF ANNUAL MEETING OF ARCA STOCKHOLDERS

Date, Time and Place

The ARCA special meeting will be held on August 22, 2024, commencing at 9:00 a.m. Mountain Time, unless postponed or adjourned to a later date. The ARCA special meeting will be held at the Denver Marriott Westminster, 7000 Church Ranch Blvd, Westminster, Colorado 80021. ARCA is sending this proxy statement/prospectus to its stockholders in connection with the solicitation of proxies by ARCA's board of directors for use at the ARCA special meeting and any adjournments or postponements of the ARCA special meeting. This proxy statement/prospectus is first being furnished to ARCA stockholders on or about July 26, 2024.

Purpose of the ARCA Special Meeting

The purposes of the ARCA special meeting are:

1. Approve (i) the issuance of shares of ARCA common stock (including the shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock), which will represent more than 20% of the shares of ARCA common stock outstanding immediately prior to the Merger, to stockholders of Oruka, pursuant to the terms of the Merger Agreement, a copy of which is attached as *Annex A* to this proxy statement/prospectus, and (ii) the change of control of ARCA resulting from the Merger, pursuant to Nasdaq Listing Rules 5635(a) and 5635(b), respectively (the "Nasdaq Stock Issuance Proposal" or "Proposal No. 1");

2. Approve an amendment to the amended and restated certificate of incorporation of ARCA (the "ARCA Charter") to increase the number of shares of ARCA common stock that ARCA is authorized to issue from 100,000,000 shares to 545,000,000, in the form attached as *Annex G* to this proxy statement/prospectus (the "Authorized Share Increase Proposal" or "Proposal No. 2");

3. Approve an amendment to the ARCA Charter to effect a reverse stock split of ARCA's issued and outstanding common stock at a ratio in the range between 6:1 to 12:1, inclusive, in the form attached as *Annex H* to this proxy statement/prospectus, if deemed necessary by ARCA and Oruka, with the final ratio and effectiveness of such amendment and the abandonment of such amendment to be mutually agreed by ARCA's board of directors and Oruka's board of directors prior to the First Effective Time or, if the Nasdaq Stock Issuance Proposal is not approved by ARCA stockholders, determined solely by ARCA's board of directors (the "Reverse Stock Split Proposal" or "Proposal No. 3");

4. Approve an amendment to the ARCA Charter to reflect Delaware law provisions regarding officer exculpation, in the form attached as *Annex I* (the "Officer Exculpation Proposal" or "Proposal No. 4");

5. Elect the Class III director, Jacob Ma-Weaver, to ARCA's board of directors and to hold office until ARCA's 2027 annual meeting of stockholders and until his successor has been duly elected and qualified, or until his earlier death, resignation or removal (the "Director Election Proposal" or "Proposal No. 5"), provided that if the Merger is consummated, the approval of Proposal No. 5 will only have an effect until the completion of the Merger because the composition of ARCA's board of directors will be reconstituted upon completion of the Merger, in accordance with the Merger Agreement;

6. Ratify the appointment of KPMG LLP as ARCA's independent registered public accounting firm for fiscal year ending December 31, 2024, provided that PricewaterhouseCoopers LLP is expected to be appointed for that fiscal year if the Merger is completed (the "Auditor Ratification Proposal" or "Proposal No. 6");

7. Approve the Oruka Therapeutics, Inc. 2024 Stock Incentive Plan (the "Stock Plan Proposal" or "Proposal No. 7");

8. Approve the Oruka Therapeutics, Inc. 2024 Employee Stock Purchase Plan (the "ESPP Proposal" or "Proposal No. 8");

9. Approve, on an advisory basis, certain compensation arrangements for ARCA named executive officers that are based on or otherwise relate to the Merger (the "the Merger Compensation Proposal" or "Proposal No. 9");

10. Approve an adjournment of the ARCA special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal (the "Adjournment Proposal" or "Proposal No. 10"); and

11. Transact such other business as may properly come before the stockholders at the ARCA special meeting or any adjournment or postponement thereof.

Each of Proposal No. 1 and Proposal No. 2 is a condition to completion of the Merger. The issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, and ARCA Series B Preferred Stock in connection with the Merger and the change of control of ARCA resulting from the Merger will not take place unless Proposal No. 1 and Proposal No. 2 are approved by ARCA stockholders and the Merger is consummated. The amendment to the ARCA Charter to increase the number of authorized shares of ARCA common stock will not take place unless Proposal No. 2 is approved by the requisite ARCA stockholders. The amendment to the ARCA Charter to effect a reverse stock split of ARCA's issued and outstanding common stock will not take place unless Proposal No. 3 is approved by the requisite ARCA stockholders. ARCA's board of directors may determine to effect the authorized share increase or the reverse stock split if one or both are approved and Proposal No. 1 is not approved by ARCA stockholders, following the special meeting.

Recommendation of ARCA's Board of Directors

ARCA's board of directors recommends that you vote:

- ARCA's board of directors has determined and declared that the issuance of shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, pursuant to the Merger Agreement is fair to, in the best interests of, and advisable to, ARCA and its stockholders. ARCA's board of directors recommends that ARCA stockholder vote "**FOR**" the approval of Nasdaq Stock Issuance Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and declared that it is advisable and in the best interests of ARCA and its stockholders to approve the amendment to the ARCA Charter to effect the increase in authorized shares. ARCA's board of directors recommends that ARCA stockholder vote "**FOR**" the Authorized Share Increase Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and declared that it is advisable and in the best interests of ARCA and its stockholders to approve the amendment to the ARCA Charter to effect the reverse stock split, if necessary. ARCA's board of directors recommends that ARCA stockholder vote "**FOR**" the Reverse Stock Split Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to approve the amendment to the ARCA Charter to provide for the exculpation of officers, as described in this proxy statement/prospectus. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Officer Exculpation Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to elect Jacob Ma-Weaver to serve on ARCA's board of directors in the class of directors with terms expiring at ARCA's 2027 annual meeting of stockholders, provided that if the Merger is consummated, the approval of Proposal No. 5 will only have an effect until the completion of the Merger because the composition of ARCA's board of directors will be reconstituted upon completion of the Merger, in accordance with the Merger Agreement. ARCA's board of directors that ARCA stockholders vote "**FOR**" the director nominee named in the Director Election Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to ratify the selection of KPMG LLP as ARCA's independent registered public accounting firm for the fiscal year ending December 31, 2024, provided that

PricewaterhouseCoopers LLP is expected to be appointed for that fiscal year if the Merger is completed. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Auditor Ratification Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to approve the 2024 Stock Incentive Plan, as described in this proxy statement/prospectus. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Stock Plan Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to approve the 2024 Employee Stock Purchase Plan, as described in this proxy statement/prospectus. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the ESPP Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that it is advisable to, and in the best interests of, ARCA and its stockholders to approve certain compensation arrangements for ARCA named executive officers that are based on or otherwise relate to the Merger. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Merger Compensation Proposal as described in this proxy statement/prospectus.

- ARCA's board of directors has determined and believes that adjourning the ARCA special meeting, if necessary, to solicit additional proxies if there are not sufficient votes in favor of the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal is fair to, in the best interests of, and advisable to, ARCA and its stockholders and has approved and adopted the proposal. ARCA's board of directors recommends that ARCA stockholders vote "**FOR**" the Adjournment Proposal, if necessary, as described in this proxy statement/prospectus.

Record Date and Voting Power

Only holders of record of ARCA common stock at the close of business on the Record Date of July 22, 2024, are entitled to notice of, and to vote at, the ARCA special meeting. At the close of business on the Record Date, there were 14 registered holders of record of ARCA common stock and there were 14,507,143 shares of ARCA common stock issued and outstanding. Each share of ARCA common stock entitles the holder thereof to one vote on each matter submitted for stockholder approval.

Voting and Revocation of Proxies

The proxy accompanying this proxy statement/prospectus is solicited on behalf of ARCA's board of directors for use at the ARCA special meeting.

If, as of the Record Date referred to above, your shares were registered directly in your name with the transfer agent for ARCA common stock, Computershare Trust Company, N.A., then you are a stockholder of record. As a stockholder of record, you may vote in person at the ARCA special meeting or vote by proxy. Whether or not you plan to attend the ARCA special meeting, we urge you to vote by proxy over the telephone or on the Internet as instructed below or return the proxy card we may mail to you to ensure your vote is counted, the form of which is attached hereto as *Annex M*.

The procedures for voting are as follows:

If you are a stockholder of record, you may vote at the ARCA special meeting. Alternatively, you may vote by proxy by using the accompanying proxy card, over the internet or by telephone. Whether or not you plan to attend the ARCA special meeting, ARCA encourages you to vote by proxy to ensure your vote is counted. Even if you have submitted a proxy before the ARCA special meeting, you may still attend the ARCA special meeting and vote. In such case, your previously submitted proxy will be disregarded.

- To vote in person, come to the ARCA special meeting and we will give you a ballot when you arrive. If you attend the ARCA special meeting and vote in person, your vote will revoke any proxy that you have previously submitted. Simply attending the ARCA special meeting will not, by itself, revoke your proxy.

- To vote using the proxy card, simply complete, sign and date the proxy card that you may request or that we may elect to deliver at a later time and return it promptly in the envelope provided. If you return your signed proxy card to us before the special meeting, we will vote your shares as you direct.
- You can vote by proxy over the telephone by calling the toll-free number found on the proxy card.
- You can vote by proxy over the internet by following the instructions provided on the proxy card.

If you are a beneficial owner of shares registered in the name of your broker, bank or other agent, you should have received a voting instruction card and voting instructions with these proxy materials from that organization rather than from ARCA. Simply complete and mail the voting instruction card to ensure that your vote is counted. To vote at the ARCA special meeting, you must obtain a valid proxy from your broker, bank or other agent. Follow the instructions from your broker, bank or other agent included with these proxy materials, or contact your broker, bank or other agent to request a proxy form.

ARCA provides internet proxy voting to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. However, please be aware that you must bear any costs associated with your internet access, such as usage charges from internet access providers and telephone companies.

If you hold shares beneficially in street name and do not provide your broker or other agent with voting instructions, your shares may constitute "broker non-votes." A "broker non-vote" occurs when shares held by a broker are not voted with respect to a particular proposal because the broker has not received voting instructions from its client(s) with respect to such shares on how to vote and does not have or did not exercise discretionary authority to vote on the matter. Abstentions will be treated as shares present for the purpose of determining the presence of a quorum for the transaction of business at the ARCA special meeting. Abstentions will be counted towards the vote totals for each proposal, and will have the same effect of a vote "AGAINST" Proposal Nos. 1, 4, 6, 7, 8, 9 and 10. Broker non-votes, if any, will not be counted as "votes properly cast" or "shares entitled to vote" and will therefore have no effect on Proposal Nos. 1, 2, 3, 5, 6, 7, 8, 9 and 10, but will have the same effect of a vote "AGAINST" Proposal No. 4. If an ARCA stockholder does not return voting instructions to their broker on how to vote their shares of ARCA common stock, such broker may be prevented from voting, or may otherwise choose not to vote, such shares held by such broker, resulting in broker non-votes with respect to such shares. To make sure that your vote is counted, you should instruct your broker to vote your shares of ARCA common stock, following the procedures provided by your broker.

All properly executed proxies that are not revoked will be voted at the ARCA special meeting and at any adjournments or postponements of the ARCA special meeting in accordance with the instructions contained in the proxy. **If a holder of ARCA common stock executes and returns a proxy and does not specify otherwise, the shares represented by that proxy will be voted "FOR" all of the proposals in accordance with the recommendation of ARCA's board of directors.**

Required Vote

The presence at the ARCA special meeting of the holders of a majority of the shares of ARCA common stock outstanding and entitled to vote at the ARCA special meeting is necessary to constitute a quorum at the meeting. Abstentions and broker non-votes, if any, will be counted towards the presence of a quorum. The affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present at the ARCA special meeting, assuming a quorum is present, is required for approval of Proposal Nos. 1, 6, 7, 8, 9 and 10. The affirmative vote of a majority of the votes properly cast by the holders of ARCA common stock at the ARCA special meeting, assuming a quorum is present, is required for approval of Proposal Nos. 2 and 3. The affirmative vote of a majority of the outstanding shares of ARCA common stock is required for approval of Proposal No. 4. With respect to Proposal No. 5, directors are elected by a plurality of the votes properly cast at the ARCA special meeting, and the one nominee for director receiving the highest number of affirmative votes properly cast will be elected. Proposal No. 1 is conditioned on the approval of Proposal No. 2. Notwithstanding the approval of Proposal No. 1, if Proposal No. 2 is not approved, the actions contemplated by Proposal No. 1 will not be effected and the Merger will not be consummated.

Each of Proposal No. 1 and Proposal No. 2 is a condition to completion of the Merger. The issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, and ARCA Series B Preferred Stock in connection with the Merger and the change of control of ARCA resulting from the Merger will not take place unless Proposal No. 1 and Proposal No. 2 are approved by ARCA stockholders and the Merger is consummated. The amendment to the ARCA Charter to increase the number of authorized shares of ARCA common stock will not take place unless Proposal No. 2 is approved by the requisite ARCA stockholders. The amendment to the ARCA Charter to effect a reverse stock split of ARCA's issued and outstanding common stock, if deemed necessary, will not take place unless Proposal No. 3 is approved by the requisite ARCA stockholders. ARCA's board of directors may determine to effect the authorized share increase or the reverse stock split if one or both are approved and Proposal No. 1 is not approved by ARCA stockholders, following the special meeting.

Votes will be counted by the inspector of election appointed for the meeting, who will separately count "FOR," "AGAINST" and "WITHHOLD" votes, abstentions and broker non-votes, if any, as applicable to each proposal. Abstentions and broker non-votes, if any, will be treated as shares present for the purpose of determining the presence of a quorum for the transaction of business at the ARCA special meeting. Abstentions will be counted towards the vote totals for each proposal, and will have the same effect of a vote "AGAINST" Proposal Nos. 1, 4, 6, 7, 8, 9 and 10. Broker non-votes, if any, will not be counted as "votes properly cast" or "shares entitled to vote" and will therefore have no effect on Proposal Nos. 1, 2, 3, 5, 6, 7, 8, 9 and 10, but will have the same effect of a vote "AGAINST" Proposal No. 4.

As of July 16, 2024, the directors and executive officers of ARCA owned or controlled 28.5% of the outstanding shares of ARCA common stock entitled to vote at the ARCA special meeting. As of July 16, 2024, the ARCA stockholders that are party to a support agreement, including the directors, executive officers and certain stockholders of ARCA, owned an aggregate number of shares of ARCA common stock representing approximately 28.5% of the outstanding shares of ARCA common stock. Each stockholder that entered into a support agreement, including the directors and executive officers of ARCA, has agreed to vote all shares of ARCA common stock owned by him or her as of the Record Date in favor of the adoption of the Merger Agreement and the transactions contemplated thereby, including the Merger, the issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, to the stockholders of Oruka pursuant to the Merger Agreement and the change of control resulting from the First Merger, and against any alternative acquisition proposals.

Solicitation of Proxies

In addition to solicitation by mail, the directors, officers, employees and agent of ARCA may solicit proxies from ARCA stockholders by personal interview, telephone, email, fax or otherwise. ARCA and Oruka will share equally the costs of printing and filing this proxy statement/prospectus and proxy card. Arrangements will also be made with brokerage firms and other custodians, nominees and fiduciaries who are record holders of ARCA common stock for the forwarding of solicitation materials to the beneficial owners of ARCA common stock. ARCA will reimburse these brokers, custodians, nominees and fiduciaries for the reasonable out of pocket expenses they incur in connection with the forwarding of solicitation materials. ARCA has retained Innisfree M&A Incorporated as its proxy solicitor.

Other Matters

As of the date of this proxy statement/prospectus, ARCA's board of directors does not know of any business to be presented at the ARCA special meeting other than as set forth in the notice accompanying this proxy statement/prospectus. If any other matters should properly come before the ARCA special meeting, it is intended that the shares represented by proxies will be voted with respect to such matters in accordance with the judgment of the persons voting the proxies.

THE MERGER

This section and the section titled "The Merger Agreement" beginning on page 135 of this proxy statement/prospectus describe the material aspects of the Merger and the Merger Agreement. While ARCA and Oruka believe that this description covers the material terms of the Merger and the Merger Agreement, it may not contain all of the information that is important to you. You should read carefully this entire proxy statement/prospectus for a more complete understanding of the Merger and the Merger Agreement and the other documents to which you are referred in this proxy statement/prospectus. See the section titled "Where You Can Find More Information" beginning on page 321 of this proxy statement/prospectus.

Background of the Merger

ARCA's board of directors and management regularly review ARCA's operating and strategic plans in an effort to enhance stockholder value. This review involves, among other things, discussions of opportunities and risks associated with ARCA's product candidates, development programs, financial condition and market, as well as a consideration of strategic alternatives available to ARCA. On March 28, 2022, members of ARCA's board of directors and management reviewed the results of ARCA's Phase 2 clinical trial of Recombinant Nematode Anticoagulant Protein c2, or rNAPc2 (AB201) (the "Clinical Trial"). The results of the Clinical Trial indicated that neither studied dose of rNAPc2 achieved statistical significance for the primary efficacy endpoint.

In light of these results, ARCA's board of directors initiated a process to identify and evaluate strategic alternatives available to ARCA that ultimately resulted in the execution of the Merger Agreement. The following is a summary of the background of the process undertaken by ARCA, the identification and evaluation of strategic alternatives and the negotiation of the Merger Agreement.

On March 28, 2022, ARCA's board of directors held video conference meetings with members of ARCA's management and a representative of its legal advisor, Cooley LLP ("Cooley") in attendance, to review the Clinical Trial results. ARCA's board of directors discussed strategic alternatives available to ARCA in light of the negative Clinical Trial results, including continuation of the development of ARCA's current products, possible licensing opportunities or a sale of ARCA. Following this meeting, Mr. Conway, Chairman of ARCA's board of directors, instructed management to provide ARCA's board of directors with management's assessment of the viability of continuing to develop ARCA's current products in light of the negative Clinical Trial results.

On March 29, 2022, ARCA's board of directors held a video conference meeting with members of ARCA's management and a representative of Cooley in attendance to discuss a proposed product development plan prepared by ARCA's management which included a plan to conduct a Phase 3 trial for ARCA's Gencaro product in patients with higher ejection fraction heart failure. ARCA's board of directors instructed management to further refine ARCA's product development plan and to explore other potential strategic alternatives to the product development plan available to ARCA.

Following the close of markets on March 31, 2022, ARCA publicly announced the Clinical Trial results.

On April 10, 2022, ARCA's board of directors held a video conference meeting with members of ARCA's management and a representative of Cooley in attendance to discuss a refined product development plan prepared by ARCA's management and the strategic alternatives to that development plan including a sale of ARCA or other strategic transaction.

Later that same day, ARCA's board of directors held a video conference meeting without members of ARCA's management or representatives of Cooley in attendance. ARCA's board of directors discussed ARCA's prospects as a stand-alone company pursuant to the refined product development plan presented by ARCA's management earlier that same day, and the potential strategic alternatives thereto that were available to ARCA including a broad outreach to potential reverse merger counterparties or a liquidation of ARCA. It was the consensus of ARCA's board of directors that in light of the negative Clinical Trial results, ARCA should explore and evaluate its strategic alternatives while continuing to evaluate its ability to continue on as a stand-alone enterprise. ARCA's board of directors discussed the evaluation and retention of a financial advisor to assist ARCA's board of directors in its exploration and evaluation of strategic alternatives.

On April 17, 2022, ARCA's board of directors held a video conference meeting with members of ARCA's management and a representative of Cooley in attendance. ARCA's board of directors discussed the formation of a special committee of ARCA's board of directors (the "Special Committee") for the purpose of identifying,

considering, evaluating and making recommendations to ARCA's board of directors regarding potential strategic alternatives. ARCA's board of directors approved the formation the Special Committee and appointed Mr. Conway, Dr. Hove and Dr. Grais to serve on the Special Committee, with Mr. Conway serving as chair. The Special Committee was not formed for the purposes of addressing potential or actual conflicts of interest of any director or officer of ARCA. ARCA's board of directors delegated to the Special Committee the full power and authority of ARCA's board of directors to, among other things, identify, consider, evaluate and make recommendations to ARCA's board of directors regarding potential strategic alternatives and proposals which may be available to ARCA and further resolved to not approve any transaction unless the Special Committee had recommended that ARCA's board of directors approve such a transaction. It was also discussed and concluded that: (1) ARCA's board of directors would continue to have an active role in (i) the evaluation of any acquisition proposal, (ii) any discussions with potential acquirers with respect to a potential strategic transaction and (iii) any broader review of strategic alternatives; (2) the Special Committee would update and seek input from ARCA's board of directors as appropriate; and (3) members of ARCA's board of directors who were not also members of the Special Committee would be invited to attend the meetings of the Special Committee. ARCA's board of directors also discussed potential candidates to act as financial advisor to ARCA in connection with a potential strategic transaction and directed the Special Committee to interview potential candidates and engage a financial advisor in connection with a strategic transaction.

On April 18, 2022, ARCA publicly announced its initiation of a process to evaluate strategic options for maximizing stockholder value and the establishment of the Special Committee to assist in the pursuit of such a transaction.

Between April 25, 2022, and April 29, 2022, the Special Committee, and members of ARCA's management team met with representatives from five investment banking firms telephonically to assess their ability to act as ARCA's financial advisor in connection with a review of potential strategic alternatives.

On May 2, 2022, the Special Committee held a video conference meeting with members of ARCA's management team in attendance. The Special Committee discussed the qualifications of the financial advisors it had interviewed. After consideration of the relative qualifications and expertise of the candidates, including industry expertise, knowledge, access to potential transaction candidates, and recent transaction experience, the Special Committee approved the selection of Ladenburg Thalmann & Co., Inc. ("Ladenburg") as ARCA's financial advisor to assist ARCA in its review of potential strategic alternatives and authorized and directed ARCA's management to negotiate an engagement letter with Ladenburg. The Special Committee also determined that Ladenburg's outreach should be focused on identifying potential reverse merger transaction candidates because the Special Committee believed such a transaction had the highest likelihood of presenting the highest value for stockholders in light of (i) the value that would be ascribed to ARCA's public listing in such a transaction which would not be taken into account in a traditional merger or other similar strategic transaction and (ii) ARCA's limited non-cash assets.

On May 4, 2022, ARCA's board of directors held a video conference meeting with members of ARCA's management and a representative of Cooley in attendance. ARCA's board of directors reviewed the qualifications of the potential candidates to serve as ARCA's financial advisor, the terms of the proposed engagement letter with Ladenburg and the Special Committee's recommendation to appoint Ladenburg as ARCA's financial advisor. ARCA's board of directors approved the engagement of Ladenburg and authorized ARCA's management to enter into an engagement letter in substantially the form presented to ARCA's board of directors, which ARCA's management executed later that same day.

On May 5, 2022, ARCA publicly announced it had retained Ladenburg to act as its financial advisor to explore and review a range of strategic alternatives focused on maximizing stockholder value including an acquisition, merger, business combination or other strategic transaction involving ARCA.

On May 6, 2022, the Special Committee held a video conference meeting with members of ARCA's management team, and representatives of Cooley and Ladenburg in attendance. At this meeting, Ladenburg reviewed the process it proposed to undertake in order to identify and evaluate potential strategic alternatives and over 250 potential counterparties that it believed may be interested in pursuing a reverse merger transaction with ARCA. The Special Committee discussed the anticipated timeline for contacting and receiving and evaluating proposals from interested parties in connection with a strategic transaction. Ladenburg also reviewed its proposed selection criteria to be used by the Special Committee in identifying and evaluating potential counterparties. This criteria included an evaluation of (i) the quality of the assets owned by the potential counterparty, (ii) whether the potential counterparty had clear, proof of concept clinic data, (iii) the development stage of the potential counterparty, (iv) the

counterparty's product pipeline, (v) whether the counterparty was pursuing a concurrent private placement financing in order to ensure the counterparty had sufficient cash resources to reach the upcoming milestones with respect to the counterparty's product candidates, (vi) the quality of the potential investors that would participate in such a concurrent financing, (vii) the amount of cash from ARCA required by the potential counterparty and the amount of cash ARCA would be able to distribute to its stockholders in a special dividend immediately prior to the closing of a transaction, (viii) the industry within which the counterparty was engaged, (ix) whether the counterparty was willing to ascribe any value to ARCA's products in the proposed transaction, (x) whether the counterparty was expected to have value inflection points within 18 months, (xi) the capital structure of the counterparty, (xii) whether the counterparty had sufficient infrastructure to maintain ARCA's public listing or the ability to maintain such infrastructure, including whether the counterparty had financial statements sufficient to satisfy public company reporting standards, and (xiii) whether the relative valuations ascribed to ARCA and the potential counterparty in light of the foregoing factors was fair. Ladenburg also proposed limiting outreach efforts to companies in the pharmaceutical and biotechnology industry in light of ARCA's enhanced ability to evaluate and assess the products, and related operational, industry, regulatory, financial, market and other risks and opportunities, of companies within those particular industries. Following a discussion, the Special Committee authorized Ladenburg to begin outreach to all of the potential counterparties presented by Ladenburg and adopted the proposed criteria for purposes of evaluating potential offers.

Beginning on May 6, 2022, Ladenburg conducted a process of identifying and evaluating potential counterparties for a strategic transaction with assistance from the Special Committee and members of ARCA's management. In its outreach efforts, members of ARCA's board of directors, ARCA's management, and representatives of Ladenburg, contacted over 250 companies that met the criteria adopted by the Special Committee.

From May 6, 2022 until June 15, 2022, ARCA delivered bid process letters to 74 companies, received a total of 50 formal non-binding proposals (all of which were for reverse merger styled transactions) and entered into 37 non-disclosure agreements to facilitate further diligence with potential counterparties which also contained a customary "standstill" restriction that would terminate upon entry into a definitive agreement for an acquisition of more than 50% of the shares of capital stock of ARCA. During that same period, the Special Committee, members of ARCA's management and outside advisors met numerous times to consider the various non-binding proposals, and to receive updates regarding the solicitation and evaluation of the proposals. The Special Committee determined not to pursue 48 of the 50 non-binding proposals that were submitted due to, among other reasons, the failure of those potential counterparties to adequately satisfy many of the criteria adopted by the Special Committee. Of the two non-binding proposals that the Special Committee determined to pursue, the Special Committee determined to abandon one in June 2022 in light of that counterparty's early stage of development (Phase 1/Phase 2 clinical trial for its lead product candidate) and its need for all of ARCA's cash to fund its operations. The other counterparty informed the Special Committee in December 2022 that it was no longer interested in pursuing a transaction.

On June 15, 2022, ARCA entered into a Cooperation Agreement with Cable Car Capital LLC, The Funicular Fund, LP, Funicular Funds, LP and Jacob Ma-Weaver. Pursuant to the Cooperation Agreement, ARCA's board of directors appointed Jacob Ma-Weaver as a Class III director with a term expiring at ARCA's 2024 annual meeting of stockholders, effective June 15, 2022, and appointed Mr. Ma-Weaver to the Special Committee.

From June 15, 2022 until December 15, 2022, at the direction of the Special Committee, ARCA's management engaged third-party experts to examine and evaluate its ability to further develop Gencaro as a stand-alone enterprise and prepared an analysis of the potential value of ARCA's assets in a liquidation.

On December 15, 2022, ARCA's board of directors held a video conference meeting with members of ARCA's management and representatives of Wilson Sonsini Goodrich & Rosati, P.C. ("Wilson Sonsini") (who at such point had been engaged as ARCA's counsel) and Ladenburg in attendance to discuss the strategic alternatives available to ARCA including having Ladenburg undertake a renewed search for new strategic transaction counterparties, pursuing a liquidation or continuing to pursue ARCA's development plans as a stand-alone enterprise. The Special Committee determined that continuing to pursue potential strategic transactions was reasonably likely to result in a superior alternative to a liquidation and ARCA's development plan as a stand-alone enterprise and as a result authorized and directed Ladenburg to re-engage with potential counterparties. As part of that authorization, it directed Ladenburg to broaden the scope of potential counterparties to include companies outside the pharmaceutical and biotechnology industry in order to evaluate all possible alternatives available to ARCA and determined to further refine its selection criteria to favor companies with later stage assets and/or near-term revenue as well as companies that did not require all of ARCA's cash in order to achieve its key milestones to ensure a significant dividend of its

cash assets could be made as part of any such transaction. In addition, the Special Committee also determined that ARCA's management should continue to further refine and pursue its development plan as a potential alternative if a compelling counterparty for a strategic transaction was not able to be found.

From December 15, 2022, until January 5, 2023, the Special Committee and representatives of Ladenburg met on multiple occasions to review eleven potential counterparties for a strategic transaction in light of ARCA's board of directors' revised selection criteria and ultimately refined the number of potential counterparties down to three potential counterparties that presented a reasonable likelihood of resulting in a superior alternative to the strategic alternatives the Special Committee was considering including a liquidation of ARCA or the continuation of its business as a standalone enterprise. ARCA and these three potential counterparties entered into non-disclosure agreements to facilitate their discussions which contained a customary "standstill" restriction that would terminate upon entry into a definitive agreement for an acquisition of more than 50% of the shares of capital stock of ARCA.

From January 5, 2023, until January 20, 2023, the Special Committee, members of ARCA's management and representatives of Ladenburg met with and reviewed presentations prepared by the three potential counterparties selected by the Special Committee. Following the presentations, the Special Committee determined that a potential transaction with Party A was the most attractive because (i) it had a promising late stage asset that was expected to reach near term value inflection points along with a promising early stage product candidate and (ii) it did not require all of ARCA's cash to fund its operations. While it did not abandon the other two potential counterparties, the Special Committee focused its efforts on engaging with Party A in light of the attractiveness of that counterparty when compared to the other two potential counterparties.

On January 26, 2023, members of ARCA's management and representatives of Ladenburg were given access to a virtual data room hosted by Party A.

From January 26, 2023, until March 10, 2023, ARCA's management and representatives of Ladenburg undertook an extensive preliminary due diligence review of Party A and engaged numerous advisors to assist ARCA in its due diligence review.

On March 10, 2023, at the direction of the Special Committee, representatives of Ladenburg delivered a draft term sheet to Party A providing for a reverse merger transaction and which ascribed an enterprise value to ARCA in the merger of $10,000,000 and an enterprise value to Party A of $75,000,000.

From March 10, 2023, until May 30, 2023, the Special Committee and representatives of Party A met multiple times to negotiate the substantive economic terms of a potential reverse merger transaction including the size and type of investor for a private placement transaction contemplated to close substantially concurrently with the closing of a reverse merger transaction and the relative valuations to be ascribed to each party.

On May 30, 2023, the Special Committee held a video conference meeting with members of ARCA's management team, and representatives of Wilson Sonsini and Ladenburg in attendance to discuss the final terms of the term sheet negotiated with Party A, which provided for a reverse merger transaction ascribing a $11,000,000 enterprise valuation to ARCA and a $60,000,000 enterprise valuation to Party A. The term sheet also, among other things, allowed ARCA to distribute to its pre-closing stockholders all of ARCA's net cash in excess of $21,000,000 and gave ARCA's stockholders a contingent value right representing the right to receive net proceeds of any sale of ARCA's legacy product candidates. The term sheet also obligated each party to exclusively negotiate a transaction with one another. The Special Committee determined that it should continue to pursue a transaction with Party A on an exclusive basis in light of (i) the Special Committee's view that each of (A) pursuing ARCA's corporate objectives on a stand-alone basis, including the proposed development plan and (B) the liquidation of ARCA, was not reasonably likely to result in superior value to ARCA's stockholders when compared to the proposed transaction; (ii) the Special Committee's view that the $11 million enterprise value ascribed to ARCA would give ARCA's stockholders a significant opportunity to participate in the potential growth of the combined company following the Merger at the negotiated exchange ratio while also receiving a cash payment on account of the special cash dividend; (iii) the Special Committee's view that the combined company was likely to possess sufficient cash resources at the closing of the Merger to fund development of Party A's product candidates through upcoming value inflection points; (iv) ARCA's positive preliminary due diligence performed to date and the recommendations of its advisors with respect to the viability of Party A's assets and (v) the Special Committee's view that the proposal from Party A was more favorable to ARCA than the potential value that might have resulted from further pursuing other strategic transactions available to ARCA in light of the extensive outreach process undertaken to date. As a result of that determination, the Special Committee authorized and directed ARCA's management to execute and deliver the term sheet to Party A and began exclusively negotiating a potential reverse merger transaction with Party A.

Later that same day, ARCA and Party A executed the non-binding term sheet and representatives of ARCA, Party A, and each of their respective legal and financial advisors participated in a video conference meeting during which the timeline and process for the signing of definitive agreements providing for a potential business combination were discussed, including the signing of definitive agreements for a private placement in ARCA that was contemplated to close concurrently with the business combination. The participants tentatively agreed on a work plan that contemplated the execution of definitive agreements in late June or early July 2023.

Between May 30, 2023, and July 20, 2023, representatives of ARCA and Party A engaged in exclusive negotiations regarding a potential reverse merger and conducted detailed due diligence reviews of one another.

On July 20, 2023, Party A informed ARCA that its product approval had been delayed due to a request for additional information by the Office of New Drugs at the FDA.

Between July 20, 2023, and August 25, 2023, the Special Committee, Party A, and each of their respective legal and financial advisors participated in numerous video conference meetings to discuss the current status of Party A's drug approval with the Office of New Drugs at the FDA.

During that same period, the Special Committee met with members of ARCA's management, and representatives of Wilson Sonsini and Ladenburg to review the status of Party A's application with the Office of New Drugs at the FDA and discussed the other strategic alternatives available to ARCA if Party A's approval continued to be delayed.

On August 25, 2023, the Special Committee determined that it was no longer viable to continue to exclusively pursue a transaction with Party A in light of Party A's ongoing financing challenges, regulatory difficulties, increased expenditures and the Special Committees determination that Party A would not be able to successfully market or obtain commitments for the private placement investment contemplated by the term sheet in light of the foregoing. On that same day, ARCA allowed its obligation to exclusively negotiate with Party A lapse without extension.

From August 25, 2023, until December 7, 2023, the Special Committee continued to participate in numerous video conference meetings to discuss the current status of Party A's drug approval with the Office of New Drugs at the FDA. At each of these meetings, Party A stated that regulatory approval was imminent.

During this same period, the Special Committee conducted video conference meetings with members of ARCA's management team, and representatives of Wilson Sonsini and Ladenburg in attendance to discuss the strategic alternatives available to ARCA if Party A's regulatory approval continued to be delayed including a renewed search by Ladenburg for potential reverse merger partners or a liquidation of ARCA.

On December 7, 2023, Mr. Ma-Weaver called Mr. Conway and verbally proposed a potential partial tender offer for 50.1% of the shares of ARCA's capital stock at a price per share range of $1.95 to $2.05 to be led by a stockholder affiliated with Mr. Ma-Weaver.

Later that same day, the Special Committee conducted a video conference meeting (without Mr. Ma-Weaver attending) with members of ARCA's management team, and representatives of Wilson Sonsini and Ladenburg in attendance. The Special Committee further discussed the strategic alternatives available to ARCA including the proposal made by Mr. Ma-Weaver earlier that day. The Special Committee discussed the proposal and noted that the proposal was unlikely to be attractive in light of (i) the fact that ARCA stockholders were expected to receive approximately $2.25 per share in cash if ARCA liquidated at that time based on the previous liquidation analysis prepared by ARCA's management in June 2022 and (ii) the outcomes that the Special Committee expected it could achieve in a potential strategic transaction. The Special Committee authorized Mr. Conway to continue conversations with Mr. Ma-Weaver regarding a potential tender offer in order to see if negotiations with Mr. Ma-Weaver could eventually result in a price per share that presented a superior alternative to the various strategic alternatives the Special Committee was considering and instructed ARCA's management to prepare an updated liquidation analysis.

From December 7, 2023, until January 12, 2024, the Special Committee (without Mr. Ma-Weaver attending), conducted numerous video conference meetings to discuss the strategic alternatives available to ARCA which included, a liquidation of ARCA, a renewed search by Ladenburg for potential reverse merger partners, and a tender offer by the stockholder affiliated with Mr. Ma-Weaver.

During that same period, Mr. Conway and Mr. Ma-Weaver met multiple times to discuss and negotiate a potential tender offer by the stockholder affiliated with Mr. Ma-Weaver.

During that same period, on December 12, 2023, the Nominating and Corporate Governance Committee of ARCA's board of directors met to discuss, among other matters, the compensation that should be paid to each of the directors serving as members of the Special Committee in light of the prolonged strategic process that the committee had undertaken and the extensive work that the Committee had performed and was expected to continue to perform. The Nominating and Corporate Governance Committee of ARCA's board of directors determined that each member of the Special Committee would be entitled to $7,500 for each month of substantive service on the Special Committee that each such member had previously performed and would perform going forward.

On January 12, 2024, the Special Committee conducted a video conference meeting with members of ARCA's management team, and representatives of Wilson Sonsini and Ladenburg in attendance to discuss the strategic alternatives ARCA had been considering. At this meeting representatives of Ladenburg delivered a presentation comparing the potential value to ARCA's stockholders that would result from a traditional merger, a reverse merger, a partial tender offer, or a liquidation. The Special Committee also reviewed a presentation prepared by ARCA's management comparing the tender offer proposal made by Mr. Ma-Weaver on December 7, 2023 to the liquidation analysis that it had prepared which showed a potential value of $2.04 per share to stockholders in a liquidation. For more information regarding the liquidation analysis including the key assumptions therein, please see the section titled "*The Merger — ARCA Liquidation Analysis*," beginning on page 108 of this proxy statement/prospectus. Following those presentations, Mr. Ma-Weaver left the meeting. The Special Committee then discussed the presentations and determined that pursuing a tender offer at the price per share offered by Mr. Ma-Weaver did not have a reasonable likelihood of resulting in a superior alternative when compared to the other strategic alternatives available to ARCA. In light of that determination, and the continuing delay of regulatory approvals for Party A, the Special Committee directed Ladenburg to renew its search for potential reverse merger partners and to focus its outreach on companies that did not require a material amount of cash to remain on ARCA's balance sheet after the closing of a transaction. The Special Committee further instructed Mr. Conway to continue negotiating the terms and conditions of a potential tender offer by the stockholder affiliated with Mr. Ma-Weaver in parallel with Ladenburg's renewed search and ARCA's continued discussions with Party A.

From January 12, 2024, until February 26, 2024, Ladenburg renewed its search for a potential counterparty in line with the Special Committee's revised criteria and received non-binding proposals from eight potential counterparties interested in a reverse merger transaction.

During that same period, Mr. Conway continued his discussions with Mr. Ma-Weaver regarding a potential tender offer and the Special Committee met multiple times to discuss the status of those discussions, and the other strategic alternatives the Special Committee was considering.

On February 15, 2024, the Special Committee (without Mr. Ma-Weaver attending) conducted a video conference meeting with members of ARCA's management team, and representatives of Wilson Sonsini attending. As a result of the negotiations that Mr. Conway and Mr. Ma-Weaver had been engaging in, Mr. Ma-Weaver increased his verbal offer to a price per share of $2.25 for 50.1% of the shares of ARCA's capital stock. Mr. Ma-Weaver then left the meeting. The Special Committee discussed Mr. Ma-Weaver's offer of $2.25 per share and determined that while the price per share was higher than the most recent liquidation analysis presented at the January 12, 2024, meeting, the offer was still not reasonably likely to result in a superior alternative when compared to the other strategic alternatives available to ARCA, including a reverse merger transaction which was expected to provide ARCA's stockholders additional value for ARCA's public listing. Mr. Ma-Weaver then rejoined the meeting and the Special Committee informed him that his offer was not compelling in light of the other strategic alternatives available to ARCA, and that the stockholder affiliated with Mr. Ma-Weaver needed to increase its proposal to a price of at least $2.50 per share for 100% of the shares of ARCA's capital stock. The Special Committee directed Mr. Conway to continue negotiations with the stockholder affiliated with Mr. Ma-Weaver.

From February 15, 2024, until February 23, 2024, Mr. Conway and Mr. Ma-Weaver met multiple times to continue to discuss the potential tender offer. On February 23, 2024, Mr. Ma-Weaver informed the Special Committee that the stockholder affiliated with Mr. Ma-Weaver was no longer interested in pursuing a tender offer.

On February 26, 2024, the Special Committee conducted a video conference meeting with representatives of Ladenburg to review, discuss and evaluate the eight non-binding proposals it had received to date as a result of Ladenburg's renewed outreach. The Special Committee determined that Oruka was a counterparty that merited serious consideration because (i) it required the least amount of ARCA's cash and would therefore permit ARCA to distribute the largest amount of cash to its stockholders, (ii) the company was backed by a reputable investor

with a history of successful reverse merger transactions and (iii) the company already had informal commitments for a substantial private placement investment that was contemplated to close concurrently with the closing of the Merger. As a result, the Special Committee focused its efforts on pursing a transaction with Oruka while continuing to discuss a potential transaction with two of the other potential counterparties that had submitted non-binding proposals in case a transaction with Oruka did not come to fruition. The Special Committee determined that the remaining five non-binding proposals that had been submitted were not compelling in light of the quality of the counterparties' assets, the substantial cash needs of the potential counterparties, and the valuations sought by the potential counterparties.

On February 28, 2024, the Special Committee conducted a video conference meeting with representatives of Ladenburg and Oruka in attendance to discuss Oruka's fitness as a strategic transaction partner.

Later that same day, at the direction of the Special Committee, representatives of Ladenburg delivered a draft term sheet to representatives of Wedbush Securities Inc. ("Wedbush"), Oruka's financial advisor, which proposed a reverse merger transaction ascribing a $10,000,000 enterprise valuation to ARCA and a $175,000,000 enterprise valuation of Oruka (which would be reduced to the extent the price per share in the proposed private placement financing ascribed a value to Oruka of less than $175,000,000) and setting forth certain other material terms including (1) the minimum investment amount to be received by Oruka as a result of a private placement transaction investment to close substantially concurrent with the business combination; (2) conditions to execution of any definitive agreement, (3) conditions to the closing of the business combination transaction; (4) the ability of ARCA to distribute any net cash in excess of $5,000,000 to the pre-Merger stockholders of ARCA; and (5) the exclusivity period.

On February 28, 2024 and February 29, 2024, the Special Committee conducted video conference meetings with representatives of Ladenburg and the other two counterparties that it was considering in attendance to discuss each counterparty's value as a strategic transaction partner.

On February 29, 2024, representatives of Wedbush delivered a revised term sheet to Ladenburg which ascribed a $6,000,000 enterprise valuation to ARCA and included proposed changes to a number of the other legal terms.

Later that same day, Mr. Conway spoke with representatives of Oruka and proposed an ascribed enterprise value of $7,500,000. Representatives of Oruka informed Mr. Conway that it was not willing to pursue a transaction at an ascribed enterprise value over $6,000,000.

Later that same day, the Special Committee held a video conference meeting with members of ARCA's management and representatives of Wilson Sonsini and Ladenburg in attendance to discuss the revised proposal received by Oruka. The Special Committee determined that the revised proposal represented a promising strategic alternative that was worth pursuing on an exclusive basis in light of: (i) the Special Committee's view that ARCA was not likely to accomplish its corporate objectives on a stand-alone basis in light of its financial condition and product candidates; (ii) the Special Committee's view that the $6,000,000 enterprise value ascribed to ARCA was within the range of values ascribed in other recent reverse merger transactions (for more information regarding the range of values ascribed to recent reverse merger transactions, please see the section titled "The Merger — Opinion of Lucid — Analysis of precedent Reverse Merger Transactions," beginning on page 118 of this proxy statement/prospectus) and would give ARCA's stockholders a significant opportunity to participate in the potential growth of the combined company following the Merger at the negotiated exchange ratio while also receiving an immediate cash payment on account of the special cash dividend ARCA would be permitted to make; (iii) the fact that the $175,000,000 enterprise value ascribed to Oruka would be validated by independent third parties in the private placement investment and that any reduction in the valuation ascribed to Oruka by such investors would also reduce Oruka's valuation for purposes of calculating the exchange ratio; (iv) the Special Committee's view that as a result of the substantial private placement financing that Oruka was committing to obtain at the closing of the Merger the combined company was likely to possess sufficient cash resources to fund development of Oruka's product candidates through upcoming value inflection points; (vi) the increased likelihood that the transaction could be consummated in a timely manner in light of the informal private placement commitments that Oruka had already obtained, and (vii) the Special Committee's view that the proposal from Oruka was more favorable to ARCA than the potential value that might have resulted from further pursuing other strategic alternatives available to ARCA in light of the extensive outreach process undertaken to date. The Special Committee concluded the meeting by directing Ladenburg to continue negotiating the final legal terms of the term sheet and authorized ARCA's management to execute and deliver the term sheet once the remaining legal terms had been finalized.

In the morning of March 1, 2024, representatives of Ladenburg delivered an updated draft term sheet to representatives of Wedbush finalizing the remaining legal terms in the term sheet and finalizing the $6,000,000 enterprise value that Mr. Conway and representatives of Oruka had agreed to. Later that afternoon, representatives of Wedbush returned a proposed final draft term sheet which finalized the remaining legal terms.

Later that same day, at the direction of the Special Committee, ARCA's management executed and delivered the term sheet to Oruka and began exclusively negotiating a transaction with Oruka.

On March 4, 2024, the Special Committee met with representatives of ARCA's management team, representatives of Wilson Sonsini and Ladenburg, Oruka's management team, and representatives of Wedbush and Gibson, Dunn & Crutcher LLP ("Gibson"), Oruka's legal advisor, via video conference to discuss the timeline and process for signing definitive agreements providing for a potential business combination and a concurrent private placement financing and discussed and tentatively agreed on a work plan for such definitive agreements.

On March 6, 2024, ARCA provided Oruka and its advisors with access to an online data room for purposes of conducting further business, financial, legal, tax, intellectual property, insurance and other due diligence with respect to ARCA and its business.

On March 7, 2024, Oruka provided ARCA and its advisors with access to an online data room for purposes of conducting further business, financial, legal, tax, intellectual property, insurance and other due diligence with respect to Oruka and its business.

Also on March 7, 2024, Oruka met with representatives of Jefferies LLC and Cowen and Company, LLC (together, the "Placement Agents"), representatives of Cooley, counsel to the Placement Agents, and Gibson, via video conference, to discuss the timeline and process for completing the concurrent private placement financing. Later that day, representatives of Gibson and Cooley met, via video conference, and tentatively agreed on a work plan for the definitive agreements related to such concurrent private placement financing.

On March 11, 2024, Mr. Conway met with ARCA's management team and representatives of Wilson Sonsini to discuss the proposed terms of a draft of the Merger Agreement prepared by representatives of Wilson Sonsini. Mr. Conway then authorized Wilson Sonsini to distribute the draft Merger Agreement to Gibson which was sent out later that same day.

Also on March 11, 2024, Oruka authorized representatives of Gibson to distribute the draft form of subscription agreement for the concurrent financing and other related documents to Cooley and Wilson Sonsini, on behalf of the Placement Agents and ARCA, respectively.

On March 15, 2024, the Special Committee met with representatives of Oruka and ARCA's management team in attendance to discuss Oruka's business and answer the Special Committee's questions regarding the materials provided in the virtual data room.

Between March 15, 2024 and April 2, 2024, representatives of ARCA's management team conducted further business and financial due diligence with respect to Oruka, its business and the market for treatment of chronic skin diseases and, over the same period of time, ARCA's legal and financial advisors conducted due diligence with respect to Oruka and its business based on information available in the data room and written responses from Oruka's management team, and such advisors negotiated the terms and conditions of the Merger Agreement at the direction of and in coordination with the Special Committee.

During that same period, representatives of Wilson Sonsini and Gibson met on numerous occasions to discuss and negotiate the legal terms of the Merger Agreement, including the form of subscription agreement for the Oruka pre-closing financing attached as an exhibit thereto.

During that same period, representatives of Oruka and its financial advisors held conversations with the representatives of the Placement Agents and prospective investors to discuss the contemplated private placement financing, addressed questions from potential investors and negotiated the terms and conditions of the definitive agreements for such a transaction, including the form of subscription agreement for the Oruka pre-closing financing.

On March 19, 2024, at the direction of the Special Committee, ARCA entered into a new engagement letter with Lucid Capital Markets, LLC ("Lucid") engaging Lucid as ARCA's financial advisor in light of restructuring events that had occurred at Ladenburg which resulted in the financial advisors primarily responsible for this transaction moving from Ladenburg to Lucid.

On March 20, 2024, at the direction of the Special Committee, ARCA terminated its engagement letter with Ladenburg.

On April 2, 2024, ARCA's board of directors held a video conference meeting with members of ARCA's management team, and representatives of Wilson Sonsini and Lucid in attendance. At the meeting, ARCA's board of directors was provided with an overview of the proposed Merger (including the potential benefits and the risks related thereto), the key terms of the related ancillary documents, and its fiduciary duties. ARCA's board of directors also reviewed the proposed resolutions which would be adopted by ARCA's board of directors in order to approve the entry into the proposed Merger and related transactions, including among other things, the form of Certificate of Designation of Preferences, Rights and Limitations of Series B Non-Voting Convertible Preferred Stock. Lucid then presented its oral opinion that, as of the date thereof, and subject to the assumptions more fully described below under the caption "The Merger — Opinion of Lucid, ARCA's Financial Advisor, to ARCA's board of directors," beginning on page 112 in this proxy statement/prospectus, the Exchange Ratio is fair, from a financial point of view to the holders of ARCA common stock.

ARCA's board of directors' meeting was then adjourned and a meeting of the Special Committee was held via video conference with members of ARCA's management team and representatives of Wilson Sonsini in attendance. The Special Committee then unanimously (i) determined that the transactions contemplated by the Merger Agreement including the Merger Agreement and related ancillary agreements contemplated thereunder, are fair to, advisable and in the best interests of ARCA and its stockholders and (ii) recommended that ARCA's board of directors approve and adopt the Merger Agreement, the related ancillary agreements and the transactions contemplated by the Merger Agreement.

The Special Committee meeting was then adjourned and a meeting of ARCA's board of directors was held via video conference with members of ARCA's management team and representatives of Wilson Sonsini in attendance. Based on the factors described below under the caption "The Merger — ARCA's Reasons for the Merger," ARCA's board of directors then adopted and approved, among other resolutions, resolutions (a) determining that it is in the best interests of ARCA and its stockholders to adopt and approve the execution and delivery of the Merger Agreement and the ancillary documents thereto, (b) adopting and approving the Merger Agreement and ancillary documents thereto and approving ARCA's execution, delivery and performance of the same and the consummation of the transactions contemplated by the Merger Agreement and the ancillary documents thereto, (c) recommending that the ARCA stockholders vote in favor of the Proposals with Dr. Bristow abstaining from voting on the passage of such resolutions.

On April 3, 2024, the parties entered into the Merger Agreement and the related ancillary documents and the private placement investors executed and delivered the Subscription Agreement for the $275.0 million Oruka pre-closing financing.

Later that same day, ARCA and Oruka issued a joint press release announcing the execution and delivery of the Merger Agreement, and ARCA filed a Current Report on Form 8-K, which filed as an exhibit (a) the Merger Agreement, (b) the form of Certificate of Designation of Preferences, Rights and Limitations of Series B Non-Voting Convertible Preferred Stock, (c) the form of Oruka Support Agreement, (d) the form of Oruka Subscription Agreement, (e) form of ARCA Support Agreement, (f) the form of Lock-up Agreement, (g) a joint press release, dated April 3, 2024 (h) an investor presentation providing information on Oruka, and (i) a transcript of a conference call held to announce the proposed transactions.

ARCA's Reasons for the Merger

During the course of its evaluation of the Merger Agreement and the transactions contemplated by the Merger Agreement, ARCA's board of directors and the members of its Special Committee held numerous meetings, consulted with ARCA's senior management, ARCA's legal counsel and financial advisors, and reviewed and

assessed a significant amount of information. In reaching its decision to approve the Merger Agreement and the transactions contemplated by the Merger Agreement, ARCA's board of directors took into account the input and recommendations of the Special Committee, as well as other information presented to it during the process, and considered a number of factors that it viewed as supporting its decision to approve the Merger Agreement, including:

- The financial condition and prospects of ARCA and the risks associated with continuing to operate ARCA on a stand-alone basis in light of:
  - ARCA's decision, announced on May 5, 2022, to initiate a process to explore strategic alternatives in light of and its subsequent decision announced in July of 2022 to reduce its workforce by 67%, which were each driven in large part by the results of ARCA's Phase 2 clinical trial of its primary product candidate Recombinant Nematode Anticoagulant Protein c2, or rNAPc2 (AB201), which found that neither studied dose of rNAPc2 achieved statistical significance for the primary efficacy endpoint;
  - investor interest and value perception for possible further development of its programs, the product candidates' efficacy and safety profiles, stage of development, regulatory agencies' feedback regarding development pathways, and probability of success in relation to the requisite time and costs; and
  - difficulties encountered in ARCA's related business development efforts to license, sell or otherwise partner its assets that could result in meaningful new capital or shared future development costs;
- Oruka's product pipeline and development candidates;
- the recommendation of the Special Committee that ARCA's board of directors approve the contemplated transactions;
- ARCA's board of directors' view that, after a thorough review of strategic alternatives, including further advancing the development of its internal programs, entering into a licensing, sale or other strategic agreement related to certain assets sufficient to fund operations, combining with other potential strategic transaction candidates, and discussions with ARCA's senior management, financial advisors and legal counsel, the Merger is more favorable to ARCA stockholders than the potential value that might have resulted from other strategic alternatives available to ARCA;
- ARCA's board of directors' belief that the $6.0 million enterprise value ascribed to ARCA would provide the existing ARCA stockholders significant value for ARCA's public listing and afford the ARCA stockholders a significant opportunity to participate in the potential growth of the combined company following the Merger at the negotiated exchange ratio while also receiving a cash payment on account of the special cash dividend;
- ARCA's board of directors' belief, after thorough discussions with ARCA's management, financial advisors and legal counsel, that a potential liquidation and dissolution was not reasonably likely to create greater value for ARCA stockholders than the Merger based on, among other things, the need to hold back a potential meaningful amount of ARCA's current cash balance to cover current and potential unknown future liabilities;
- ARCA's board of directors' belief that, as a result of arm's length negotiations with Oruka, terms of the Merger Agreement include the most favorable terms to ARCA in the aggregate that were achievable and consistent with other similar transactions;
- ARCA's board of directors' view that Oruka's product candidates have the potential to create meaningful value for the stockholders of the combined company and an opportunity for ARCA's stockholders to participate in the growth of the combined company, based on the business, scientific, regulatory,

intellectual property, financial, accounting and legal due diligence conducted by ARCA management and advisors (which included diligence calls and a comprehensive review of Oruka's due diligence materials) regarding:

- the regulatory pathway for, and market opportunity of, Oruka's product candidates, including in light of the stage of development of Oruka's product candidates;
- the quality and scope of the preclinical and clinical results available for Oruka as opposed to other parties with which ARCA engaged in discussions;
- Oruka's plans to explore the potential of its product candidates to treat other diseases, including through collaborations; and
- the likelihood of value inflection milestones prior to the time in which the combined company would need to raise additional financing;

- ARCA's board of directors' consideration of the expected cash balances of the combined company as of the closing of the Merger resulting from the approximately $5.0 million of net cash, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, expected to be held by ARCA upon completion of the Merger, together with the cash Oruka currently holds and the $275 million of expected gross proceeds from the Oruka pre-closing financing;
- ARCA's board of directors' view, following a review with ARCA's management and advisors of Oruka's current development and clinical trial plans, of the likelihood that the combined company would possess sufficient cash resources at the closing of the Merger to fund development of Oruka's product candidates through upcoming value inflection points, including Oruka's ongoing IND-enabling preclinical development work and its anticipated initiation of its Phase 1 trials of ORKA-001 in the first half of 2025 and Phase 1 trials of ORKA-002 in the second half of 2025;
- the expected operations, management structure, operating plans and cash burn rate of the combined company and the expected cash resources of the combined company (including the ability to support the combined company's current and planned clinical trials and operations);
- the ability of Oruka to take advantage of the potential benefits resulting from becoming a public reporting company listed on Nasdaq, should it be required to raise additional capital in the future through the sale of equity or debt securities;
- the prospects of and risks associated with the other strategic candidates that had made proposals for a strategic transaction with ARCA based on the business, scientific, regulatory, intellectual property, financial, accounting and legal due diligence conducted by the Special Committee, ARCA's management and its advisors;
- ARCA's board of directors' view that the combined company will be led by an experienced senior management team from Oruka, many members of which have extensive experience in drug development, research and development, business and regulatory expertise; and
- the financial analysis reviewed by Lucid with ARCA's board of directors as well as the oral opinion of Lucid rendered to ARCA's board of directors on April 2, 2024 (which was subsequently confirmed in writing by delivery of Lucid's written opinion dated April 2, 2024 addressed to ARCA's board of directors), as to, as of April 2, 2024, the fairness, of the exchange ratio from a financial point of view, to ARCA's stockholders, as more fully described below under the caption "Opinion of Lucid, ARCA's Financial Advisor, to ARCA's Board of Directors," beginning on page 112 in this proxy statement/prospectus.

ARCA's board of directors also reviewed the terms of the Merger Agreement and related transaction documents, including those described below, and concluded that the terms of the Merger Agreement and related transaction documents, in the aggregate, were reasonable under the circumstances:

- the calculation of the exchange ratio, closing net cash and the estimated number of shares of ARCA common stock to be issued in the Merger;

- ARCA's ability to dividend all of its net cash (as determined in accordance with the terms of the Merger Agreement) in excess of $5.0 million to the current ARCA stockholders;
- the number and nature of the conditions to Oruka's and ARCA's respective obligations to complete the Merger and the likelihood that the Merger will be completed on a timely basis, including the fact that Oruka's obligation to complete the Merger would not be conditioned on ARCA having a specified level of closing net cash, as more fully described below under the caption "*The Merger Agreement — Conditions to the Completion of the Merger*," beginning on page 148 in this proxy statement/prospectus;
- the respective rights of, and limitations on, ARCA and Oruka under the Merger Agreement to consider and engage in discussions regarding unsolicited acquisition proposals under certain circumstances, and the limitations on the board of directors of each party to change its recommendation in favor of the Merger, as more fully described below under the caption "The Merger Agreement — Non-Solicitation," beginning on page 145 in this proxy statement/prospectus;
- the potential termination fee of $440,000, in the case of the fee payable by ARCA, or $440,000, in the case of the fee payable by Oruka, if the Merger Agreement is terminated in certain circumstances, as more fully described below under the caption "The Merger Agreement — Termination and Termination Fees," beginning on page 150 in this proxy statement/prospectus;
- the lock-up agreements, pursuant to which certain stockholders of Oruka and ARCA, respectively, have, subject to certain exceptions, agreed not to transfer their shares of ARCA common stock during the period of 180 days following the completion of the Merger, as more fully described below under the caption "Agreements Related to the Merger — Lock-Up Agreements," beginning on page 153 in this proxy statement/prospectus;
- the support agreements, pursuant to which certain stockholders of ARCA and Oruka, respectively, have agreed, solely in their capacities as stockholders, to vote all of their shares of ARCA common stock or Oruka common stock in favor of the proposals submitted to them in connection with the Merger and against any alternative acquisition proposals, as more fully described below under the caption "Agreements Related to the Merger — Support Agreements," beginning on page 153 in this proxy statement/prospectus; and
- the expectation that the Merger will qualify as a reorganization within the meaning of Section 368(a) of the Code, and will constitute a "plan of reorganization" within the meaning of Treasury Regulations Section 1.368-2(g) and 1.368-3(a), with the result that Oruka stockholders will generally not recognize taxable gain or loss for U.S. federal income tax purposes upon the exchange of Oruka common stock for ARCA common stock pursuant to the Merger Agreement, as more fully described below under the caption "The Merger — Material U.S. Federal Income Tax Consequences of the Merger," beginning on page 128 in this proxy statement/prospectus.

In the course of its deliberations, and in addition to the consideration, input and recommendations of the Special Committee, ARCA's board of directors also considered a variety of risks, uncertainties and other countervailing factors related to entering into the Merger, including:

- the risk that the potential benefits of the Merger may not be fully achieved, or may not be achieved within the expected timeframe;
- the risk that the future financial performance of Oruka may not meet ARCA's board of directors' expectations due to factors both in and outside of Oruka's control;
- the risk that, while ARCA's management team performed an extensive due diligence review of Oruka, there may have been relevant Oruka information not considered by ARCA's management team and accordingly, ARCA may not have properly valued Oruka;
- the potential effect of the $440,000 termination fee payable by ARCA upon the occurrence of certain events in deterring other potential companies from proposing an alternative acquisition proposal that may be more advantageous to ARCA's stockholders;
- ARCA's obligation to not solicit alternative acquisition proposals during the pendency of the Merger;

- the substantial expenses to be incurred by ARCA in connection with the Merger;
- the possible volatility of the trading price of the ARCA common stock resulting from the announcement, pendency or completion of the Merger;
- the scientific, technical, regulatory and other risks and uncertainties associated with development and commercialization of Oruka's product candidates;
- various risks impacting the financial condition, results of operations and prospects for ARCA, including:
    - the risks and challenges associated with pursuing any strategic alternative to the Merger available to ARCA, including the discussions that ARCA's management and ARCA's board of directors of directors previously conducted with other potential transaction partners, and the time to negotiate and complete an alternative strategic transaction and anticipated cash burn;
    - the risks and delays associated with, and uncertain value and costs to ARCA stockholders of, liquidating ARCA, including the uncertainties of continuing cash burn while contingent liabilities are resolved, uncertainty of timing of release of cash until contingent liabilities are resolved, and the risks and costs associated with being a shell company prior to cash distribution;
    - the risks and challenges of attempting to continue to operate ARCA on a stand-alone basis, including, without limitation, (i) the considerable time and resources that would have been required to successfully address the uncertainties associated with its Gencaro product, (ii) the inability to finance ARCA's continuing operations through the sale of securities in the capital markets due to, among other things, the lack of near term data catalysts and the general downturn in the U.S. capital markets for biotechnology companies and (iii) ARCA's other product candidate profiles, stage of development, feedback from regulatory agencies regarding development pathway, and probability of success in relation to the requisite time and costs required as well as management's related business development efforts to license, sell or otherwise partner the assets;.
    - the challenges of retaining or rebuilding staff with limited cash runway in light of the reductions in force that ARCA previously undertook; and
    - the challenges of maintaining ARCA's Nasdaq listing without completing the merger and the transactions contemplated in the Merger Agreement, including the reverse stock split; and
- the various other risks associated with the combined company and the Merger, including those described in the sections titled "*Risk Factors*" and "*Cautionary Note Regarding Forward-Looking Statements*" in this proxy statement/prospectus.

The foregoing information and factors considered by the Special Committee and ARCA's board of directors are not intended to be exhaustive but are believed to include all of the material factors considered by the Special Committee and ARCA's board of directors. In view of the wide variety of factors considered in connection with its evaluation of the Merger and the complexity of these matters, the Special Committee and ARCA's board of directors did not find it useful, and did not attempt, to quantify, rank or otherwise assign relative weights to these factors. In considering the factors described above, individual members of the Special Committee and ARCA's board of directors may have given different weight to different factors. The Special Committee and ARCA's board of directors conducted an overall analysis of the factors described above, including thorough discussions with, and questioning of, ARCA's management team and the legal and financial advisors of ARCA, and considered the factors overall to be favorable to, and to support, its determination.

ARCA Liquidation Analysis

In connection with the evaluation of the Merger by ARCA's board of directors and the Special Committee, ARCA's management prepared an analysis with respect to the estimated value of the liquidation or dissolution of ARCA as a potential alternative to the Merger, including for such purposes ARCA's estimated cash position at the time of the potential dissolution or liquidation, ARCA's estimated expenses in connection with any such liquidation or dissolution, and the amount of cash available to be distributed to ARCA's stockholders in connection with any such proposed future dissolution or liquidation (the "Liquidation Analysis"). Although the Liquidation Analysis

assumes that the entirety of ARCA's cash balance at the time of the dissolution or liquidation would be available for distribution to ARCA's stockholders, it is unlikely that the entirety of such cash balance would be available at the time of an actual dissolution or liquidation due to the requirements of applicable law.

The inclusion of the Liquidation Analysis should not be deemed an admission or representation by ARCA or any of its officers, directors, affiliates, advisors, or other representatives with respect to the Liquidation Analysis. The Liquidation Analysis is not included to influence your views on the Merger, the Merger Agreement and the transactions contemplated thereby and is summarized in this proxy statement/prospectus solely to provide stockholders access to certain information considered by ARCA's board of directors and the Special Committee in connection with its evaluation of the Merger, the Merger Agreement and the transactions contemplated thereby. Any estimates contained in these analyses are not necessarily indicative of actual values or predictive of future results or values, which may be significantly more or less favorable than as set forth below. In addition, analyses relating to the value of ARCA do not purport to be appraisals or reflect the prices at which shares of ARCA common stock may actually be valued or trade, either before or after the consummation of the Merger.

The Liquidation Analysis was not prepared with a view toward public disclosure, nor was it prepared with a view toward compliance with published guidelines of the SEC, the guidelines established by the American Institute of Certified Public Accountants for preparation and presentation of prospective financial information, or GAAP. Neither the independent registered public accounting firm of ARCA nor any other independent accountant has audited, reviewed, compiled, examined or performed any procedures with respect to the accompanying unaudited prospective financial information for the purpose of its inclusion herein, and accordingly, neither the independent registered public accounting firm of ARCA nor any other independent accountant expresses an opinion or provides any form of assurance with respect thereto for the purpose of this proxy statement/prospectus.

The prospective financial information included in this proxy statement/prospectus has been prepared by, and is the responsibility of, ARCA management. PricewaterhouseCoopers LLP has not audited, reviewed, examined, compiled nor applied agreed-upon procedures with respect to the accompanying prospective financial information and, accordingly, PricewaterhouseCoopers LLP does not express an opinion or any other form of assurance with respect thereto. The PricewaterhouseCoopers LLP report included in this proxy statement/prospectus relates to Oruka's financial statement. It does not extend to the prospective financial information and should not be read to do so.

The Liquidation Analysis includes estimates of cash and of certain expenditures, which for the purpose of the Liquidation Analysis were not calculated in accordance with GAAP. Non-GAAP financial measures should not be viewed as a substitute for GAAP financial measures and may be different from non-GAAP financial measures used by other companies. Furthermore, there are limitations inherent in non-GAAP financial measures because they exclude charges and credits that are required to be included in a GAAP presentation. Accordingly, non-GAAP financial measures should be considered together with, and not as an alternative to, financial measures prepared in accordance with GAAP. The SEC rules, which otherwise would require a reconciliation of a non-GAAP financial measure to a GAAP financial measure, do not apply to non-GAAP financial measures provided to a board of directors or financial advisors in connection with a proposed business combination transaction such as the Merger if the disclosure is included in a document such as this proxy statement/prospectus to comply with requirements under state laws, including case law.

In light of the foregoing factors and the uncertainties inherent in estimated cash balances, stockholders are cautioned not to place undue reliance, if any, on the Liquidation Analysis.

The below summary of the Liquidation Analysis is subject to the statements above, and it represents estimates prepared by ARCA's management of the cash which could be distributed to stockholders as permitted under applicable law pursuant to a plan of dissolution.

Key assumptions underlying the Liquidation Analysis included: (i) that the entire distribution of ARCA's net cash would be made in June 2024; (ii) that ARCA would have approximately $29.65 million of net cash as June 2024, after deducting costs and expenses, including legal fees, the fees payable to ARCA's strategic financial advisor, accounting fees, employee retention bonuses, severance and benefits, insurance expenses, other transaction-related costs and other liabilities; (iii) that these costs and expenses were forecasted to total approximately $7.28 million assuming the closing of a liquidation in June 2024; and (iv) approximately 14.5 million total shares of ARCA common stock outstanding as of December 31, 2023. The analysis resulted in an estimated cash distribution per share in June 2024 of $2.04 per share.

Oruka's Reasons for the Merger

In the course of reaching its decision to approve the Merger and the Oruka pre-closing financing, Oruka's board of directors held numerous meetings, consulted with Oruka's senior management, legal counsel and financial advisors, and considered a wide variety of factors. Ultimately, Oruka's board of directors concluded that a merger with ARCA, together with the additional financing committed from the Oruka pre-closing financing, was the best option to generate capital resources to support the advancement of Oruka's pipeline and fund the combined organization.

Additional factors Oruka's board of directors considered included the following (which factors are not necessarily presented in any order of relative importance):

- the Merger will potentially expand the access to capital and the range of investors available as a public company to support the clinical development of Oruka's pipeline, compared to the capital and investors Oruka could otherwise gain access to if it continued to operate as a privately-held company;
- the Oruka pre-closing financing will generate capital resources to fund the combined company;
- the potential benefits from increased public market awareness of Oruka and its pipeline;
- the historical and current information concerning Oruka's business, including its financial performance and condition, operations, management and preclinical and clinical data;
- the competitive nature of the industry in which Oruka operates;
- Oruka's board of directors' fiduciary duties to Oruka stockholders;
- Oruka's board of directors' belief that no alternatives to the Merger, together with the additional financing committed from the Oruka pre-closing financing, were reasonably likely to create greater value for Oruka stockholders, after considering the various financing and other strategic options to enhance stockholder value that were considered by the Oruka board of directors;
- Oruka's board of directors' expectation that the Merger, together with the additional financing committed from the Oruka pre-closing financing, would be a higher probability and more cost-effective means to access capital than other options considered, including an IPO;
- the expected operations, management structure and operating plans of the combined company (including the ability to support the combined company's current and planned preclinical and clinical trials);
- the business, history, operations, financial resources, assets, technology and credibility of ARCA;
- the availability of appraisal rights under the DGCL to holders of Oruka capital stock who comply with the required procedures under the DGCL, which allow such holders to seek appraisal of the fair value of their shares of Oruka capital stock as determined by the Delaware Court of Chancery;
- the terms and conditions of the Merger Agreement, including the following:
    - the determination that the expected relative percentage ownership of ARCA stockholders and Oruka stockholders in the combined organization was appropriate, based on Oruka's board of directors' judgment and assessment of the approximate valuations of ARCA (including the value of the net cash ARCA is expected to provide to the combined organization) and Oruka (including the value of the amount of proceeds from the Oruka pre-closing financing);
    - the expectation that the Merger will be treated as a reorganization for U.S. federal income tax purposes, with the result that the Oruka stockholders will generally not recognize taxable gain or loss for U.S. federal income tax purposes with respect to the Merger;
    - the limited number and nature of the conditions of the obligation of ARCA to consummate the Merger;
    - the rights of Oruka under the Merger Agreement to consider certain unsolicited acquisition proposals under certain circumstances should Oruka receive a superior offer;

- the rights of Oruka under the Merger Agreement to effect a change in recommendation in favor of the Merger as a result of a material development or change in circumstances (i.e., applicable Intervening Events);
- the conclusion of Oruka's board of directors that the potential termination fees payable by ARCA or Oruka to the other party, and the circumstances when such fee may be payable, were reasonable; and
- the belief that the other terms of the Merger Agreement, including the parties' representations, warranties and covenants, and the conditions to their respective obligations, were reasonable in light of the entire transaction;

- the shares of ARCA's common stock issued to Oruka stockholders, including shares of ARCA common stock issued in exchange for shares of Oruka common stock sold in the Oruka pre-closing financing, will be registered on a Form S-4 registration statement and will become freely tradable for Oruka stockholders who are not affiliates of Oruka and who are not parties to lock-up agreements;
- the support agreements, pursuant to which certain directors, officers and stockholders of Oruka and ARCA, respectively, have agreed, solely in their capacity as stockholders of Oruka and ARCA, respectively, to vote all of their shares of Oruka capital stock or ARCA common stock in favor of the adoption or approval, respectively, of the Merger Agreement;
- the ability to obtain a Nasdaq listing and the change of the combined organization's name to Oruka Therapeutics, Inc. prior to or upon the closing of the Merger; and
- the likelihood that the Merger will be consummated on a timely basis.

Oruka's board of directors also considered a number of uncertainties and risks in its deliberations concerning the Merger and the other transactions contemplated by the Merger Agreement, including the following:

- the possibility that the Merger might not be completed and the potential adverse effect of the public announcement of the Merger on the reputation of Oruka and the ability of Oruka to obtain financing in the future in the event the Merger is not completed; the possibility that the Oruka pre-closing financing might not be completed or completed in accordance with the terms of the Merger Agreement and the potential adverse effect of the public announcement of the Oruka pre-closing financing on the reputation of Oruka and the ability of Oruka to obtain financing in the future in the event the Oruka pre-closing financing is not completed;
- the exchange ratio used to establish the number of shares of ARCA's common stock to be issued to Oruka stockholders in the Merger is fixed, except for adjustments due to ARCA's net cash balances, the amount of proceeds from the Oruka pre-closing financing and outstanding capital stock at closing, and thus the relative percentage ownership of ARCA stockholders and Oruka stockholders in the combined organization immediately following the completion of the Merger is similarly fixed;
- the potential reduction of ARCA's net cash prior to the closing;
- the possibility that ARCA could, under certain circumstances, consider unsolicited acquisition proposals if superior to the Merger or change its recommendation to approve the Merger upon certain events;
- the risk that the Merger might not be consummated in a timely manner or at all, for a variety of reasons, such as the failure of ARCA to obtain the required stockholder vote or the failure of Oruka to close the Oruka pre-closing financing, and the potential adverse effect on the reputation of Oruka and the ability of Oruka to obtain financing in the future in the event the Merger is not completed;
- the costs involved in connection with completing the Merger, the time and effort of Oruka senior management required to complete the Merger, the related disruptions or potential disruptions to Oruka's business operations and future prospects, including its relationships with its employees, suppliers and partners and others that do business or may do business in the future with Oruka, and related administrative challenges associated with combining the companies;

- the additional expenses and obligations to which Oruka's business will be subject to following the Merger that Oruka has not previously been subject to, and the operational changes to Oruka's business, in each case that may result from being a public company;
- the fact that the representations and warranties in the Merger Agreement do not survive the closing of the Merger and the potential risk of liabilities that may arise post-closing;
- the risk that future sales of common stock by existing ARCA stockholders may cause the price of ARCA common stock to fall, thus reducing the potential value of ARCA common stock received by Oruka stockholders following the Merger; and
- various other risks associated with the combined organization and the Merger, including the risks described in the section titled "*Risk Factors*" in this proxy statement/prospectus.

The foregoing information is not intended to be exhaustive, but is believed to include a summary of all of the material factors considered by Oruka's board of directors in its consideration of the Merger Agreement, the Oruka pre-closing financing, and the transactions contemplated thereby. After conducting an overall analysis of these and other factors, including thorough discussions with, and questioning of, Oruka's senior management and legal counsel, Oruka's board of directors concluded that the benefits, advantages and opportunities of a potential transaction outweighed the uncertainties and risks described above. Based on this overall analysis of the factors described above, Oruka's board of directors unanimously approved the Merger Agreement, the Merger, the Oruka pre-closing financing and the other transactions contemplated by the Merger Agreement.

Opinion of Lucid, ARCA's Financial Advisor, to ARCA's Board of Directors

As stated above, pursuant to an engagement letter dated March 19, 2024 (the "Engagement Letter"), ARCA retained Lucid to act as a financial advisor in connection with the Merger and to render Lucid's opinion (the "Lucid Opinion") to ARCA's board of directors as to the fairness of the exchange ratio, from a financial point of view, to the stockholders of ARCA. On April 2, 2024, at the request of ARCA's board of directors, Lucid rendered the oral opinion, subsequently confirmed by delivery of the written opinion dated April 2, 2024, to ARCA's board of directors, that the exchange ratio was fair, from a financial point of view, to the stockholders of ARCA as of the date of the Lucid Opinion and based upon the various assumptions, qualifications and limitations set forth therein.

The full text of the Lucid Opinion is attached as Annex B to this proxy statement and is incorporated by reference. ARCA encourages its stockholders to read the Lucid Opinion in its entirety for the assumptions made, procedures followed, other matters considered and limits of the review by Lucid. The summary of the Lucid Opinion set forth herein is qualified by reference to the full text of the Lucid Opinion. Lucid provided the Lucid Opinion for the sole benefit and use by ARCA's board of directors in its consideration of the Merger. The Lucid Opinion is not a recommendation to ARCA's board of directors or to any stockholder as to how to vote with respect to the proposed Merger or to take any other action in connection with the Merger or otherwise.

In connection with the Lucid Opinion, Lucid took into account an assessment of general economic, market and financial conditions as well as its experience in connection with similar transactions and securities valuations generally and, among other things:

- Reviewed a draft of the Merger Agreement;
- Reviewed and analyzed certain publicly available financial and other information for each of ARCA and Oruka, respectively, including equity research on comparable companies and on ARCA, and certain other relevant financial and operating data furnished to Lucid by the management of each of ARCA and Oruka, respectively;
- Reviewed and analyzed certain relevant historical financial and operating data concerning Oruka furnished to Lucid by the management of Oruka;
- Discussed with certain members of the management of ARCA the historical and current business operations, financial condition and prospects of ARCA and Oruka;

- Reviewed and analyzed certain operating results of Oruka as compared to operating results and the reported price and trading histories of certain publicly traded companies that Lucid deemed relevant;
- Reviewed and analyzed certain financial terms of the Merger Agreement as compared to the publicly available financial terms of certain selected business combinations that Lucid deemed relevant;
- Reviewed and analyzed certain financial terms of completed IPOs for certain companies that Lucid deemed relevant;
- Reviewed certain pro forma financial effects of the Merger;
- Reviewed and analyzed certain internal financial analyses, including the cash burn model over the next year, projections as to cost and expenses and whether concurrent capital raised would sufficiently cover select programs, reports, and other information concerning Oruka prepared by Oruka; and
- Reviewed and analyzed such other information and such other factors, and conducted such other financial studies, analyses and investigations, as Lucid deemed relevant for the purposes of the Lucid Opinion.

In conducting Lucid's review and arriving at the Lucid Opinion, Lucid has, with ARCA's consent, assumed and relied, without independent verification or investigation, upon the accuracy and completeness of all financial and other information provided to or discussed with Lucid by ARCA and Oruka, respectively (for their respective employees, representatives or affiliates), or which is publicly available or was otherwise reviewed by Lucid. Lucid has not undertaken any responsibility for the accuracy, completeness or reasonableness of, or independent verification of, such information. Lucid has relied upon, without independent verifications, the assessment of ARCA management and Oruka management as to the viability of, and risks associated with, the current and future products and services of Oruka (including without limitation, the development, testing and marketing of such products and services, the receipt of all necessary governmental and other regulatory approvals for the development, testing and marketing thereof, and the life and enforceability of all relevant patents and other intellectual and other property rights associated with such products and services). In addition, Lucid has not conducted, nor has it assumed any obligation to conduct any physical inspection of the properties or facilities of ARCA or Oruka. Furthermore, Lucid has assumed, with ARCA's consent, that there will be no further adjustments to the exchange ratio between the date hereof and the date the final exchange ratio is determined. Lucid has, with ARCA's consent, relied upon the assumption that all information provided to Lucid by ARCA and Oruka is accurate and complete in all material respects.

Lucid expressly disclaimed any undertaking or obligation to advise any person of any change in any fact or matter affecting the Lucid Opinion of which Lucid has become aware after the date of the Lucid Opinion. Lucid assumed there were no material changes in the assets, liabilities, financial condition, results of operations, business or prospects of ARCA or Oruka since the date of the last financial statements made available to Lucid. Lucid has not obtained any independent evaluations, valuations or appraisals of the assets or liabilities of ARCA or Oruka, nor has Lucid been furnished with such materials. Further, as ARCA's board of directors was aware, Oruka's management did not provide Lucid with, and Lucid did not otherwise have access to, financial forecasts regarding Oruka's businesses, other than certain cash burn projections, which indicated that Oruka believes that the expected net proceeds from the Merger and the Oruka pre-closing financing, together with Oruka's existing cash and sales of additional convertible notes under the Purchase Agreement (as defined in the section titled "*Oruka's Management Discussion & Analysis of Financial Condition and Results of Operations*"), will enable Oruka to fund its operating expenses through 2027, and, accordingly, Lucid did not perform either a discounted cash flow analysis or any multiples-based analyses with respect to Oruka. In addition, Lucid has not evaluated the solvency or fair value of ARCA or Oruka under any state or federal laws relating to bankruptcy, insolvency or similar matters. The Lucid Opinion does not address any legal, tax or accounting matters related to the merger, as to which Lucid has assumed that ARCA and ARCA's board of directors have received such advice from legal, regulatory, tax and accounting advisors as each has determined appropriate. The Lucid Opinion addresses only the fairness of the exchange ratio, from a financial point of view, to the ARCA stockholders. Lucid expresses no view as to any other aspect or implication of the merger or any other agreement or arrangement entered into in connection with the merger. The Lucid Opinion is necessarily based upon economic and market conditions and other circumstances as they existed and could be evaluated by Lucid on the date of the Lucid Opinion. It should be understood that although subsequent developments may affect the Lucid Opinion, Lucid does not have any obligation to update, revise or reaffirm the Lucid Opinion and Lucid expressly disclaims any responsibility to do so.

Lucid did not consider any potential legislative or regulatory changes currently being considered or recently enacted by the United States or any foreign government, or any domestic or foreign regulatory body, or any changes in accounting methods or generally accepted accounting principles that may be adopted by the Securities and Exchange Commission, the Financial Accounting Standards Board, or any similar foreign regulatory body or board.

For purposes of rendering the Lucid Opinion, Lucid assumed in all respects material to Lucid's analysis, that the representations and warranties of each party contained in the merger agreement were true and correct, that each party will perform all of the standards of the covenants and agreements required to be performed by it under the merger agreement and that all conditions to the consummation of the merger will be satisfied without waiver or amendment of any term or condition thereof. Lucid has assumed that the final form of the merger agreement will be substantially similar to the last draft reviewed by Lucid. Lucid has also assumed that all governmental, regulatory and other consents and approvals contemplated by the merger agreement or otherwise required for the transactions contemplated thereby will be obtained and that in the course of obtaining any of those consents no restrictions will be imposed or waivers made that would have an adverse effect on ARCA, Oruka or the contemplated benefits of the Merger. Lucid has assumed that the merger will be consummated in a manner that complies with the applicable provisions of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, and all other applicable federal and state statutes, rules and regulations. ARCA has informed Lucid, and Lucid has assumed, that the merger is intended to constitute a reorganization within the meaning of Section 368(a) of the Code and the Treasury Regulations promulgated thereunder.

It is understood that the Lucid Opinion is intended for the benefit and use of ARCA's board of directors in its consideration of the financial terms of the Merger and, except as set forth in Lucid's Engagement Letter, may not be used for any other purpose or reproduced, disseminated, quoted or referred to at any time, in any manner or for any purpose without Lucid's prior written consent, unless pursuant to applicable law or regulations or required by other regulatory authority by the order or ruling of a court or administrative body, except that the Lucid Opinion may be included in its entirety in any filing related to the merger to be filed with the Securities and Exchange Commission and the proxy statement to be mailed to the ARCA stockholders. The Lucid Opinion does not constitute a recommendation to ARCA's board of directors of whether or not to approve the merger or to any ARCA stockholder or any other person as to how to vote with respect to the merger or to take any other action in connection with the merger or otherwise. The Lucid Opinion does not address ARCA's underlying business decision to proceed with the merger or the relative merits of the merger compared to other alternatives available to ARCA. Lucid expressed no opinion as to the prices or ranges of prices at which shares or the securities of any person, including ARCA, will trade at any time, including following the announcement or consummation of the merger. Lucid has not been requested to opine as to, and the Lucid Opinion does not in any manner address, the amount or nature of compensation to any of the officers, directors or employees of any party to the merger, or any class of such persons, relative to the compensation to be paid to the ARCA stockholders in connection with the merger or with respect to the fairness of any such compensation.

The Lucid Opinion may not be published or otherwise used or referred to, nor shall any public reference to Lucid be made, without Lucid's prior written consent.

Principal Financial Analyses

The following is a summary of the principal financial analyses performed by Lucid to arrive at the Lucid Opinion. Some of the summaries of financial analyses include information presented in tabular format. In order to fully understand the financial analyses, the tables must be read together with the text of each summary. The tables alone do not constitute a complete description of the financial analyses. Considering the data set forth in the tables without considering the full narrative description of the financial analyses, including the methodologies and assumptions underlying the analyses, could create a misleading or incomplete view of the financial analyses. Lucid performed certain procedures, including each of the financial analyses described below and reviewed with ARCA's board of directors the assumptions on which such analyses were based and other factors, including the historical and projected financial results of ARCA and Oruka.

Transaction Overview as of the Date of the Lucid Opinion

Based upon the exchange ratio of 7.4631 at the time of the signing of the merger agreement, it was estimated that at the closing: (a) Oruka equity holders as of immediately prior to the merger (including the shares issued in the approximately $275 million Oruka pre-closing financing) will own approximately 97.61% of the fully-diluted shares of ARCA common stock at the closing of the merger, and (b) the ARCA equity holders as of immediately prior to the merger (excluding for this purpose the ARCA Out of the Money Options) will own approximately 2.39% of the fully-diluted shares of ARCA common stock at the closing of the merger, in each case, subject to adjustment of the exchange ratio as set forth in the merger agreement and described herein.

Pre-Financing Oruka Equity Value

For the purpose of the Lucid Opinion, Lucid utilized a Oruka equity value of $175.0 million, which was the pre-money valuation utilized in the Oruka pre-closing financing. The post-money Oruka valuation is calculated by adding the negotiated value of $175.0 million plus $275.0 million raised in the pre-closing financing totaling $450.0 million.

Analysis of Selected Initial Public Offering Transactions

Lucid reviewed certain publicly available information for the IPOs of 19 dermatology/inflammation/autoimmune-focused biopharmaceutical companies that have completed an IPO since September 2017 and whose lead product at the time of IPO was in a preclinical or Phase 1 stage of clinical development. Although the companies referred to below were used for comparison purposes, none of these companies are directly comparable to Oruka. Accordingly, an analysis of the results of such a comparison is not purely mathematical but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the selected companies below. These companies, which are referred to as the "Selected Precedent IPO Companies," were:

- Apogee Therapeutics
- Applied Molecular Transport
- Avidity Biosciences
- Azitra
- Biora Therapeutics
- Cabaletta Bio
- DICE Therapeutics
- Dyne Therapeutics
- Evelo Biosciences
- Hoth Therapeutics
- Kezar Life Sciences
- Krystal Biotech
- Kymera Therapeutics
- Kyverna Therapeutics
- Morphic Holding
- Prometheus Biosciences
- Third Harmonic Bio
- Ventyx Biosciences
- Virpax Pharmaceuticals

The total enterprise value at IPO is defined as the pre-money equity value plus indebtedness, liquidation value of preferred stock and non-controlling interest, minus cash and cash equivalents at the time of its IPO. The Selected Precedent IPO Companies had total enterprise values between $33.0 million and $638.5 million. Lucid derived a median total enterprise value of $315.2 million for the Selected Precedent IPO Companies. Using the 25th percentile and the 75th percentile of the implied total enterprise values, Lucid then calculated a range of implied total equity values for Oruka (by adding an estimated $2.7 million in net cash at closing), which was approximately $177.4 million to $504.2 million. This compares to Oruka's pre-financing equity value as per the merger agreement of $175.0 million.

Selected Precedent IPO Companies

Filing Date	Issuer	Enterprise Value ($M)
2/7/24	Kyverna Therapeutics	$ 511.5
7/13/23	Apogee Therapeutics	384.3
6/15/23	Azitra	58.6
9/14/22	Third Harmonic Bio	359.8
10/20/21	Ventyx Biosciences	466.6
9/14/21	DICE Therapeutics	343.5
3/11/21	Prometheus Biosciences	442.5
2/16/21	Virpax Pharmaceuticals	33.0
9/17/20	Dyne Therapeutics	460.4
8/20/20	Kymera Therapeutics	526.2
6/19/20	Biora Therapeutics	638.5
6/12/20	Avidity Biosciences	292.2
6/4/20	Applied Molecular Transport	260.5
10/24/19	Cabaletta Bio	108.0
6/26/19	Morphic Holding	154.4
2/15/19	Hoth Therapeutics	45.0
6/20/18	Kezar Life Sciences	141.5
5/8/18	Evelo Biosciences	315.2
9/19/17	Krystal Biotech	45.3

Analysis of Selected Publicly Traded Companies

Based on its experience and professional judgment and using financial screening sources and databases to find companies that share similar business characteristics to Oruka within the biopharmaceutical industry, Lucid selected financial data of 13 publicly traded companies (referred to as the "**Selected Publicly Traded Companies**"). Each of the Selected Publicly Traded Companies had a lead candidate in preclinical or Phase I stage of clinical development and focused on the dermatology/inflammation/autoimmune space. Although the companies referred to below were used for comparison purposes, none of those companies is directly comparable to Oruka. Accordingly, an analysis of the results of such a comparison is not purely mathematical but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the selected companies below. The total enterprise values are based on closing stock prices on April 1, 2024. The Selected Publicly Traded Companies were:

- Aditxt
- Apogee Therapeutics
- Astria Therapeutics, Inc.
- Azitra
- Cabaletta Bio
- Forte Biosciences, Inc.

- Kyverna Therapeutics
- Rani Therapeutics
- Spyre Therapeutics
- Surrozen, Inc.
- Tharimmune
- Third Harmonic Bio
- ZyVersa Therapeutics

The Selected Publicly Traded Companies had implied total enterprise values between negative $18.8 million and $2.9 billion. Lucid derived a median implied total enterprise value of $63.1 million for the Selected Publicly Traded Companies. Using the 25th percentile and the 75th percentile of the implied total enterprise values, Lucid then calculated a range of implied total equity values for Oruka (by adding an estimated $2.7 million in net cash at closing), which was approximately $5.3 million to $539.2 million. This compares to Oruka's pre-financing equity value as per the merger agreement of $175.0 million.

Selected Publicly Traded Companies

Company Name	Enterprise Value ($M)
Apogee Therapeutics	$ 2,863.5
Spyre Therapeutics	818.3
Cabaletta Bio	575.1
Kyverna Therapeutics	536.5
Astria Therapeutics, Inc.	370.5
Third Harmonic Bio	91.1
Rani Therapeutics	63.1
Azitra	4.9
Aditxt	4.2
ZyVersa Therapeutics	2.6
Tharimmune	(5.5)
Forte Biosciences, Inc.	(11.4)
Surrozen, Inc.	(18.8)

Analysis of Selected Precedent M&A Transactions

Lucid reviewed the financial terms, to the extent the information was publicly available, of the 9 most recent qualifying merger transactions of companies in the biopharmaceutical industry, which had a lead candidate in the preclinical or phase I stage of clinical development and focused on the dermatology/inflammation/autoimmune space (referred to as the "Selected Precedent M&A Transactions"). Although the precedent transactions referred to below were used for comparison purposes, none of the target companies is directly comparable to Oruka. Accordingly, an analysis of the results of such a comparison is not purely mathematical, but instead involves complex considerations and judgments concerning differences in historical and projected financial and operating characteristics of the companies involved and other factors that could affect the merger value of such companies and Oruka to which they are being compared. Lucid reviewed the total enterprise values of the target companies (including future milestone payments). These transactions, including the date each was closed, were as follows below.

The Selected Precedent M&A Transactions had total implied enterprise values between $20.0 million and $2.0 billion. Lucid derived a median total enterprise value of $250.0 million for the Selected Precedent M&A Transactions. Using the 25th percentile and the 75th percentile of the implied total enterprise values, Lucid then calculated a range of implied total enterprise values for Oruka (by adding an estimated $2.7 million in net cash at closing), which was approximately $65.0 million to $1.0 billion. This compares to Oruka's pre-financing equity value as per the merger agreement of $175.0 million.

Selected Precedent M&A Transactions

Announced Date	Target	Acquirer	Implied Enterprise Value ($M)
3/13/24	IMF Tre	Novartis AG	$ 90.0
2/15/24	Aiolos Bio	GSK	1,000.0
1/18/24	Calypso Biotech	Novartis AG	250.0
8/9/23	DICE Therapeutics	Eli Lilly	2,028.7
12/1/21	ORIGIMM Biotechnology	Sanofi	62.3
4/1/21	Pandion Therapeutics	Merck	1,850.0
3/20/21	Rodeo Therapeutics	Amgen	55.0
8/8/17	Confluence Life Sciences	Aclaris Therapeutics	20.0
1/26/17	Delinia, Inc.	Celegene Corporation	300.0

Analysis of Precedent Reverse Merger Transactions

Lucid reviewed the financial terms, to the extent the information was publicly available, of life sciences reverse merger transactions dating back to January 2018 (referred to as the "Selected Precedent Reverse Merger Transactions"). Lucid reviewed the total premium to cash delivered to each target, along with other quantitative metrics. These transactions, including the date each was closed, are as follows:

Selected Precedent Reverse Merger Transactions

Closed Date	Surviving Company	Public Company	Value Delivered for Public Vehicle Net of Cash ($ mm's)
3/21/2024	LENZ Therapeutics	Graphite Bio (Nasdaq: GRPH)	$12
3/14/2024	Immunogenx	First Wave BioPharma (FWBI)	15
3/6/2024	Adaptive Phage Therapeutics	Biomx (NYSEAM: PHGE)	NA
12/27/2023	Cyclo Therapeutics (Nasdaq: CYTH)	Applied Molecular Transport (Nasdaq: AMTI)	1
12/18/2023	Neurogene	Neoleukin Therapeutics (Nasdaq: NLTX)	14
11/13/2023	Cartesian Therapeutics	Selecta Biosciences (Nasdaq: RNAC)	13
11/3/2023	Korro Bio	Frequency Therapeutics (Nasdaq: FREQ)	15
10/31/2023	Lung Therapeutics	Aileron Therapeutics (Nasdaq: ALRN)	10
10/16/2023	Notable Labs	Vascular Biogenics Ltd. (Nasdaq: VBLT)	20
9/11/2023	Dianthus Therapeutics	Magenta Therapeutics (Nasdaq: MGTA)	20
8/16/2023	EIP Pharma (CervoMed)	Diffusion Pharmaceuticals (Nasdaq: DFFN)	10
6/29/2023	TeraImmune	Baudax Bio (Nasdaq: BXRX)	3
6/22/2023	Spyre Therapeutics	Aeglea BioTherapeutics (Nasdaq: AGLE)	25
6/1/2023	Elicio Therapeutics	Angion Biomedica (Nasdaq: ANGN)	7
4/22/2023	GRI Bio	Vallon Pharmaceuticals (Nasdaq: VLON)	29
3/20/2023	CalciMedica	Graybug Vision (Nasdaq: GRAY)	15
3/7/2023	Carisma Therapeutics	Sesen Bio (Nasdaq: SESN)	15
2/23/2023	Enliven Therapeutics	Imara (Nasdaq: IMRA)	10
1/9/2023	Catheter Precision, Inc.	Ra Medical Systems (NYSE: RMED)	4
12/29/2022	Disc Medicine	Gemini Therapeutics (Nasdaq: GMTX)	10
12/27/2022	GNI Group (Gyre Therapeutics)	Catalyst Biosciences (Nasdaq: CBIO)	9
12/19/2022	Kineta, Inc.	Yumanity Therapeutics (Nasdaq: YMTX)	26
11/8/2022	ARS Pharmaceuticals	Silverback Therapeutics (Nasdaq: SBTX)	5
9/28/2022	Aceragen, Inc.	Idera Pharmaceuticals (Nasdaq: IDRA)	7
9/15/2022	Lisata Therapeutics (Cend)	Caladrius Biosciences (Nasdaq: CLBS)	25
8/30/2022	Vivani Medical (Nano Precision)	Second Sight Medical (Nasdaq: EYES)	NA

Closed Date	Surviving Company	Public Company	Value Delivered for Public Vehicle Net of Cash ($ mm's)
7/5/2022	Syros Pharmaceuticals (Nasdaq: SYRS)	Tyme Technologies (Nasdaq: TYME)	8
5/16/2022	Aprea Therapeutics, Inc.	Atrin Pharmaceuticals (NasdaqGS: APRE)	15
10/24/2021	Quoin Pharmaceuticals, Inc.	Cellect Biotechnology Ltd. (Nasdaq: APOP)	13
8/26/2021	Aadi Bioscience, Inc.	Aerpio Pharmaceuticals, Inc. (Nasdaq: ARPO)	15
8/3/2021	Decoy Biosystems, Inc.	Indaptus Therapeutics (Intec) (Nasdaq: INDP)	10
7/27/2021	Cytocom, Inc. (Statera)	Cleveland BioLabs, Inc. (Nasdaq: CBLI)	NA
6/28/2021	Tempest Therapeutics Inc.	Millendo Therapeutics, Inc. (Nasdaq: MLND)	19
6/15/2021	ReShape Lifesciences Inc.	Obalon Therapeutics, Inc. (Nasdaq: OBLN)	15
4/27/2021	Leading BioSciences, Inc. (Palisade)	Seneca Biopharma, Inc. (Nasdaq: SNCA)	30
4/16/2021	MyMD Pharmaceuticals, Inc.	Akers Biosciences, Inc. (Nasdaq: AKER)	5
3/31/2021	StemoniX Inc. (Vyant Bio)	Cancer Genetics, Inc. (Nasdaq: CGIX)	15
3/16/2021	ChemomAb Ltd.	Anchiano Therapeutics Ltd. (Nasdaq: ANCN)	15
2/24/2021	Viracta Therapeutics, Inc.	Sunesis Pharmaceuticals (Nasdaq: SNSS)	16
1/28/2021	Quellis Biosciences, Inc. (Astria)	Catabasis Pharmaceuticals (Nasdaq: CATB)	25
12/22/2020	Yumanity Therapeutics Inc.	Proteostasis Therapeutics (Nasdaq: PTI)	34
12/1/2020	Petros Pharmaceuticals, Inc.	Neurotrope, Inc. (NasdaqCM: NTRP)	4
11/23/2020	F-star Therapeutics, Limited	Spring Bank Pharmaceuticals, Inc.	23
11/5/2020	Ocuphire Pharma, Inc.	Rexahn Pharmaceuticals (Nasdaq: REXN)	16
10/27/2020	Viridian Therapeutics, Inc.	Miragen Therapeutics, Inc. (NasdaqCM: MGEN)	15
9/15/2020	Adicet Bio, Inc.	resTORbio, Inc. (NasdaqGS: TORC)	8
9/14/2020	Anelixis Therapeutics (Eledon)	Novus Therapeutics, Inc. (NasdaqCM: NVUS)	5
7/6/2020	Kiq Bio (Cogent)	Unum Therapeutics, Inc. (NASDAQ: UMRX)	17
6/15/2020	Forte Biosciences, Inc.	Tocagen Inc. (NasdaqGS: TOCA)	8
5/28/2020	Larimar Therapeutics, Inc.	Zafgen, Inc. (NasdaqGS: ZFGN)	5
5/26/2020	Histogen, Inc.	Conatus Pharmaceuticals (Nasdaq: CNAT)	23
5/22/2020	Qualigen, Inc.	Ritter Pharmaceuticals (Nasdaq: RTTR)	NA
5/18/2020	Timber Pharmaceuticals, Inc.	BioPharmX Corporation (AMEX: BPMX)	16
4/1/2020	Curetis NV (Euronext: CURE)	OpGen, Inc. (NasdaqCM: OPGN)	7
1/9/2020	Protara Therapeutics, Inc.	Proteon Therapeutics, Inc. (NASDAQ: PRTO)	5
12/30/2019	NeuroBo Pharmaceuticals, Inc.	Gemphire Therapeutics Inc. (NASDAQ: GEMP)	8
11/7/2019	Venus Concept Ltd.	Restoration Robotics, Inc. (NASDAQ: HAIR)	20
9/27/2019	Ocugen, Inc.	Histogenics Corporation (NASDAQ: HSGX)	NA
8/31/2019	Brickell Biotech, Inc.	Vical Incorporated (NASDAQ: VICL)	4
7/31/2019	ESSA Pharma (NASDAQ: EPIX)	Realm Therapeutics plc (NASDAQ: RLM)	1
7/22/2019	Salarius Pharmaceuticals, LLC	Flex Pharma, Inc. (NASDAQ: FLKS)	4
7/15/2019	NeuBase Therapeutics	Ohr Pharmaceutical (NASDAQ: OHRP)	7
6/10/2019	Oncternal Therapeutics, Inc.	GTx, Inc. (NASDAQ: GTXI)	9
6/9/2019	Edesa Biotech Inc.	Stellar Biotechnologies, Inc. (NASDAQ: SBOT)	2
5/9/2019	Armata Pharmaceuticals (f.k.a C3J)	Ampliphi Biosciences (NYSE: APHB)	10
5/6/2019	Adynxx, Inc.	Alliqua BioMedical, Inc. (NASDAQ: ALQA)	3
4/23/2019	Mereo BioPharma (AIM: MPH)	Oncomed Pharmaceuticals (NASDAQ: OMED)	20
4/12/2019	Immunic AG	Vital Therapies, Inc. (NASDAQ: VTL)	10

Closed Date	Surviving Company	Public Company	Value Delivered for Public Vehicle Net of Cash ($ mm's)
3/26/2019	Enlivex Therapeutics Ltd.	Bioblast Pharma Ltd. (NASDAQ: ORPN)	5
3/18/2019	PDS Biotechnology Corporation	Edge Therapeutics, Inc. (NASDAQ: EDGE)	5
3/13/2019	X4 Pharmaceuticals, Inc.	Arsanis, Inc. (NASDAQ: ASNS)	29
1/24/2019	Seelos Therapeutics, Inc.	Apricus Biosciences, Inc. (NASDAQ: APRI)	8
12/7/2018	Millendo Therapeutics, Inc.	OvaScience, Inc. (NASDAQ: OVAS)	5
10/12/2018	Aravive Biologics, Inc.	Versartis, Inc. (NASDAQ: VSAR)	0
2/13/2018	Vaxart, Inc.	Aviragen Therapeutics, Inc. (NASDAQ: AVIR)	44
1/30/2018	Innovate Biopharmaceuticals, Inc.	Monster Digital, Inc. (NASDAQ: MSDI)	6
1/17/2018	Evofem Biosciences, Inc.	Neothetics, Inc. (NASDAQ: NEOT)	29
1/4/2018	Rocket Pharmaceuticals, Ltd	Inotek Pharmaceuticals Corp (NASDAQ: ITEK)	5

Lucid reviewed the value delivered for the public vehicle (net of cash) from the Selected Precedent Reverse Merger Transactions, which ranged from $0.0 million to $44.0 million. The 25th percentile and the 75th percentile for the value delivered for the public vehicle (net of cash), was $5.0 million and $17.0 million respectively.

The summary set forth above does not purport to be a complete description of all the analyses performed by Lucid. The preparation of a fairness opinion involves various determinations as to the most appropriate and relevant methods of financial analysis and the application of these methods to the particular circumstances. Therefore, such an opinion is not readily susceptible to partial analysis or summary description. Lucid did not attribute any particular weight to any analysis or factor considered by it, but rather made qualitative judgments as to the significance and relevance of each analysis and factor. Accordingly, notwithstanding the separate factors summarized above, Lucid believes, and advised ARCA's board of directors, that its analyses must be considered as a whole. Selecting portions of its analyses and the factors considered by it without considering all analyses and factors could create an incomplete view of the process underlying the Lucid Opinion. In performing its analyses, Lucid made numerous assumptions with respect to industry performance, business and economic conditions and other matters, many of which are beyond the control of ARCA and Oruka. These analyses performed by Lucid are not necessarily indicative of actual values or future results, which may be significantly more or less favorable than suggested by such analyses. In addition, analyses relating to the value of businesses do not purport to be appraisals or to reflect the prices at which businesses or securities may actually be sold. Accordingly, such analyses and estimates are inherently subject to uncertainty, being based upon numerous factors or events beyond the control of the parties or their respective advisors. None of ARCA, Oruka, Lucid or any other person assumes responsibility if future results are materially different from those projected. The analyses supplied by Lucid and the Lucid Opinion were among several factors taken into consideration by ARCA's board of directors in making its decision to enter into the merger agreement and should not be considered as determinative of such a decision.

Lucid was selected by ARCA's board of directors to render an opinion to ARCA's board of directors because Lucid is a nationally recognized investment banking firm and because, as part of its investment banking business, Lucid is continually engaged in the valuation of businesses and their securities in connection with mergers, negotiated underwritings, secondary distributions of listed and unlisted securities, private placements and valuations for corporate and other purposes. In addition, in the ordinary course of its business, Lucid and its affiliates may trade the equity securities of ARCA for its own account and for the accounts of their customers, and, accordingly, may at any time hold a long or short position in such securities. In the two years preceding the date hereof, Lucid has not received any fees from ARCA. In the two years preceding the date hereof, Lucid has not had a relationship with Oruka and has not received any fees from Oruka. Lucid and its affiliates may in the future seek to provide investment banking or financial advisory services to ARCA and Oruka and/or certain of their respective affiliates and expect to receive fees for the rendering of these services.

Pursuant to the Engagement Letter between Lucid and ARCA as of the time the merger agreement was approved, if the merger is consummated, Lucid will be entitled to receive a transaction fee of $800,000 payable in cash at the closing of the transaction. ARCA has also paid Lucid a fee for the Lucid Opinion of $250,000

(in addition to the $800,000 transaction fee payable upon closing of the transaction) upon delivery of the Lucid Opinion. Additionally, ARCA has agreed to reimburse Lucid for its out-of-pocket expenses and has agreed to indemnify Lucid against certain liabilities, including liabilities under the federal securities laws. The terms of the fee arrangement with Lucid, which are customary in transactions of this nature, were negotiated at arm's length between ARCA and Lucid, and ARCA's board of directors was aware of the arrangement, including the fact that a portion of the fee payable to Lucid is contingent upon the completion of the merger.

Interests of ARCA's Directors and Executive Officers in the Merger

In considering the recommendation of ARCA's board of directors with respect to issuing shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, in the Merger and the other matters to be acted upon by the ARCA stockholders at the ARCA special meeting, the ARCA stockholders should be aware that ARCA's directors and executive officers have interests in the Merger that are different from, or in addition to, the interests of ARCA stockholders generally. These interests may present ARCA's directors and executive officers with actual or potential conflicts of interest.

ARCA's board of directors was aware of these potential conflicts of interest and considered them, among other matters, in reaching its decision to approve the Merger Agreement and the Merger, and to recommend that the ARCA stockholders approve the proposals to be presented to the ARCA stockholders for consideration at the ARCA special meeting as contemplated by this proxy statement/prospectus.

Treatment of ARCA Options

Under the terms of the Merger Agreement, prior to the closing of the Merger, ARCA's board of directors will accelerate the vesting of all equity awards of ARCA then outstanding but not then vested or exercisable. At the closing of the First Merger, (i) each option to acquire shares of ARCA's common stock with an exercise price less than or equal to the Parent Closing Price will be cancelled and converted into the right to receive an amount in cash, without interest, equal to the Parent Closing Price less the exercise price of such option and (ii) each other option to acquire shares of ARCA's common stock will be cancelled for no consideration. The following table sets forth, for each ARCA executive officer and each member of ARCA's board of directors the aggregate number of ARCA stock options that were unvested and vested as of July 16, 2024 and the weighted-average exercise price.

Name	Unvested ARCA Options (#)	Weighted-Average Exercise Price of Unvested ARCA Options ($)	Vested ARCA Options (#)	Weighted-Average Exercise Price of Vested ARCA Options ($)
Executive Officers				
Thomas A. Keuer	13,611	3.56	93,763	4.84
C. Jeffrey Dekker	13,916	2.92	58,784	2.86
Directors				
Linda Grais, M.D.	3,500	1.64	21,895	5.86
Robert E. Conway	3,500	1.64	21,895	5.86
Anders Hove	3,500	1.64	21,499	4.67
Jacob Ma-Weaver	7,166	1.96	16,834	2.19
James Flynn	9,166	2.06	8,834	2.13

Retention Bonus Agreements

Each of ARCA's current executive officers is party to a retention bonus letter, as amended from time to time, pursuant to which the ARCA executive officer will receive a retention bonus of $165,000, subject to his continued employment with ARCA in good standing through the earlier of a corporate transaction of ARCA or certain clinical development decisions. The Merger will constitute a corporate transaction of ARCA for purposes of the retention bonus letters.

Employment Agreements

Each of ARCA's current executive officers is party to an employment agreement that provides certain payments and benefits upon a termination of employment without cause by ARCA or a resignation by the officer for good reason (each as defined below) on the same day as a corporation transaction of ARCA or within 13 months after a corporation transaction of ARCA. The Merger will constitute a corporate transaction of ARCA for purposes of the employment agreements. These payments and benefits include:

- Severance pay equal to (i) 12 months of the ARCA executive officer's base salary, payable in installments over 12 months, plus (ii) a pro rata portion of any bonus compensation approved for the fiscal year in which the termination occurs, payable when bonuses for such year are otherwise paid;
- Reimbursement of out-of-pocket costs to continue group health insurance benefits under COBRA for up to 12 months.

In addition, the employment agreements provides that ARCA may, in its sole discretion, pay additional severance pay of up to 12 months of base salary to extend the term of the restrictive covenants applicable to the ARCA executive officer. The severance payments and benefits are subject to the ARCA executive officer's release of claims in a form acceptable to ARCA.

The employment agreements do not contain tax gross-up provisions with respect to excise taxes under Section 4999 of the Code. Instead, the severance payments and benefits are subject to a "best-of-net" provision in the event of excess parachute payments under Section 280G of the Code. In the event excise taxes under Section 4999 of the Code would be imposed on payments made under the employment agreements, the ARCA executive officer will either pay the excise tax or have his payments and benefits reduced to an amount at which an excise tax no longer applies, based on which result is more favorable to the ARCA executive officer on an after-tax basis

For purposes of the employment agreements:

- "Cause" generally means that the ARCA executive officer has committed or engaged in: (i) willful misconduct, gross negligence, theft, fraud, or other illegal or dishonest conduct, any of which are considered to be materially harmful to ARCA; (ii) refusal, unwillingness, failure, or inability to perform material job duties or habitual absenteeism; or (iii) violation of fiduciary duty, violation of any duty of loyalty, or material breach of any material term of the employment agreement, intellectual property agreement or any other contract with ARCA
- "Good Reason" generally means, with the ARCA executive officer's consent: (i) geographic relocation by more than 30 miles; (ii) a decrease in base salary by more than 15%, other than a decrease resulting from a general reduction in the base salary of all ARCA executive officers; or (iii) significant detrimental reductions in the ARCA executive officer's job responsibilities, in each case, subject to standard notice and cure provisions.

Director Compensation

As discussed under "ARCA Director Compensation" below, Chairman of ARCA's board of directors, Robert E. Conway, and other members of ARCA's board of directors, including Linda Grais, M.D., Anders Hove, M.D. and Jacob Ma-Weaver (served from June 2022 to April 2024), served on the Special Committee beginning in 2022, pursuant to which they each received enhanced retainers totaling: $105,000 for each of Robert E. Conway, Linda Grais, M.D., Anders Hove, M.D. and $90,000 for Jacob Ma-Weaver. In April 2024, James Flynn replaced Mr. Ma-Weaver on the Special Committee. Each member of the Special Committee will continue to be paid $7,500 per month for each month of substantive service on the Special Committee.

Cash Dividend

Prior to the closing of the First Merger, ARCA expects to declare a cash dividend to the pre-First Merger ARCA stockholders equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash will exceed $5.0 million, and any of ARCA's directors and executive officers that are also ARCA stockholders will share in any such cash dividend proportionally to their pre-First Merger ownership of ARCA common stock (see the section titled "*Principal Stockholders of ARCA*" beginning on page 312 of this

proxy statement/prospectus for additional information regarding ARCA's directors' and officers' holdings of ARCA common stock; notably, Jacob Ma-Weaver and affiliated entities together hold 4,000,452 shares of ARCA common stock, representing over 27% of outstanding shares of ARCA common stock).

Indemnification and Insurance

Under the Merger Agreement, ARCA's directors and executive officers are entitled to continued indemnification, expense advancement and insurance coverage. For a discussion of the indemnification and insurance provisions related to the ARCA directors and officers under the Merger Agreement, please see the section titled "*The Merger Agreement — Indemnification and Insurance for Directors and Officers*" beginning on page 147 of this proxy statement/prospectus.

Quantification of Potential Payments and Benefits to ARCA Named Executive Officers

In accordance with Item 402(t) of Regulation S-K, the table below sets forth the compensation that is based on or otherwise relates to the Offer and the Merger that may be paid or become payable to each of ARCA named executive officer in connection with the Merger. Please see the previous portions of this section for further information regarding this compensation.

The amounts indicated in the table below are estimates of the amounts that would be payable assuming, solely for purposes of this table, that (i) the Merger was consummated on July 16, 2024, (ii) each ARCA named executive officer's employment was terminated by ARCA without cause immediately following consummation of the Merger, (ii) the value per share of ARCA common stock on consummation of the Merger is $3.09 (which, in accordance with SEC requirements, is equal to the average closing price of a share of ARCA common stock over the first five business days following the first public announcement of the Merger on April 3, 2024), and (iii) the Parent Closing Price is $3.09. The ARCA named executive officer will not receive pension, tax reimbursement or other benefits in connection with the Merger.

Some of the amounts set forth in the table would be payable solely by virtue of the consummation of the Merger. In addition to the assumptions regarding the consummation date of the Merger and the termination of employment, these estimates are based on certain other assumptions that are described in the footnotes accompanying the table below. Accordingly, the ultimate values to be received by an ARCA named executive officer in connection with the Merger may differ from the amounts set forth below.

Name	Cash ($)[1]	Equity ($)[2]	Perquisites/ Benefits ($)[3]	Total ($)
Michael R. Bristow[4]	370,000	10,555	—	380,555
Thomas A. Keuer	505,000	3,889	40,746	549,635
C. Jeffrey Dekker	435,000	2,310	36,579	473,889

(1) The cash amounts represent: (i) with respect to Mr. Bristow, the cash severance payments that are payable to him in connection with his prior termination of employment pursuant to his Separation Agreement and Release with ARCA dated April 3, 2024, as described under "ARCA Executive Compensation — Narrative Disclosure to Summary Compensation Table — Employment Agreements or Arrangements" below, which are being included herein out of an abundance of caution but which will be payable notwithstanding the consummation of the Merger, and (ii) with respect to Mr. Keuer and Mr. Dekker, (A) a $165,000 retention bonus payable in connection with the closing of the Merger, which constitutes a single-trigger benefit, and (B) aggregate cash severance payments of $340,000 with respect to Mr. Keuer and $270,000 with respect to Mr. Dekker that may be payable in connection with the Merger pursuant to their respective employment agreements upon a termination by ARCA without Cause or by the ARCA named executive officer for Good Reason on or within 13 months following a Corporate Transaction (as such terms are defined in the applicable employment agreement) subject to their timely execution and non-revocation of a release in favor of ARCA, which constitutes a double-trigger benefit. For more information, please see the section above captioned "— *Employment Agreements*."

(2) Represents ARCA stock options (which ARCA refers to as the "Executive Equity Awards") that will accelerate and vest in the Merger, assuming, solely for purposes of this table, continued employment or service of each ARCA named executive officer through the Closing Date. Pursuant to the Merger Agreement, each Executive Equity Award will fully accelerate on the Closing Date and thus constitute a single-trigger benefit. No value is reflected herein for any Executive Equity Award with an exercise price in excess of $3.09, as Executive Equity Awards with values in excess of the Parent Closing Price will

be cancelled for no consideration. The values for each Executive Equity Award with an exercise price in excess of $3.09 in the table below represent the product of (i) the difference between $3.09 and the applicable exercise price of the Executive Equity Award, multiplied by (ii) the number of shares of ARCA common stock subject to the Executive Equity Award, as applicable, that accelerate and vest in connection with the Merger:

Name	Number of ARCA Shares Subject to Executive Equity Award (#)	Per Share Value of Executive Equity Award ($)	Total ($)
Michael R. Bristow	13,194	0.80	10,555
Thomas A. Keuer	4,861	0.80	3,889
C. Jeffrey Dekker	2,458	0.80	1,966
C. Jeffrey Dekker	11,458	0.03	344

(3) Represents the estimated value of the premiums ARCA would be required to reimburse to Messrs. Keuer and Dekker for continued health coverage under COBRA for a period of 12 months that may be payable in connection with the Merger pursuant to their respective employment agreements upon a termination by ARCA without Cause or by the ARCA named executive officer for Good Reason on or within 13 months following a Corporate Transaction (as such terms are defined in the applicable employment agreement) subject to their timely execution and non-revocation of a release in favor of ARCA, which constitutes a double-trigger benefit. For more information, please see the section above captioned "— Employment Agreements."

(4) Dr. Bristow, ARCA's former President and Chief Executive Officer, terminated employment with ARCA on April 3, 2024.

Interests of Oruka's Directors and Executive Officers in the Merger

In considering the recommendation of Oruka's board of directors with respect to approving the Merger, stockholders should be aware that Oruka's directors and executive officers have interests in the Merger that are different from, or in addition to, the interests of Oruka stockholders generally. These interests may present them with actual or potential conflicts of interest, and these interests, to the extent material, are described below.

Oruka's board of directors was aware of these potential conflicts of interest and considered them, among other matters, in reaching its decision to approve the Merger Agreement and the Merger, and to recommend that the Oruka stockholders approve the Merger as contemplated by this proxy statement/prospectus.

Oruka Ownership Interests

As of July 16, 2024, Oruka's current non-employee directors and executive officers beneficially owned, in the aggregate approximately 73.5% of the shares of Oruka capital stock, which for purposes of this subsection excludes any Oruka shares issuable upon exercise or settlement of Oruka options held by such individual. Each of Oruka's officers, directors and affiliated stockholders have also entered into a support agreement in connection with the Merger. For a more detailed discussion of the support agreements, please see the section titled "*Agreements Related to the Merger — Support Agreements*" beginning on page 153 of this proxy statement/prospectus.

As noted above, Fairmount Fund II, an affiliate of Peter Harwin, an Oruka director, Dr. Lawrence Klein, Oruka's President and Chief Executive Officer, and Turtle Family Trust, of which Cameron Turtle, an Oruka director, is a trustee, also currently hold shares of Oruka capital stock. The table below sets forth the ownership of Oruka capital stock by Fairmount Fund II, Lawrence Klein and Turtle Family Trust as of July 16, 2024. Fairmount Fund II also holds the Convertible Note and has agreed to purchase shares and pre-funded warrants in the Oruka pre-closing financing. For a more detailed discussion of these relationships, please see the section titled "*Certain Relationships and Related Party Transactions of the Combined Company — Oruka Transactions — Private Placement of Securities*" beginning on page 281 of this proxy statement/prospectus.

Stockholder	Number of Shares of Capital Stock held
Fairmount Healthcare Fund II L.P.	20,000,000[1]
Lawrence Klein	1,491,646[2]
Turtle Family Trust	149,164[3]

(1) Consists of 20,000,000 shares of Oruka common stock issuable upon conversion of 20,000,000 shares of Oruka Series A Preferred Stock held by Fairmount Fund II. Fairmount Healthcare Fund II GP LLC ("Fairmount GP II") is the general partner of Fairmount Fund II. Fairmount Funds Management LLC ("Fairmount Funds Management"), as the investment manager, along with Fairmount GP II, as the general partner, exercise voting and investment power over Fairmount Fund II. Fairmount Funds Management has voting and dispositive power over the common stock held by Fairmount Fund II, which is deemed shared with Fairmount GP II. As managing members of Fairmount Funds Management and Fairmount GP II, Peter Harwin and Tomas Kiselak may be deemed beneficial owners of any securities beneficially owned by Fairmount Funds Management. Fairmount Funds Management, Fairmount GP II, Mr. Harwin and Mr. Kiselak disclaim beneficial ownership of such shares of Oruka Series A Preferred Stock and the underlying shares of Oruka common stock except to the extent of their pecuniary interest therein. The principal business address for these persons and entities is 200 Barr Harbor Drive, Suite 400, West Conshohocken, Pennsylvania 19428.

(2) Consists of 1,491,646 shares of Oruka common stock held by Lawrence Klein. Such shares were purchased by Dr. Klein, in anticipation of his service as Oruka's Chief Executive Officer, at the fair market value on the purchase date. The purchased shares are subject to vesting as to 25% on February 26, 2025 and in equal monthly installments for the 36 months thereafter.

(3) Consists of 149,164 shares of Oruka common stock held by Turtle Family Trust, of which Cameron Turtle is a trustee. Such shares were purchased by Dr. Turtle, in anticipation of his service on the Oruka board of directors, at the fair market value on the purchase date. The purchased shares are subject to vesting as to 25% on March 1, 2025 and in equal monthly installments for the 36 months thereafter.

Klein Anti-Dilution Provision

Pursuant to the amended and restated offer letter agreement between Oruka and Lawrence Klein, Oruka is obligated to issue additional options to purchase shares of Oruka common stock in order to maintain Dr. Klein's ownership in Oruka at the Target Ownership Percentage until Oruka has raised an aggregate of the Covered Limit. As a result, Oruka expects to issue Dr. Klein warrants of Oruka in full satisfaction of such obligation to maintain his ownership in Oruka at the Target Ownership Percentage concurrently with the closing of the Oruka pre-closing financing up to the Covered Limit.

Oruka Options and Warrants

Under the terms of the Merger Agreement, each option to purchase shares of Oruka common stock that is outstanding and unexercised immediately prior to the effective time of the First Merger under Oruka's 2024 Equity Incentive Plan and that, following assumption by ARCA at the effective time of the First Merger, will be eligible to be registered on Form S-8, whether or not vested, will be converted into an option to purchase shares of ARCA common stock. ARCA will assume Oruka's 2024 Equity Incentive Plan and each such outstanding option to purchase shares of Oruka common stock in accordance with the terms (as in effect as of the date of the Merger Agreement) of Oruka's 2024 Equity Incentive Plan and the terms of the stock option agreement by which such option to purchase shares of Oruka common stock is evidenced.

Under the terms of the Merger Agreement, each warrant held by Oruka employees and non-employee directors to purchase shares of Oruka common stock that is outstanding and unexercised immediately prior to the effective time of the First Merger, whether or not vested, will be converted into a warrant to purchase shares of ARCA common stock. ARCA will assume each such outstanding warrant to purchase shares of Oruka common stock in accordance with the terms (as in effect as of the date of the Merger Agreement) of the warrant agreement by which such warrant to purchase shares of Oruka common stock is evidenced. Such Oruka warrants will be eligible to be registered on Form S-8.

The table below sets forth information regarding the Oruka stock options and warrants held as of July 16, 2024 by each of Oruka's current executive officers and non-employee directors. The number of shares of common stock underlying such options and the exercise price will be adjusted appropriately to reflect the exchange ratio. All outstanding Oruka stock options and warrants are unvested as of July 16, 2024.

Name	Number of Unvested Warrants (#)	Weighted Average Exercise Price of Unvested Warrants ($)	Number of Unvested Options (#)	Weighted Average Exercise Price of Unvested Options ($)
Executive Officers				
Lawrence Klein	2,850,000	4.44	—	—
Joana Goncalves	350,000	4.44	400,000	3.89
Arjun Agarwal	150,000	4.44	225,000	2.90
Paul Quinlan	175,000	4.44	400,000	3.89
Non-Employee Directors				
Peter Harwin	—	—	—	
Cameron Turtle	15,836	4.44	—	—
Carl Dambkowski	40,000	4.44	125,000	3.89
Samarth Kulkarni	—	—	350,000	2.90
Kristine Ball	40,000	4.44	125,000	3.89

Oruka Management Following the Merger

As described in the section captioned "*Management Following the Merger*" beginning on page 273 of this proxy statement/prospectus certain of Oruka's directors and executive officers are expected to become the directors and executive officers of the combined company upon the closing of the Merger.

Indemnification and Insurance

For a discussion of the indemnification and insurance provisions related to the Oruka directors and officers under the Merger Agreement, please see the section titled "*The Merger Agreement — Indemnification and Insurance for Directors and Officers*" beginning on page 147 of this proxy statement/prospectus.

Form of the Merger

Subject to the terms and conditions of the Merger Agreement, and in accordance with the DGCL, (i) at the First Effective Time, First Merger Sub will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the First Merger and (ii) as part of the same overall transaction at the completion of the Second Merger (the "Second Effective Time"), Oruka will merge with and into Second Merger Sub, with Second Merger Sub being the surviving entity of the Second Merger.

Merger Consideration and Adjustment

At the First Effective Time, upon the terms and subject to the conditions set forth in the Merger Agreement, (i) each then-outstanding share of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing and excluding shares to be canceled pursuant to the Merger Agreement and dissenting shares) will be automatically converted solely into the right to receive a number of shares of ARCA common stock equal to the exchange ratio (described in more detail in the section titled "*The Merger Agreement — Exchange Ratio*" beginning on page 136 of this proxy statement/prospectus), (ii) each then-outstanding share of Oruka preferred stock will be converted into the right to receive a number of shares of ARCA Series B Preferred Stock, which are each convertible into 1,000 shares of ARCA common stock, equal to the exchange ratio divided by 1,000, in accordance with the terms of the Merger Agreement, (iii) each then-outstanding option to purchase Oruka common stock will be assumed by ARCA, subject to adjustment based on the exchange ratio as set forth in the Merger Agreement, and (iv) each then-outstanding warrant to purchase shares of Oruka common stock will be converted into a warrant to purchase shares of ARCA common stock, subject to adjustment based on the exchange ratio as set forth in the Merger Agreement and the form of warrant.

No fractional shares of ARCA common stock will be issued in connection with the Merger, and no certificates or scrip for any such fractional shares will be issued. Any fractional shares of ARCA common stock resulting from the conversion of shares of Oruka common stock (including shares of Oruka common stock issued in the

Oruka pre-closing financing) shall be issued as follows: (i) one share of ARCA common stock if the aggregate amount of fractional shares of ARCA common stock of any individual holder of Oruka capital stock if upon conversion is equal to or exceeds 0.50 or (ii) no shares of ARCA common stock if the aggregate amount of fractional shares of ARCA common stock of any individual holder of Oruka capital stock if upon conversion is less than 0.50, with no cash being paid for any fractional share eliminated by such rounding. Any fractional shares of ARCA Series B Preferred Stock that a holder of Oruka preferred stock would otherwise be entitled to receive will be aggregated with all fractional shares of ARCA preferred stock issuable to such holder and rounded up to the nearest whole share of ARCA's convertible preferred stock.

Procedures for Exchanging Stock Certificates

On or prior to the closing date, ARCA and Oruka will select an exchange agent and, at the First Effective Time (as defined herein), ARCA will deposit with the exchange agent evidence of book-entry shares representing the shares of ARCA common stock issuable pursuant to the terms of the Merger Agreement in exchange for shares of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing) (excluding shares to be canceled pursuant to the Merger Agreement and excluding dissenting shares) and the shares of ARCA Series B Preferred Stock issuable pursuant to the terms of the Merger Agreement in exchange for shares of Oruka preferred stock calculated in accordance with the Merger Agreement.

Promptly after the First Effective Time, the exchange agent will mail to each record holder of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing) (excluding shares to be canceled pursuant to the Merger Agreement and excluding dissenting shares) and each record holder of Oruka preferred stock who will receive ARCA Series B Preferred Stock issuable in exchange for such Oruka preferred stock pursuant to the terms, and calculated in accordance with, the Merger Agreement (i) a letter of transmittal and (ii) instructions for surrendering the record holder's stock certificates in exchange for the merger consideration. Upon delivery to the exchange agent of a duly executed letter of transmittal in accordance with the exchange agent's instructions and the declaration for tax withholding purposes, the surrender of the record holder's stock certificates, if applicable, and delivery to the exchange agent of such other documents as may be reasonably required by the exchange agent or ARCA, the record holder of such stock certificates or book-entry shares, as applicable, will be entitled to receive in exchange therefor book-entry shares representing the number of whole shares of ARCA common stock or ARCA Series B Preferred Stock issuable to such holder pursuant to the Merger Agreement. The surrendered certificates representing shares of Oruka common stock or Oruka preferred stock will be canceled.

After the First Effective Time, each certificate representing Oruka common stock or Oruka preferred stock that has not been surrendered will represent only the right to receive shares of ARCA common stock or ARCA Series B Preferred Stock, as applicable, issuable pursuant to the Merger Agreement to which the holder of any such certificate is entitled.

HOLDERS OF ORUKA COMMON STOCK OR ORUKA PREFERRED STOCK SHOULD NOT SEND IN THEIR ORUKA STOCK CERTIFICATES UNTIL THEY RECEIVE A LETTER OF TRANSMITTAL FROM THE EXCHANGE AGENT WITH INSTRUCTIONS FOR THE SURRENDER OF ORUKA STOCK CERTIFICATES.

First Effective Time and Second Effective Time

The Merger Agreement requires the parties to consummate the Merger as promptly as practicable (and in any event within two business days) after all of the conditions to the consummation of the Merger contained in the Merger Agreement are satisfied or waived, including the adoption of the Merger Agreement by the Oruka stockholders and the approval by the ARCA stockholders of the issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, and the other transactions proposed under the Merger Agreement, other than those conditions that by their nature are to be satisfied at the closing of the Merger. The First Merger will become effective upon the filing of a certificate of merger (the "First Certificate of Merger") with the Secretary of State of the State of Delaware or at such later time as is agreed by ARCA and Oruka and specified in the First Certificate of Merger. The Second Merger will become effective upon the filing of a certificate of merger (the "Second Certificate of Merger") with the Secretary of State of the State of Delaware or at such later time as is agreed by ARCA and Oruka and specified in the Second Certificate of Merger. Neither ARCA nor Oruka can predict the exact timing of the consummation of the Merger.

Regulatory Approvals

In the United States, ARCA must comply with applicable federal and state securities laws and the rules and regulations of Nasdaq in connection with the issuance of shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, to Oruka's stockholders in connection with the transactions contemplated by the Merger Agreement and the filing of this proxy statement/prospectus with the SEC. ARCA and Oruka do not intend to seek any regulatory approval from antitrust authorities to consummate the transactions.

Material U.S. Federal Income Tax Consequences of the Merger

The following discussion is a summary of U.S. federal income tax consequences of the Merger generally applicable to a U.S. holder (as defined below) of Oruka common stock or Oruka preferred stock ("Oruka stock"). This discussion applies only to a U.S. holder that holds its Oruka stock as a capital asset for U.S. federal income tax purposes (generally, property held for investment). This discussion is a summary only and does not discuss all aspects of U.S. federal income taxation that may be relevant to U.S. holders in light of their particular circumstances or U.S. holders with special status, including:

- brokers, dealers or traders in securities, banks, insurance companies, other financial institutions or mutual funds;
- real estate investment trusts; regulated investment companies; tax-exempt organizations or governmental organizations;
- pass-through entities such as partnerships, S corporations, disregarded entities for federal income tax purposes and limited liability companies (and investors therein);
- persons that have a functional currency other than the U.S. dollar;
- taxpayers that are subject to the mark-to-market accounting rules;
- persons who hold their Oruka stock that constitutes "qualified small business stock" under Section 1202 of the Code or as "Section 1244 stock" for purposes of Section 1244 of the Code;
- persons that hold their Oruka stock as part of a straddle, constructive sale, hedging, conversion or other integrated or similar transaction;
- persons who exercise dissenters' rights;
- persons who acquired their shares of Oruka stock pursuant to the exercise of options or otherwise as compensation or through a tax-qualified retirement plan or through the exercise of a warrant or conversion rights under convertible instruments;
- persons who acquired their Oruka stock in a transaction subject to the gain rollover provisions of Section 1045 of the Code; and
- expatriates or former citizens or long-term residents of the United States.

This discussion is based on the Code, proposed, temporary and final Treasury Regulations promulgated under the Code, and judicial and administrative interpretations thereof, all as of the date hereof and all of which are subject to change, which change could apply retroactively and could affect the tax consequences described herein. This discussion does not address (i) the tax consequences of the Merger under U.S. federal non-income tax law (including estate, gift, or other non-income taxes), (ii) the tax consequences of the Merger under state, local or non-U.S. tax laws, (iii) the impact of the alternative minimum tax provisions of the Code (including the 15% minimum tax applicable to the adjusted financial statement income of certain corporations) or the Medicare contribution tax on net investment income, (iv) the tax consequences of transactions effectuated before, subsequent to or concurrently with the Merger (whether or not any such transactions are consummated in connection with the Merger), including any transaction in which shares of Oruka stock are acquired, or (v) the tax consequences to holders of Oruka stock options, Oruka warrants or similar rights to acquire Oruka stock.

Oruka has not and does not intend to seek any rulings from the Internal Revenue Service (the "IRS") regarding the Merger. There can be no assurance that the IRS will not take positions inconsistent with the consequences discussed below or that any such positions would not be sustained by a court.

If any entity or arrangement classified as a partnership for U.S. federal income tax purposes holds Oruka stock, the tax treatment of such partnership and any person treated as a partner of such partnership will generally depend on the status and activities of the partner and the activities of the partnership. Each partnership holding any Oruka stock and each person that is treated as a partner of such partnership should consult its tax advisor as to the particular U.S. federal income tax consequences of the Merger.

As used herein, a "U.S. holder" is a beneficial owner of Oruka stock that is, for U.S. federal income tax purposes:

- an individual citizen or resident of the United States;
- a corporation (or other entity that is classified as a corporation for U.S. federal income tax purposes) that is created or organized (or treated as created or organized) in or under the laws of the United States, any state thereof, or the District of Columbia or otherwise treated as a U.S. tax resident for U.S. federal income tax purposes;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a U.S. court can exercise primary supervision over the administration of such trust and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) it has a valid election in place to be treated as a U.S. person.

Effects of the Merger

In connection with the filing of this Registration Statement, Gibson, Dunn & Crutcher LLP, counsel to Oruka, and Wilson Sonsini Goodrich & Rosati, P.C., counsel to ARCA, will each deliver an opinion that the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code (the "Tax Opinions"). The Tax Opinions will be based on, among other things, certain assumptions stated in the Tax Opinions and in the Registration Statement, as well as on the accuracy, correctness and completeness of certain covenants, representations and statements made by Oruka and ARCA. If any of the assumptions, representations or statements made by Oruka or ARCA are, or become, inaccurate, incorrect or incomplete, or if Oruka or ARCA breach any of their covenants, the Tax Opinions may be invalid and the conclusions reached therein could be jeopardized. Neither ARCA nor Oruka intends to request any ruling from the IRS as to the U.S. federal income tax considerations of the Merger. Consequently, no assurance can be given that the IRS will not challenge the conclusions reflected below or in the Tax Opinions or that a court would not sustain such a challenge.

Based on the assumptions, qualifications and limitations described herein and in the Tax Opinions, the Merger will qualify as a "reorganization" within the meaning of Section 368(a) of the Code. As a result, a U.S. holder of Oruka stock generally will not recognize any gain or loss for U.S. federal income tax purposes upon receipt of ARCA common stock or ARCA Series B Preferred Stock ("ARCA stock") in the Merger, as applicable. Each U.S. holder's aggregate tax basis in the ARCA stock received in the Merger will equal such U.S. holder's aggregate adjusted tax basis in the Oruka stock surrendered in the Merger. The holding period of the ARCA stock received by a U.S. holder in the Merger will include such U.S. holder's holding period for the Oruka stock surrendered in the Merger. If a U.S. holder holds different blocks of Oruka stock (generally, Oruka stock acquired on different dates or at different prices), such U.S. holder is urged to consult his, her or its tax advisor with respect to the determination of the tax bases and/or holding periods of the shares of ARCA stock received in the Merger.

Information Reporting

Each U.S. holder who receives ARCA stock in the Merger is required to retain permanent records pertaining to the Merger and make such records available to any authorized IRS officers and employees. Such records should specifically include information regarding the amount, basis, and fair market value of all transferred property, and relevant facts regarding any liabilities assumed or extinguished as part of such reorganization. Each U.S. holder who owned immediately before the Merger at least one percent (by vote or value) of the total outstanding stock of Oruka is required to attach a statement to its tax return for the year in which the Merger is consummated that contains the information listed in Treasury Regulation Section 1.368-3(b). Such statement must include the U.S. holder's tax basis in such U.S. holder's Oruka stock surrendered in the Merger, the fair market value of such Oruka stock, the date of the Merger and the name and employer identification number of each of Oruka and ARCA. Each U.S. holder is urged to consult with its tax advisor to comply with these rules.

This discussion of U.S. federal income tax considerations of the Merger is for general information purposes only and is not intended to be, and should not be construed as, tax advice. Determining the actual tax consequences of the Merger to you may be complex and will depend on your specific situation and on factors that are not within ARCA's knowledge or control. You should consult your tax advisor with respect to the application of U.S. federal income tax laws to your specific situation as well as any tax consequences arising under the U.S. federal estate or gift tax rules or under the laws of any state, local, non-U.S. or other taxing jurisdiction.

Material U.S. Federal Income Tax Consequences of the Special Cash Dividend to Holders of ARCA Common Stock

The following discussion is a summary of the material U.S. federal income tax considerations generally applicable to U.S. holder (as defined below) of ARCA common stock who receive the special cash dividend. This section applies only to U.S. holders that hold their ARCA common stock as capital assets for U.S. federal income tax purposes (generally, property held for investment). This discussion is a summary only and does not discuss all aspects of U.S. federal income taxation that may be relevant to U.S. holders in light of their particular circumstances or status including:

- brokers, dealers or traders in securities, banks, insurance companies, other financial institutions or mutual funds;
- real estate investment trusts; regulated investment companies; tax-exempt organizations or governmental organizations; qualified foreign pension funds (or entities wholly owned by one or more qualified foreign pension funds);
- persons that have a functional currency other than the U.S. dollar;
- taxpayers that are subject to the mark-to-market accounting rules
- persons who hold shares of ARCA common stock that constitute "qualified small business stock" under Section 1202 of the Code or as "Section 1244 stock" for purposes of Section 1244 of the Code;
- persons that hold their ARCA common stock as part of a straddle, constructive sale, hedging, conversion or other integrated or similar transaction;
- persons who acquired their shares of ARCA common stock in a transaction subject to the gain rollover provisions under Section 1045 of the Code;
- persons who acquired their shares of ARCA common stock pursuant to the exercise of options or otherwise as compensation or through a tax-qualified retirement plan or through the exercise of a warrant or conversion right under convertible instruments; and
- expatriates or former citizens or long-term residents of the United States.

This discussion is based on the Code, proposed, temporary and final Treasury Regulations promulgated under the Code, and judicial and administrative interpretations thereof, all as of the date hereof. All of the foregoing is subject to change, which change could apply retroactively and could affect the tax considerations described herein. This discussion does not address U.S. federal taxes other than those pertaining to U.S. federal income taxation (such as estate or gift taxes, the alternative minimum tax or the Medicare tax on investment income), nor does it address any aspects of U.S. state or local or non-U.S. taxation.

ARCA has not and does not intend to seek any rulings from the IRS regarding the special cash dividend. There can be no assurance that the IRS will not take positions inconsistent with the considerations discussed below or that any such positions would not be sustained by a court.

If any entity or arrangement classified as a partnership for U.S. federal income tax purposes holds ARCA common stock, the tax treatment of such partnership and any person treated as a partner of such partnership will generally depend on the status and activities of the partner and the activities of the partnership. Partnerships holding any ARCA common stock and persons that are treated as partners of such partnerships should consult their tax advisors as to the particular U.S. federal income tax consequences of the special cash dividend to them.

As used herein, a "U.S. holder" is a beneficial owner of ARCA common stock that is, for U.S. federal income tax purposes:

- an individual who is a citizen or resident of the United States;

- a corporation (or other entity that is treated as a corporation for U.S. federal income tax purposes) that is created or organized (or treated as created or organized) in or under the laws of the United States, any state thereof or the District of Columbia or otherwise treated as a U.S. tax resident for U.S. federal income tax purposes;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a U.S. court can exercise primary supervision over the administration of such trust and one or more U.S. persons (within the meaning of Section 7701(a)(30) of the Code) have the authority to control all substantial decisions of the trust or (2) it has a valid election in place to be treated as a U.S. person (within the meaning of Section 7701(a)(30) of the Code).

This discussion assumes that the distribution of the special cash dividend to holders of ARCA common stock will be treated for U.S. federal income tax purposes as a transaction that is separate and distinct from the Merger and the proposed reverse stock split. If, contrary to that assumption, the distribution of the special cash dividend to a holder of ARCA common stock were integrated for tax purposes with the proposed reverse stock split, this could affect the calculation of the extent to which the distribution constitutes a taxable dividend or capital gain.

Receipt of the Special Cash Dividend by U.S. Holders

The distribution of the special cash dividend should be treated first as a dividend to the extent of ARCA's current and accumulated earnings and profits, then as a non-taxable return of capital to the extent of the U.S. holder's basis in its ARCA common stock, and then as capital gain from the sale or exchange of ARCA common stock with respect to any remaining value. Such capital gain will be long-term capital gain if the U.S. holder's holding period in the ARCA common stock exceeds one year at the time of the special cash dividend. Preferential tax rates may apply to long-term capital gains of non-corporate U.S. holders (including individuals). ARCA currently has an accumulated deficit and expects additional losses in the current period. Thus, ARCA expects most or all of the distribution of the special cash dividend to be treated as other than a dividend for U.S. federal income tax purposes. However, there can be no assurance that it will be so treated.

Information Reporting and Backup Withholding

A U.S. holder of ARCA common stock may be subject to information reporting and backup withholding for U.S. federal income tax purposes with respect to the special cash dividends. Backup withholding will not apply, however, to a U.S. holder who (i) furnishes a correct taxpayer identification number and certifies the holder is not subject to backup withholding on IRS Form W-9 or a substantially similar form, or (ii) certifies the holder is otherwise exempt from backup withholding. If a U.S. holder does not provide a correct taxpayer identification number on IRS Form W-9 or other proper certification, the stockholder may be subject to penalties imposed by the IRS. Any amounts withheld under the backup withholding rules may be refunded or allowed as a credit against the federal income tax liability of a U.S. holder of ARCA common stock, if any, provided the required information is timely furnished to the IRS. U.S. holders should consult their tax advisors regarding their qualification for an exemption from backup withholding, the procedures for obtaining such an exemption, and in the event backup withholding is applied, to determine if any tax credit, tax refund or other tax benefit may be obtained.

Nasdaq Stock Market Listing

Shares of ARCA common stock are currently listed on Nasdaq under the symbol "ABIO." ARCA has agreed to use commercially reasonable efforts to (a) maintain its listing on Nasdaq until the First Effective Time and to obtain approval of the listing of the combined corporation on Nasdaq; (b) to the extent required by the rules and regulations of Nasdaq, prepare and submit to Nasdaq a notification form for the listing of the shares of ARCA common stock to be issued in connection with the Merger and transactions contemplated thereunder, and to cause such shares to be approved for listing (subject to official notice of issuance); (c) prepare and timely submit to Nasdaq a notification form for the proposed reverse stock split (if required) and to submit a copy of the amendment to the ARCA Charter effecting the proposed reverse stock split, certified by the Secretary of State of the State of Delaware, to Nasdaq on the closing date of the Merger; and (d) to the extent required by Nasdaq Marketplace Rule 5110, assist Oruka in preparing and filing an initial listing application for the ARCA common stock issued to Oruka stockholders

(including any common stock issuable upon conversion of the ARCA Series B Preferred Stock) (the "Nasdaq Listing Application") and to cause such Nasdaq Listing Application to be conditionally approved prior to the First Effective Time.

In addition, under the Merger Agreement, each of ARCA's and Oruka's obligation to complete the Merger is subject to the satisfaction or waiver by each of the parties, at or prior to the closing of the Merger, of various conditions, including that the Nasdaq Listing Application shall have been approved.

If the Nasdaq Listing Application is approved, ARCA anticipates that the common stock of the combined company will be listed on Nasdaq following the closing of the Merger under the trading symbol "ORKA." In order for the Nasdaq Listing Application to be accepted, among other requirements, the combined company must maintain a bid price of $4.00 or higher for a certain period of time following the proposed reverse stock split.

Anticipated Accounting Treatment

The Merger is expected to be treated by ARCA as a reverse merger and will be accounted for as an in-substance reverse recapitalization of ARCA by Oruka in accordance with U.S. GAAP as, at close, the transaction is, in essence, the issuance of equity for ARCA's net asset, which primarily consist of cash and other nominal non-operating assets and liabilities. For accounting purposes, Oruka is considered to be acquiring the assets and liabilities of ARCA in this transaction based on the terms of the Merger Agreement and other factors, including: (i) Oruka's equity holders will own a substantial majority of the voting rights in the combined company; (ii) Oruka's largest stockholder will retain the largest interest in the combined company; (iii) Oruka will designate all of the initial members of the board of directors of the combined company; and (iv) Oruka's executive management team will become the management of the combined company. The combined company will be named Oruka Therapeutics, Inc. and be headquartered in Menlo Park, California. Accordingly, the Merger is expected to be treated as the equivalent of Oruka issuing stock to acquire the net assets of ARCA. As a result of the Merger, the net assets of ARCA will be stated at fair value, which approximates carrying value, with no goodwill or other intangible assets recorded, and the historical results of operations prior to the Merger will be those of Oruka. The direct and incremental costs related to the transaction will be treated as a reduction of the net proceeds received within additional paid-in-capital. See the "*Unaudited Pro Forma Condensed Combined Financial Information*" elsewhere in this proxy statement/prospectus for additional information.

Appraisal Rights and Dissenters' Rights

Under the DGCL, ARCA stockholders are not entitled to appraisal rights in connection with the Merger. Oruka stockholders are entitled to appraisal rights in connection with the Merger under Section 262 of the DGCL.

The discussion below is not a complete summary regarding Oruka's stockholders' appraisal rights under Delaware law and is qualified in its entirety by reference to the text of the relevant provisions of Delaware law, which are attached as *Annex J* in this proxy statement/prospectus. Stockholders intending to exercise appraisal rights should carefully review *Annex J*. Failure to follow precisely any of the statutory procedures set forth in *Annex J* may result in a termination or waiver of these rights. This summary does not constitute legal or other advice, nor does it constitute a recommendation that Oruka stockholders exercise their appraisal rights under Delaware law.

Under Section 262, where a merger is adopted by stockholders by written consent in lieu of a meeting of stockholders pursuant to Section 228 of the DGCL, either the constituent corporation before the effective date of such merger or the surviving corporation, within ten days after the effective date of such merger, must notify each stockholder of the constituent corporation entitled to appraisal rights of the approval of such merger, the effective date of such merger and that appraisal rights are available.

If the Merger is completed, within ten days after the effective date of the Merger, Oruka will notify its stockholders that the Merger has been approved, the effective date of the Merger and that appraisal rights are available to any stockholder who has not approved the Merger. Holders of shares of Oruka capital stock who desire to exercise their appraisal rights must deliver a written demand for appraisal to Oruka within 20 days after the date of mailing of that notice, and that stockholder must not have delivered a written consent approving the Merger. A demand for appraisal must reasonably inform Oruka of the identity of the stockholder and that such stockholder intends thereby to demand appraisal of the shares of Oruka capital stock held by such stockholder. Failure to deliver

a written consent approving the Merger will not in and of itself constitute a written demand for appraisal satisfying the requirements of Section 262. All demands for appraisal should be addressed to c/o Oruka Therapeutics, Inc., 855 Oak Grove Ave., Suite 100, Menlo Park, CA 94025 and should be executed by, or on behalf of, the record holder of shares of Oruka capital stock.

ALL DEMANDS MUST BE RECEIVED BY ORUKA WITHIN 20 DAYS AFTER THE DATE ORUKA MAILS A NOTICE TO ITS STOCKHOLDERS NOTIFYING THEM THAT THE MERGER HAS BEEN APPROVED, THE EFFECTIVE DATE OF THE MERGER AND THAT APPRAISAL RIGHTS ARE AVAILABLE TO ANY STOCKHOLDER WHO HAS NOT APPROVED THE MERGER.

If you fail to deliver a written demand for appraisal within the time period specified above, you will be entitled to receive the merger consideration for your shares of Oruka capital stock as provided for in the Merger Agreement, but you will have no appraisal rights with respect to your shares of Oruka capital stock.

To be effective, a demand for appraisal by a holder of shares of Oruka capital stock must be made by, or in the name of, the registered stockholder, fully and correctly, as the stockholder's name appears on the stockholder's stock certificate(s). Beneficial owners who do not also hold the shares of record may not directly make appraisal demands to Oruka. The beneficial owner must, in these cases, have the registered owner, such as a broker, bank or other custodian, submit the required demand in respect of those shares. If shares are owned of record in a fiduciary capacity, such as by a trustee, guardian or custodian, execution of a demand for appraisal should be made by or for the fiduciary; and if the shares are owned of record by more than one person, as in a joint tenancy or tenancy in common, the demand should be executed by or for all joint owners. An authorized agent, including an authorized agent for two or more joint owners, may execute the demand for appraisal for a stockholder of record; however, the agent must identify the record owner or owners and expressly disclose the fact that, in executing the demand, he or she is acting as agent for the record owner. A record owner, such as a broker, who holds shares as a custodian for others, may exercise the record owner's right of appraisal with respect to the shares held for one or more beneficial owners, while not exercising this right for other beneficial owners. In that case, the written demand should state the number of shares as to which appraisal is sought. Where no number of shares is expressly mentioned, the demand will be presumed to cover all shares held in the name of the record owner. In addition, the stockholder must continuously hold the shares of record from the date of making the demand through the effective time.

If you hold your shares of Oruka capital stock in a brokerage account or in other custodian form and you wish to exercise appraisal rights, you should consult with your bank, broker or other custodian to determine the appropriate procedures for the making of a demand for appraisal by the custodian.

At any time within 60 days after the effective time, any stockholder who has demanded an appraisal, but has neither commenced an appraisal proceeding or joined an appraisal proceeding as a named party, has the right to withdraw such stockholder's demand and accept the terms of the Merger by delivering a written withdrawal to Oruka. If, following a demand for appraisal, you have withdrawn your demand for appraisal in accordance with Section 262, you will have the right to receive the merger consideration for your shares of Oruka capital stock.

Within 120 days after the effective date of the Merger, any stockholder who has delivered a demand for appraisal in accordance with Section 262 will, upon written request to the surviving corporation, be entitled to receive a written statement setting forth the aggregate number of shares not voted in favor of the Merger Agreement and with respect to which demands for appraisal rights have been received and the aggregate number of holders of these shares. This written statement will be mailed to the requesting stockholder within 10 days after the stockholder's written request is received by the surviving corporation or within 10 days after expiration of the period for delivery of demands for appraisal, whichever is later. Within 120 days after the effective date of the Merger, either the surviving corporation or any stockholder who has delivered a demand for appraisal in accordance with Section 262 may file a petition in the Delaware Court of Chancery demanding a determination of the fair value of the shares held by all such stockholders. Upon the filing of the petition by a stockholder, service of a copy of the petition must be made upon the surviving corporation. The surviving corporation has no obligation to file a petition in the Delaware Court of Chancery in the event there are dissenting stockholders, and ARCA, which is expected to be the surviving corporation, has no present intent to file a petition in the Delaware Court of Chancery. Accordingly, the failure of a stockholder to file a petition within the period specified could nullify the stockholder's previously written demand for appraisal.

If a petition for appraisal is duly filed by a stockholder and a copy of the petition is delivered to the surviving corporation, the surviving corporation will then be obligated, within 20 days after receiving service of a copy of the petition, to provide the Delaware Court of Chancery with a duly verified list containing the names and addresses of all stockholders who have demanded an appraisal of their shares and with whom agreements as to the value of their shares have not been reached by the surviving corporation. After notice to dissenting stockholders who demanded appraisal of their shares, the Delaware Court of Chancery is empowered to conduct a hearing upon the petition, and to determine those stockholders who have complied with Section 262 and who have become entitled to the appraisal rights provided thereby. The Delaware Court of Chancery may require the stockholders who have demanded appraisal for their shares to submit their stock certificates to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with that direction, the Delaware Court of Chancery may dismiss the proceedings as to that stockholder.

After determination of the stockholders entitled to appraisal of their shares, the Delaware Court of Chancery will appraise the "fair value" of the shares owned by those stockholders. This value will be exclusive of any element of value arising from the accomplishment or expectation of the Merger, but may include a fair rate of interest, if any, upon the amount determined to be the fair value. When the value is determined, the Delaware Court of Chancery will direct the payment of the value, with interest thereon accrued during the pendency of the proceeding, if the Delaware Court of Chancery so determines, to the stockholders entitled to receive the same, upon surrender by the holders of the certificates representing those shares. At any time before the entry of judgment in the proceedings, the surviving corporation may pay to each stockholder entitled to appraisal an amount in cash, in which case interest shall accrue thereafter only upon the sum of (i) the difference, if any, between the amount so paid and the fair value of the shares subject to appraisal as determined by the Delaware Court of Chancery and (ii) interest theretofore accrued, unless paid at that time.

In determining fair value and, if applicable, a fair rate of interest, the Delaware Court of Chancery is required to take into account all relevant factors. In Weinberger v. UOP, Inc., the Delaware Supreme Court discussed the factors that could be considered in determining fair value in an appraisal proceeding, stating that "proof of value by any techniques or methods which are generally considered acceptable in the financial community and otherwise admissible in court" should be considered, and that "fair price obviously requires consideration of all relevant factors involving the value of a company."

Section 262 provides that fair value is to be "exclusive of any element of value arising from the accomplishment or expectation of the merger." In Cede & Co. v. Technicolor, Inc., the Delaware Supreme Court stated that this exclusion is a "narrow exclusion [that] does not encompass known elements of value," but which rather applies only to the speculative elements of value arising from such accomplishment or expectation. In Weinberger, the Delaware Supreme Court construed Section 262 to mean that "elements of future value, including the nature of the enterprise, which are known or susceptible of proof as of the date of the merger and not the product of speculation, may be considered."

You should be aware that the fair value of your shares as determined under Section 262 could be more than, the same as, or less than the value that you are entitled to receive under the terms of the Merger Agreement.

Costs of the appraisal proceeding may be imposed upon the surviving corporation and the stockholders participating in the appraisal proceeding by the Delaware Court of Chancery as the Court deems equitable in the circumstances. Upon the application of a stockholder, the Delaware Court of Chancery may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorneys' fees and the fees and expenses of experts, to be charged pro rata against the value of all shares entitled to appraisal. In the absence of such a determination of assessment, each party bears its own expenses. Any stockholder who had demanded appraisal rights will not, after the effective time, be entitled to vote shares subject to that demand for any purpose or to receive payments of dividends or any other distribution with respect to those shares, other than with respect to payment as of a record date prior to the effective time; however, if no petition for appraisal is filed within 120 days after the effective time, or if the stockholder delivers a written withdrawal of his or her demand for appraisal and an acceptance of the terms of the Merger within 60 days after the effective time, then the right of that stockholder to appraisal will cease and that stockholder will be entitled to receive the merger consideration for shares of his or her Oruka capital stock pursuant to the Merger Agreement. Any withdrawal of a demand for appraisal made more than 60 days after the effective time may only be made with the written approval of the surviving corporation. No appraisal proceeding in the Delaware Court of Chancery will be dismissed as to any stockholder without the approval of the court.

Failure to follow the steps required by Section 262 for perfecting appraisal rights may result in the loss of appraisal rights. In view of the complexity of Section 262, stockholders who may wish to dissent from the Merger and pursue appraisal rights should consult their legal advisors.

THE MERGER AGREEMENT

The following is a summary of the material terms of the Merger Agreement. A copy of the Merger Agreement is attached to this proxy statement/prospectus as Annex A and is incorporated by reference into this proxy statement/prospectus. The Merger Agreement has been attached to this proxy statement/prospectus to provide you with information regarding its terms. It is not intended to provide any other factual information about ARCA, Oruka, First Merger Sub or Second Merger Sub. The following description does not purport to be complete and is qualified in its entirety by reference to the Merger Agreement. You should refer to the full text of the Merger Agreement for details of the Merger and the terms and conditions of the Merger Agreement.

The Merger Agreement contains representations and warranties that ARCA, First Merger Sub and Second Merger Sub, on the one hand, and Oruka, on the other hand, have made to one another as of specific dates. These representations and warranties have been made for the benefit of the other parties to the Merger Agreement and may be intended not as statements of fact but rather as a way of allocating the risk to one of the parties if those statements prove to be incorrect. In addition, the assertions embodied in the representations and warranties are qualified by information in confidential disclosure letters exchanged by the parties in connection with signing the Merger Agreement. While ARCA and Oruka do not believe that these disclosure letters contain information required to be publicly disclosed under the applicable securities laws, other than information that has already been so disclosed, the disclosure letters do contain information that modifies, qualifies and creates exceptions to the representations and warranties set forth in the attached Merger Agreement. Accordingly, you should not rely on the representations and warranties as current characterizations of factual information about ARCA or Oruka, because they were made as of specific dates, may be intended merely as a risk allocation mechanism between ARCA, First Merger Sub, Second Merger Sub and Oruka and are modified by the disclosure letters.

Structure

Subject to the terms and conditions of the Merger Agreement, and in accordance with Delaware law, at the closing of the Merger, First Merger Sub, a wholly owned subsidiary of ARCA formed by ARCA in connection with the Merger, will merge with and into Oruka, with Oruka surviving as a wholly owned subsidiary of ARCA, and immediately following such Merger, and as part of the same overall transaction, Oruka will merge with and into Second Merger Sub and with Second Merger Sub being the surviving entity of such Merger.

Completion and Effectiveness of the Merger

The Merger Agreement requires the parties to consummate the Merger as promptly as practicable (and in any event within two business days) after all of the conditions to the consummation of the Merger contained in the Merger Agreement are satisfied or waived, including the adoption of the Merger Agreement by the Oruka stockholders and the approval by the ARCA stockholders of the issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, and the other transactions proposed under the Merger Agreement, other than those conditions that by their nature are to be satisfied at the closing of the Merger. The Merger will become effective upon the filing of certificates of Merger with the Secretary of State of the State of Delaware or at such later time as is agreed by ARCA and Oruka and specified in the certificates of Merger. Neither ARCA nor Oruka can predict the exact timing of the consummation of the Merger.

Merger Consideration

At the First Effective Time, upon the terms and subject to the conditions set forth in the Merger Agreement, each share of Oruka common stock (including any shares of Oruka common stock issued pursuant to Oruka's pre-closing financing) outstanding immediately prior to the First Effective Time (excluding shares to be canceled pursuant to the Merger Agreement and excluding dissenting shares) will be automatically converted solely into the right to receive a number of shares of ARCA common stock equal to the exchange ratio described in more detail below, and each share of Oruka's preferred stock outstanding immediately prior to the First Effective Time (excluding shares to be canceled pursuant to the Merger Agreement and excluding dissenting shares) will be automatically converted solely into the right to receive a number of shares of ARCA's convertible preferred stock equal to (x) the exchange ratio described in more details below *divided by* (y) 1,000. No fractional shares of ARCA common stock will be issued in connection with the Merger, and no certificates or scrip for any such fractional shares will be issued. Any fractional shares of ARCA common stock resulting from the conversion of shares of Oruka common stock (including shares of Oruka common stock issued in the Oruka pre-closing financing) shall

be issued as follows: (i) one share of ARCA common stock if the aggregate amount of fractional shares of ARCA common stock of any individual holder of Oruka capital stock if upon conversion is equal to or exceeds 0.50 or (ii) no shares of ARCA common stock if the aggregate amount of fractional shares of ARCA common stock of any individual holder of Oruka capital stock if upon conversion is less than 0.50, with no cash being paid for any fractional share eliminated by such rounding. Any fractional shares of ARCA Series B Preferred Stock would otherwise be entitled to receive will be aggregated with all fractional shares of ARCA preferred stock issuable to such holder and rounded up to the nearest whole share of ARCA's convertible preferred stock.

Exchange Ratio

The exchange ratio is calculated using a formula intended to allocate existing ARCA and Oruka securityholders a percentage of the combined company. Based on ARCA's and Oruka's capitalization as of July 16, 2024, the exchange ratio was estimated to be equal to approximately 6.8699 shares of ARCA common stock. This estimate is subject to adjustment prior to closing of the First Merger for net cash as of 11:59 p.m. Eastern Time on the business day prior to the anticipated closing date (and as a result, ARCA securityholders could own less, and Oruka securityholders (including, for this purpose, investors in the Oruka pre-closing financing) could own more, or vice versa, of the combined company). ARCA management currently anticipates that ARCA's net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million.

Based on the estimates set forth above, after giving effect to the Oruka pre-closing financing, and certain other assumptions, immediately following the completion of the Merger, ARCA securityholders would own approximately 2.39% of the capital stock of the combined company post-Merger, and Oruka securityholders, including shares of Oruka common stock and Oruka warrants purchased in the Oruka pre-closing financing, would own approximately 97.61% of the capital stock of the combined company post-Merger. Under certain circumstances further described in the Merger Agreement, the ownership percentages may be adjusted up or down including, but not limited to, if ARCA's net cash as of closing is lower than $5.0 million. ARCA management currently anticipates ARCA's net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, and the currently estimated ownership percentages reflect this projection. There can be no assurances any of these assumptions will be accurate at closing when the final exchange ratio is determined. For more information on the Oruka pre-closing financing, please see the section titled "*Agreements Related to the Merger — Subscription Agreement*" beginning on page 153 in this proxy statement/prospectus.

The exchange ratio formula is the quotient obtained (rounded to four decimal places) by dividing the number of Oruka merger shares (defined below) by the Oruka outstanding shares (defined below), in which:

- "Aggregate valuation" means the sum of (i) the Oruka valuation plus (ii) the ARCA valuation.
- "Oruka allocation percentage" means the percentage (rounded to four decimal places) determined by subtracting the ARCA allocation percentage from 100%.
- "Oruka merger shares" means the product determined by multiplying (i) the post-closing ARCA shares by (ii) the Oruka allocation percentage.
- "Oruka outstanding shares" means, without duplication, the total number of shares of Oruka capital stock outstanding immediately prior to the First Effective Time, (including any shares of Oruka common stock or Oruka preferred stock that are issued in, or issuable upon the exercise or conversion of securities issued in, the Oruka pre-closing financing), expressed on a fully diluted and as-converted-to-Oruka common stock basis, assuming, without limitation or duplication, the exercise of all options and warrants to acquire Oruka's capital stock and other rights or commitments to receive shares of Oruka common stock or Oruka preferred stock (or securities convertible or exercisable into shares of Oruka common stock or Oruka preferred stock, including the convertible promissory note convertible into Oruka common stock), whether conditional or unconditional, that are outstanding as of immediately prior to the First Effective Time. The calculation of Oruka outstanding shares:
    - excludes, to avoid the double-counting of, any shares of Oruka common stock or Oruka preferred stock (or securities convertible or exercisable into shares of Oruka common stock or Oruka preferred stock, including any convertible promissory note convertible into Oruka common stock) to the extent such shares or securities are contributed as consideration in the Oruka pre-closing financing; and

- includes to the extent not already issued prior to the First Effective Time, (i) any shares of Oruka common stock or Oruka preferred stock (or securities convertible or exercisable into shares of Oruka common stock or Oruka preferred stock) issuable to the "Paragon Entities" (as such term is defined in Oruka's organizational documents) as a result of the contemplated transactions pursuant to Oruka's organizational documents and (ii) any shares of Oruka common stock or Oruka preferred stock (or securities convertible or exercisable into shares of Oruka common stock or Oruka preferred stock) issuable pursuant to an offer letter set forth in the Oruka disclosure letter.

- "Oruka valuation" means (i) $175 million *plus* (ii) the amount of proceeds actually received by Oruka from the Oruka pre-closing financing (including in the proceeds actually received from any convertible promissory notes convertible into Oruka common stock, and any interest thereon, contributed as consideration in the Oruka pre-closing financing).

- "ARCA allocation percentage" means the quotient (expressed as a percentage and rounded to four decimal places) determined by dividing (i) the ARCA valuation by (ii) the aggregate valuation.

- "ARCA outstanding shares" means, without duplication, (including, without limitation, the effects of any reverse split, if completed) the total number of shares of ARCA common stock outstanding immediately prior to the First Effective Time expressed on a fully-diluted basis, and assuming, without limitation or duplication, the issuance of shares of ARCA common stock in respect of all options, warrants or other rights or commitments to receive shares of ARCA common stock or ARCA preferred stock (or securities convertible or exercisable into shares of ARCA common stock or ARCA preferred stock, but excluding any ARCA convertible preferred stock issuable as a result of the Merger), whether conditional or unconditional, that are outstanding as of immediately prior to the First Effective Time other than options to acquire shares of ARCA common stock to the extent cancelled at or prior to closing under Section 6.6(c) of the Merger Agreement.

- "ARCA valuation" means (i) $11,000,000, minus (ii) the amount by which ARCA net cash is less than $5,000,000 (if any).

- "Post-closing ARCA shares" means the quotient determined by dividing (i) the ARCA outstanding shares by (ii) the ARCA allocation percentage. The estimated exchange ratio for purposes of the unaudited pro forma condensed combined financial information was derived on a fully-diluted basis as of March 31, 2024 using a stipulated value of Oruka of approximately $175 million (excluding the Oruka pre-closing financing) and of ARCA of approximately $11 million. For more information, see "*Unaudited Pro Forma Condensed Combined Financial Information.*"

Calculation of ARCA's Net Cash

Pursuant to the terms of the Merger Agreement, ARCA's "net cash" means, as of 11:59 p.m. Eastern Time on the last business day prior to the anticipated closing date, the sum (without duplication) of the following:

- ARCA's unrestricted cash and cash equivalents and marketable securities determined, to the extent in accordance with GAAP, in a manner consistent with the manner in which such items were historically determined and in accordance with the financial statements (including any related notes) contained or incorporated by reference in ARCA's SEC filings or ARCA's balance sheet;

- Certain ARCA prepaid expenses set forth in ARCA's disclosure letter; and

- All receivables which ARCA and Oruka may mutually agree are recoverable by or provide benefit to ARCA after the First Effective Time (if any).

minus the sum (without duplication) of the following:

- ARCA's consolidated short-term and long-term contractual obligations and liabilities accrued at the closing date, in each case determined in accordance with GAAP and, to the extent in accordance with GAAP, in a manner consistent with the manner in which such items were historically determined and in accordance with the financial statements (including any related notes) contained or incorporated by reference in the ARCA's SEC reports and its balance sheet;

- The aggregate amount (without duplication) of all fees and expenses incurred by ARCA prior to the First Effective Time in connection with the contemplated transactions or the sale of ARCA's legacy business, in each case, to the extent unpaid as of the First Effective Time, including;
  - any fees and expenses of legal counsel, accountants, financial advisors, investment bankers, brokers, consultants, tax advisors, and other professional advisors of ARCA in connection with the transactions contemplated by the Merger Agreement or the sale of ARCA's legacy business;
  - 50% of the fees paid to the SEC in connection with filing this registration statement and any amendments and supplements thereto, with the SEC;
  - 50% of the fees and expenses in connection with the printing, mailing and distribution of this proxy statement and any amendments and supplements thereto;
  - 50% of the fees associated with the filing of Oruka's initial listing application with Nasdaq;
  - any bonus, retention payments, severance, change-in-control payments or similar payment obligations (including payments with "single-trigger" provisions triggered at and as of the consummation of the transactions contemplated hereby) that become due or payable to any director, officer, employee or consultant in connection with the consummation of the contemplated transactions or the sale of ARCA's legacy business, together with any payroll taxes associated therewith;
  - the dividend by ARCA of any excess net cash (but only to the extent declared and unpaid) and all costs and expenses associated therewith; and
  - the costs associated with obtaining the "D&O tail policy" pursuant to Section 6.7 of the Merger Agreement.
- All remaining rent payments and any other liabilities under ARCA's lease obligations;
- Any unpaid taxes of ARCA and its subsidiaries for tax periods (or portions thereof) ending on or before the closing date;
- All costs and expenses to be mutually agreed by ARCA and Oruka relating to the winding down of ARCA's legacy business, including the sale, license or other disposition of any or all of ARCA's legacy business to the extent unpaid as of the closing; and
- The amounts due and payable to holders of options to acquire shares of ARCA's common stock with an exercise price less than or equal to the Parent Closing Price that are cancelled and converted into the right to receive an amount in cash, without interest, equal to the Parent Closing Price less the exercise price of such options, in accordance with the Merger Agreement, to the extent unpaid as of the First Effective Time.

No later than five business days prior to the anticipated closing date, (i) ARCA will deliver to Oruka a net cash schedule setting forth, in reasonable detail, ARCA's good faith estimated calculation of its net cash and (ii) Oruka will deliver to ARCA a Oruka valuation schedule setting forth, in reasonable detail, Oruka's good faith estimated calculations of the components of Oruka's valuation, in each case, as of 11:59 p.m. Eastern Time on the last business day prior to the anticipated closing date, prepared and certified by ARCA's and Oruka's chief financial officer (or if there is no chief financial officer, the principal financial and accounting officer), as the case may be, and, if requested, the relevant work papers and back-up materials used or useful in preparing the net cash schedule and Oruka valuation schedule, respectively. No later than three business days after delivery of such net cash schedule (the last day of such period referred to as the response date), Oruka will have the right to dispute any part of the net cash schedule by delivering a written notice to that effect to ARCA (referred to herein as a dispute notice). Any dispute notice will identify, in reasonable detail and, to the extent known, the nature and amounts of any proposed revisions to ARCA's net cash calculation. No later than three business days after delivery of such Oruka valuation schedule (the last day of such period referred to as the response date), ARCA will have the right to dispute any part of such schedule by delivering a written notice to that effect to Oruka (referred to herein as an Oruka valuation dispute notice). Any dispute notice will identify, in reasonable detail and, to the extent known, the nature and amounts of any proposed revisions to Oruka's valuation calculation.

If Oruka disputes the net cash schedule or ARCA disputes the Oruka valuation schedule, the parties shall attempt in good faith to resolve the disputed items and negotiate an agreed-upon determination of net cash and/or Oruka's valuation, as the case may be. If the parties are unable to negotiate an agreed-upon determination of the disputed items or component thereof within three days after the delivery of the relevant dispute notice, any remaining disagreements will be referred to an independent auditor of recognized national standing mutually agreed upon by ARCA and Oruka. The determination of the amount of net cash or Oruka valuation made by such auditor shall be final and binding on ARCA and Oruka.

ARCA's net cash balance is subject to numerous factors, some of which are outside of ARCA's control. The actual amount of net cash will depend significantly on the timing of the closing of the Merger. In addition, the closing of the Merger could be delayed if ARCA and Oruka are not able to agree upon the amount of ARCA's net cash as of 11:59 p.m. Eastern Time on the last business day prior to the anticipated closing date.

Oruka Options

Under the terms of the Merger Agreement, each option to purchase shares of Oruka common stock that is outstanding and unexercised immediately prior to the First Effective Time, whether or not vested, will be assumed and converted into an option to purchase shares of ARCA common stock.

Accordingly, from and after the First Effective Time: (i) each outstanding Oruka stock option assumed by ARCA may be exercised solely for shares of ARCA common stock; (ii) the number of shares of ARCA common stock subject to each outstanding Oruka stock option assumed by ARCA will be determined by multiplying (A) the number of shares of Oruka common stock that were subject to such Oruka stock option assumed by ARCA, as in effect immediately prior to the First Effective Time, by (B) the exchange ratio, and rounding the resulting number down to the nearest whole number of shares of ARCA common stock; and (iii) the per share exercise price of each Oruka stock option assumed by will be determined by dividing (A) the per share exercise price of such Oruka stock option, as in effect immediately prior to the First Effective Time, by (B) the exchange ratio and rounding the resulting exercise price up to the nearest whole cent. Each Oruka stock option assumed by ARCA will otherwise continue in full force and effect and the term, exercisability, vesting schedule, acceleration rights and other terms and conditions of such Oruka stock option will otherwise remain unchanged.

To the extent provided under the terms of a Oruka stock option assumed by ARCA in accordance with the terms of the Merger Agreement, such Oruka stock option shall, in accordance with its terms, be subject to further adjustment as appropriate to reflect any stock split, division or subdivision of shares, stock dividend, reverse stock split, consolidation of shares, reclassification, recapitalization or other similar transaction with respect to shares of ARCA common stock subsequent to the First Effective Time. In addition, ARCA's board of directors or a committee thereof will succeed to the authority and responsibility of Oruka's board of directors or any committee thereof with respect to each Oruka option assumed by ARCA in accordance with the terms of the Merger Agreement.

Oruka Warrants

Under the terms of the Merger Agreement, each warrant to purchase shares of Oruka capital stock (including any pre-funded Oruka warrants issued pursuant to the Oruka pre-closing financing) that is outstanding and unexercised immediately prior to the First Effective Time, whether or not vested, will be converted into a warrant to purchase shares of ARCA common stock.

Accordingly, from and after the First Effective Time: (i) each outstanding Oruka warrant assumed by ARCA may be exercised solely for shares of ARCA common stock; (ii) the number of shares of ARCA common stock subject to each outstanding Oruka warrant assumed by ARCA will be determined by multiplying (A) the number of shares of Oruka common stock issuable upon exercise of the Oruka warrant that were subject to such Oruka warrant, as in effect immediately prior to the First Effective Time, by (B) the exchange ratio, and rounding the resulting number down to the nearest whole number of shares of ARCA common stock; and (iii) the per share exercise price for the ARCA common stock issuable upon exercise of each Oruka warrant assumed by ARCA will be determined by dividing (A) the per share exercise price of ARCA common stock subject to such Oruka warrant as in effect immediately prior to the First Effective Time, by (B) the exchange ratio and rounding the resulting exercise price up to the nearest whole cent. Each Oruka warrant assumed by ARCA will otherwise continue in full force and effect and the term, any restriction on the exercise and other provisions of such Oruka warrant will otherwise remain unchanged.

To the extent provided under the terms of a Oruka warrant assumed by ARCA in accordance with the terms of the Merger Agreement, such Oruka warrant shall, in accordance with its terms, be subject to further adjustment as appropriate to reflect any stock split, division or subdivision of shares, stock dividend, reverse stock split, consolidation of shares, reclassification, recapitalization or other similar transaction with respect to shares of ARCA common stock subsequent to the First Effective Time. In addition, ARCA's board of directors or a committee thereof will succeed to the authority and responsibility of Oruka's board of directors or any committee thereof with respect to each Oruka warrant assumed by ARCA in accordance with the terms of the Merger Agreement.

ARCA Common Stock and ARCA Options

Except as contemplated by the proposed increase in the number of authorized shares of ARCA common stock described in Proposal No. 2 of this proxy statement/prospectus and the proposed reverse stock split of issued and outstanding ARCA common stock described in Proposal No. 3 of this proxy statement/prospectus, ARCA common stock will remain unaffected by the Merger.

Under the terms of the Merger Agreement, prior to the closing of the Merger, ARCA's board of directors will accelerate the vesting of all equity awards of ARCA then outstanding but not then vested or exercisable, and cancel each option to acquire shares of ARCA's common stock with an exercise price per share greater than the Parent Closing Price, in each case, in accordance with the terms of the Merger Agreement. At the closing of the First Merger, (i) each option to acquire shares of ARCA's common stock with an exercise price less than or equal to the volume weighted average closing trading price of a share of ARCA common stock on Nasdaq for the five (5) consecutive trading days ending three (3) days immediately prior to the closing date of the First Merger (the "Parent Closing Price") will be cancelled and converted into the right to receive an amount in cash, without interest, equal to the Parent Closing Price less the exercise price of such option and (ii) each other option to acquire shares of ARCA's common stock will be cancelled for no consideration.

Procedures for Exchanging Oruka Stock Certificates

Prior to the closing date of the First Merger, ARCA will select an exchange agent and, at the First Effective Time, ARCA will deposit with the exchange agent evidence of book-entry shares representing the shares of ARCA common stock and ARCA Series B Preferred Stock issuable pursuant to the terms of the Merger Agreement in exchange for shares of Oruka common stock and Oruka preferred stock.

Promptly after the First Effective Time, the exchange agent will mail to each record holder of Oruka common stock or Oruka preferred stock (i) a letter of transmittal and (ii) instructions for surrendering the record holder's stock certificates in exchange for the Merger consideration. Upon delivery to the exchange agent of a duly executed letter of transmittal in accordance with the exchange agent's instructions and the declaration for tax withholding purposes, the surrender of the record holder's stock certificates, if applicable, and delivery to the exchange agent of such other documents as may be reasonably required by the exchange agent or ARCA, the record holder of such stock certificates or book-entry shares, as applicable, will be entitled to receive in exchange therefor book-entry shares representing the number of whole shares of ARCA common stock issuable to such holder pursuant to the Merger Agreement. The surrendered certificates representing shares of Oruka common stock or Oruka preferred stock will be canceled.

After the First Effective Time, each certificate representing Oruka common stock or Oruka preferred stock that has not been surrendered will represent only the right to receive shares of ARCA common stock or preferred stock (as applicable) issuable pursuant to the Merger Agreement to which the holder of any such certificate is entitled.

HOLDERS OF ORUKA COMMON STOCK OR ORUKA PREFERRED STOCK SHOULD NOT SEND IN THEIR ORUKA STOCK CERTIFICATES UNTIL THEY RECEIVE A LETTER OF TRANSMITTAL FROM THE EXCHANGE AGENT WITH INSTRUCTIONS FOR THE SURRENDER OF ORUKA STOCK CERTIFICATES.

Directors and Officers of ARCA Following the Merger

Pursuant to the Merger Agreement, each of the directors and officers of ARCA will resign effective as of the First Effective Time and ARCA's board of directors will thereafter consist of a total of six new directors designated by Oruka. Oruka has designated Lawrence Klein, Kristine Ball, Carl Dambkowski, Cameron Turtle, Peter Harwin, and Samarth Kulkarni to serve as members of ARCA's board of directors.

In addition, upon the closing of the Merger, Lawrence Klein will serve as Chief Executive Officer and President, Arjun Agarwal will serve as Senior Vice President, Finance and Treasurer, Joana Goncalves will serve as Chief Medical Officer, and Paul Quinlan will serve as General Counsel and Secretary.

Amendment of the Amended and Restated Certificate of Incorporation of ARCA

ARCA agreed to amend its amended and restated certificate of incorporation to (i) change ARCA's name to "Oruka Therapeutics, Inc.", (ii) effect the proposed reverse stock split, if needed, (iii) authorize a sufficient number of shares of common stock to issue the Merger consideration and (iv) increase the number of shares of ARCA common stock that ARCA is authorized to the amount proposed in this Proxy Statement.

Representations and Warranties

The Merger Agreement contains customary representations and warranties of ARCA, First Merger Sub and Second Merger Sub, on one hand, and Oruka, on the other hand, for a transaction of this type relating to, among other things:

- corporate organization and power, and similar corporate matters;
- due organization;
- subsidiaries;
- organizational documents;
- authority to enter into the Merger Agreement and the related agreements;
- votes required for completion of the Merger and approval of the proposals that will come before the ARCA special meeting of stockholders and that will be the subject of the Oruka stockholder approval;
- except as otherwise specifically disclosed in the Merger Agreement, the fact that the consummation of the Merger would not contravene the organizational documents, certain laws, governmental authorizations or certain contracts of the parties; result in any encumbrances on the parties' assets or require the consent of any third party;
- the parties' efforts with respect to ensuring the inapplicability of Section 203 of the DGCL and other similar takeover laws;
- capitalization;
- financial statements and, with respect to ARCA, documents filed with the SEC and the accuracy of information contained in those documents;
- material changes or events;
- liabilities;
- title to assets;
- real property and leaseholds;
- intellectual property;
- material contracts;

- the validity of material contracts to which the parties or their subsidiaries are a party and any violation, default or breach of such contracts;
- regulatory compliance, permits and restrictions;
- legal proceedings and orders;
- tax matters;
- employee and labor matters and benefit plans;
- environmental matters;
- insurance;
- financial advisors fees;
- certain transactions or relationships with affiliates;
- privacy and data security;
- with respect to ARCA, the valid issuance in the Merger of ARCA common stock; and
- with respect to Oruka, the lack of ownership of ARCA's common stock.

The representations and warranties are, in many respects, qualified by materiality and knowledge, and will not survive the Merger. The accuracy of the representations and warranties of the Company form the basis of certain of the conditions to the obligations of ARCA and Oruka to complete the Merger, subject to materiality thresholds.

Covenants; Conduct of Business Pending the Merger

ARCA has agreed that, except as permitted by the Merger Agreement, as required by law, or unless Oruka has provided written consent, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the First Effective Time and the termination of the Merger Agreement, ARCA and its subsidiaries will use commercially reasonable efforts to conduct their business and operations in the ordinary course consistent with past practices and in compliance with all applicable laws, regulations and certain material contracts. ARCA has also agreed that, subject to certain limited exceptions, without the consent of Oruka, it will not, and will not cause or permit any of its subsidiaries to, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the First Effective Time and the termination of the Merger Agreement:

- declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of capital stock; or repurchase, redeem or otherwise reacquire any shares of capital stock or other securities (except for shares of ARCA common stock from terminated employees, directors or consultants of ARCA);
- sell, issue, grant, pledge or otherwise dispose of or encumber or authorize the issuance of any capital stock or other security (except for ARCA common stock issued upon the valid exercise of outstanding ARCA options or ARCA RSUs), any option, warrant or right to acquire any capital stock or any other security or any instrument convertible into or exchangeable for any capital stock or other security;
- except as required to give effect to anything in contemplation of the closing, amend the certificate of incorporation, bylaws or other similar organizational documents of ARCA or its subsidiaries, or effect or be a party to any Merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction except as related to the transactions contemplated in the Merger Agreement;
- form any subsidiary or acquire any equity interest or other interest in any other entity or enter into any joint venture with any other entity;

- lend money to any person or entity; incur or guarantee any indebtedness for borrowed money; guarantee any debt securities of others; or make any capital expenditure or commitment in excess of $25,000;
- adopt, establish or enter into certain agreements, plans or arrangements relating to employment or benefits matters; cause or permit any such agreement, plan or arrangement to be amended other than as required by law or in order to make amendments for purposes of Section 409A of the Code; pay any bonus or make any profit-sharing or similar payment to, or increase the amount of the wages, salary, commissions, fringe benefits or other compensation or remuneration payable to, any of its directors, officers, employees or independent contractors; increase the severance or change of control benefits offered to any current or new employees, directors or consultants; or hire any officer, employee or consultant;
- acquire any material asset or sell, lease or otherwise irrevocably dispose of any of its assets or properties, or grant any encumbrance with respect to such assets or properties;
- sell, assign, transfer, license, sublicense or otherwise dispose of any material intellectual property rights of ARCA (other than pursuant to non-exclusive licenses in the ordinary course of business);
- other than in the ordinary course of business: make, change or revoke any material tax election; file any amended income or other material tax return; adopt or change any material accounting method in respect of taxes; enter into any material tax closing agreement or settle any material tax claim or assessment; consent to any extension or waiver of the limitation period applicable to or relating to any material tax claim or assessment; or surrender any material claim for refund;
- waive, settle or compromise any pending or threatened legal proceeding against ARCA or any of its subsidiaries, other than waivers, settlements or agreements for an amount not in excess of $100,000 in the aggregate (excluding amounts to be paid under existing insurance policies or renewals thereof) and that do not impose any material restrictions on the operations or businesses of ARCA or its subsidiaries, taken as a whole, or any equitable relief on, or the admission of wrongdoing by ARCA or any of its subsidiaries;
- delay or fail to repay when due any material obligation, including accounts payable and accrued expenses;
- forgive any loans to any person, including its employees, officers, directors or affiliate;
- terminate or modify in any material respect, or fail to exercise renewal rights to, any material insurance policy;
- materially change pricing or royalties or other payments set or charged by ARCA or any of subsidiaries to its customers or licensees;
- agree to materially change pricing or royalties or other payments set or charged by persons who have licensed intellectual property to ARCA or any of subsidiaries;
- enter into, amend in a manner adverse to ARCA or terminate any of ARCA's material contracts outside the ordinary course of business; or
- agree, resolve or commit to do any of the foregoing.

Notwithstanding the foregoing restrictions, ARCA is expressly permitted to engage in the sale, license, transfer, disposition, divestiture or other monetization transaction (i.e., a royalty transaction) or winding down of its legacy business (including terminating its real estate leases and other contracts) and is expressly permitted to declare and pay a dividend on the shares of ARCA common stock outstanding prior to the First Effective Time (excluding for the avoidance of doubt any shares of ARCA's common stock issuable pursuant to the Merger), up to an amount equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash at the First Effective Time will exceed $5.0 million.

Oruka has agreed that, except as permitted by the Merger Agreement, as required by law, or unless ARCA shall have provided its written consent, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the First Effective Time and the termination of the Merger Agreement, Oruka will use commercially reasonable efforts to conduct its business and operations in the ordinary course consistent with past practices and in compliance with all applicable laws, regulations and certain contracts. Oruka has also agreed that, subject to certain limited exceptions, without the consent of ARCA, it will not, and will not cause or permit its subsidiary to, during the period commencing on the date of the Merger Agreement and continuing until the earlier to occur of the First Effective Time and the termination of the Merger Agreement:

- declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of capital stock; or repurchase, redeem or otherwise reacquire any shares of capital stock or other securities (except for shares of common stock from terminated employees, directors or consultants of Oruka);
- except as required to give effect to anything in contemplation of the closing, amend the certificate of incorporation, bylaws or other organizational documents of Oruka or its subsidiaries, or effect or be a party to any Merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction except as related to the transactions contemplated in the Merger Agreement;
- other than in the ordinary course of its business, sell, issue, grant, pledge or otherwise dispose of or encumber or authorize any of the foregoing actions with respect to more than 25% of the shares of Oruka capital stock outstanding as of the date the Merger Agreement was signed: any capital stock or other security of Oruka or its subsidiaries (except for shares of outstanding Oruka common stock issued upon the valid exercise or settlement of Oruka options or warrants in accordance with their terms as in effect as of the date of the Merger Agreement); any option, warrant or right to acquire any capital stock or any other security; or any instrument convertible into or exchangeable for any capital stock or other security of Oruka or its subsidiaries;
- other than in the ordinary course of its business, acquire any equity interest or other interest in any other entity or enter into a joint venture with any other entity;
- lend money to any person or entity; incur or guarantee any indebtedness for borrowed money; guarantee any debt securities of others;
- acquire any material asset or sell, lease or otherwise irrevocably dispose of any of its assets or properties, or grant any encumbrance with respect to such assets or properties, except in the ordinary course of business;
- sell, assign, transfer, license, sublicense or otherwise dispose of any material intellectual property rights owned by Oruka, other than pursuant to non-exclusive licenses in the ordinary course of business;
- waive, settle or compromise any pending or threatened legal proceeding against Oruka, other than waivers, settlements or agreements (A) for an amount not in excess of $100,000 in the aggregate (excluding amounts to be paid under existing insurance policies or renewals thereof) and (B) that do not impose any material restrictions on the operations or businesses of Oruka or any equitable relief on, or the admission of wrongdoing by Oruka;
- enter into, amend in a manner adverse to Oruka or terminate any material contract outside of the ordinary course of its business; and
- agree, resolve or commit to do any of the foregoing.

Non-Solicitation

Each of ARCA and Oruka have agreed that, except as described below, ARCA and Oruka and any of their respective subsidiaries will not, nor will either party or any of its subsidiaries authorize any of the directors, officers, employees, agents, attorneys, accountants, investment bankers, advisors or representatives retained by it or any of its subsidiaries to, directly or indirectly:

- solicit, initiate or knowingly encourage, induce or facilitate the communication, making, submission or announcement of, any Acquisition Proposal or Acquisition Inquiry;
- furnish any non-public information with respect to it to any person in connection with or in response to an Acquisition Proposal or Acquisition Inquiry;
- engage in discussions or negotiations with any person with respect to any Acquisition Proposal or Acquisition Inquiry;
- execute or enter into any letter of intent or any contract contemplating or otherwise relating to an Acquisition Proposal; or
- publicly propose to do any of the foregoing.

An "Acquisition Inquiry" means, with respect to a party, an inquiry, indication of interest or request for non-public information (other than an inquiry, indication of interest or request for information made or submitted by Oruka, on the one hand, or ARCA on the other hand, to the other party) that would reasonably be expected to lead to an Acquisition Proposal.

An "Acquisition Proposal" means, with respect to a party, any offer or proposal, whether written or oral (other than an offer or proposal made or submitted by or on behalf of Oruka or any of its affiliates, on the one hand, or by or on behalf of ARCA or any of its affiliates, on the other hand, to the other party) contemplating or otherwise relating to any Acquisition Transaction with such party.

An "Acquisition Transaction" means any transaction or series of related transactions (other than a sale by ARCA of its legacy assets, the issuance of convertible notes by Oruka or the Oruka pre-closing financing) involving:

- any merger, consolidation, amalgamation, share exchange, business combination, issuance or acquisition of securities, reorganization, recapitalization, tender offer, exchange offer or similar transaction: (i) in which any individual, entity, governmental entity, or "group," as defined under applicable securities laws, directly or indirectly acquires beneficial or record ownership of securities representing more than 20% of the outstanding securities of any class of voting securities of ARCA or Oruka or any of their respective subsidiaries or (ii) in which ARCA, Oruka or Merger Subs or any of their respective subsidiaries issues securities representing more than 20% of the outstanding securities of any class of voting securities of such party or any of its subsidiaries or issues securities convertible into more than 20% of the outstanding securities of any class of voting securities; or
- any sale, lease, exchange, transfer, license, acquisition or disposition of any business or businesses or assets that constitute or account for 20% or more of the consolidated book value or the fair market value of the assets of ARCA or Oruka and their respective subsidiaries, as applicable, taken as a whole.

Notwithstanding the foregoing, before obtaining the applicable approvals of the ARCA stockholders or Oruka stockholders required to consummate the Merger, each party may furnish non-public information regarding such party and its subsidiaries to, and may enter into discussions or negotiations with, any third party in response to a bona fide written Acquisition Proposal, which such party's board of directors determines in good faith, after consultation with such party's financial advisors and outside legal counsel, constitutes or is reasonably likely to result in a Superior Offer (and is not withdrawn), if:

- such Acquisition Proposal was not obtained or made as a direct or indirect result of a breach of the Merger Agreement;

- such party's board of directors concludes in good faith, based on the advice of outside legal counsel, that the failure to take such action would reasonably be expected to be inconsistent with the fiduciary duties of such board of directors under applicable law;
- at least two business days prior to furnishing any non-public information or entering into discussions with a third party, such party gives the other party written notice of the identity of the third party and of that party's intention to furnish non-public information to, or enter into discussions with, such third party;
- such party receives from the third party an executed confidentiality agreement containing provisions at least as favorable to such party as those contained in the confidentiality agreement between ARCA and Oruka; and
- at least two business days prior to furnishing any non-public information to a third party, such party furnishes the same non-public information to the other party to the extent not previously furnished.

A "Superior Offer" means an unsolicited *bona fide* written Acquisition Proposal (with all references to 20% in the definition of Acquisition Transaction being treated as references to 50% for these purposes) that (a) was not obtained or made as a direct or indirect result of a breach of the Merger Agreement, (b) is on terms and conditions that the board of directors of the party receiving the offer determines in good faith, based on such matters that it deems relevant (including the likelihood of consummation thereof and the financing terms thereof), as well as any written offer by the other party to the Merger Agreement to amend the terms of the Merger Agreement, and following consultation with its outside legal counsel and financial advisors, if any, are more favorable, from a financial point of view, to that party's stockholders than the terms of the transactions contemplated by the Merger Agreement, (c) is not subject to any financing conditions (and if financing is required, such financing is then fully committed to the third party) and (d) is reasonably capable of being completed on the terms proposed.

The Merger Agreement also provides that each party will promptly (and in no event later than one business day after such party receives any such Acquisition Proposal or Acquisition Inquiry) advise the other party of the status and terms of, and keep the other party reasonably informed with respect to, any Acquisition Proposal or Acquisition Inquiry and any material modification or material proposed modification thereto.

Board Recommendation Change

Under the Merger Agreement, subject to certain exceptions described below, both Oruka and ARCA agreed that their respective board of directors may not withhold, amend, withdraw or modify (or publicly propose to withhold, amend, withdraw or modify) the recommendation of such party's board of directors in a manner adverse to the other party except for in limited circumstances described below.

At any time prior to the approval of the Merger by each party's respective stockholders, if (i) such party has received a bona fide written Acquisition Proposal that the such party's board of directors determines, following consultation with its outside legal counsel and financial advisor, to be a Superior Offer, or (ii) a material development or change in circumstances (other than any such event, development or change to the extent related to any Acquisition Proposal, Acquisition Inquiry, Acquisition Transaction or the consequences thereof, the fact, in and of itself, that ARCA meets or exceeds internal budgets, plans or forecasts of its revenues, earnings or other financial performance or results of operations or, in the case of ARCA, any sale of ARCA's legacy business) that affects the business, assets or operations of such party and occurs or arises after the date the Merger Agreement was executed.

In the case of a change recommendation due to a material development or change in circumstance, such party's board of directors must first promptly notify the other party, in writing, at least four business days before making a change in its recommendation, stating the material facts and circumstances related to the applicable material development or change in circumstance and that such party's board of directors intends to make a change in its recommendation.

In the case of a change its recommendation due to a Superior Offer, such party's board of directors must first:

- determine in good faith, based on the advice of its outside legal counsel, that the failure to make a change in its recommendation would reasonably be expected to be inconsistent with its fiduciary duties under applicable law; and

- negotiate with the other party in good faith to make such adjustments to the terms and conditions of the Merger Agreement so that such Acquisition Proposal ceases to constitute a Superior Offer, during the required four business day notice period and provide the other party with certain information regarding such Superior Offer.

If the other party delivers a written offer to alter the terms or conditions of the Merger Agreement during the required four business day notice period, the party considering a change in the recommendation of its board of directors must redetermine in good faith, based on the advice of its outside legal counsel and financial advisors, that the failure to make a change in its recommendation would reasonably be expected to be inconsistent with its fiduciary duties under applicable law (after taking into account such alterations of the terms and conditions of the Merger Agreement);

Required Stockholder Approvals

ARCA is obligated under the Merger Agreement to take all action necessary under applicable law to call, give notice of and hold a meeting of the holders of ARCA common stock for the purpose of considering and voting to approve the Merger Agreement and the transactions contemplated thereby (including the Merger) and an amendment to the ARCA Charter as further described herein (collectively, the "Merger proposals"). The ARCA special meeting will be held as promptly as practicable after this registration statement on Form S-4 is declared effective under the Securities Act, and in any event no later than 45 days after the effective date of this registration statement on Form S-4.

Promptly after this registration statement on Form S-4 has been declared effective, and no later than two business days thereafter, Oruka is required to obtain the approval by written consent from the holders of a majority of the outstanding shares of Oruka's capital stock, voting as a single class on an as-converted basis and the holders of a majority of the outstanding shares of Oruka Series A preferred stock, voting as a separate class, in each case, to (x) adopt and approve the Merger Agreement and the Merger or the transactions contemplated thereby (including the Merger), (y) acknowledge that the approval given thereby is irrevocable and that such stockholders are aware of their rights to demand appraisal for their shares pursuant to Section 262 of the DGCL, and that such stockholder has received and read a copy of Section 262 of the DGCL and (z) acknowledge that by their approval of the Merger, they are not entitled to appraisal rights with respect to their shares in connection with the Merger and thereby waive any rights to receive payment of the fair value of their capital stock under the DGCL. Reasonably promptly following receipt of such consents, Oruka will prepare, and cause to be mailed to its stockholders who did not execute such consents, a notice in accordance with the DGCL.

Regulatory Approvals

Each party agreed to use commercially reasonable efforts to file or otherwise submit, as soon as practicable after the date of the Merger Agreement, all applications, notices, reports and other documents reasonably required to be filed by such party with or otherwise submitted by such party to any governmental authority with respect to the transactions contemplated by the Merger Agreement, and to submit promptly any additional information requested by any such governmental authority. ARCA and Oruka do not intend to seek any regulatory approval from antitrust or other regulatory authorities to consummate the transactions.

Indemnification and Insurance for Directors and Officers

Under the Merger Agreement, from the First Merger Effective Time through the sixth anniversary of the date on which the First Merger Effective Time occurs, ARCA and the surviving entity in the Second Merger agreed to indemnify and hold harmless each person who is now, or has been at any time prior to the date of the Merger Agreement, or who becomes prior to the First Merger Effective Time, a director or officer of ARCA or Oruka, respectively, against all claims, losses, liabilities, damages, judgments, fines and reasonable fees, costs and expenses, including attorneys' fees and disbursements, incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, arising out of or pertaining to the fact that the indemnified officer or director is or was a director or officer of ARCA or of Oruka, whether asserted or claimed prior to, at or after the First Merger Effective Time. From and after the First Merger Effective Time, ARCA and the surviving corporation in the Merger will also fulfill ARCA's and Oruka' indemnity obligations, respectively, to each person who is, has been, or who becomes prior to the First Merger Effective Time, a director or officer of ARCA or Oruka.

The certificate of formation and limited liability company agreement of the surviving entity will contain provisions no less favorable with respect to indemnification, advancement of expenses and exculpation of present and former directors and officers as those presently set forth in the ARCA Charter and ARCA Bylaws.

From and after the First Merger Effective Time, ARCA will maintain director and officers' liability insurance policies, with an effective date as of the closing date of the First Merger, on commercially available terms and conditions and with coverage limits customary for U.S. public companies similarly situated to ARCA. In addition, ARCA will secure and purchase a six year "tail policy" on ARCA's existing directors' and officers' liability insurance policy with an effective date as of the date of the closing of the First Merger.

Additional Agreements

Each of ARCA and Oruka has agreed to use its reasonable best efforts to cause to be taken all actions necessary to consummate the Merger and the other transactions contemplated by the Merger Agreement. In connection therewith, each party has agreed to:

- make all filings and other submissions (if any) and give all notices (if any) required to be made and given by such party in connection with the transactions contemplated by the Merger Agreement;
- use commercially reasonable efforts to obtain each consent (if any) reasonably required to be obtained (pursuant to any applicable law or contract, or otherwise) in connection with the Merger and the other transactions contemplated by the Merger Agreement or for such contract to remain in full force and effect;
- use commercially reasonable efforts to lift any injunction prohibiting, or any other legal bar to, the transactions contemplated by the Merger Agreement; and
- use commercially reasonable efforts to satisfy the conditions precedent to the consummation of the Merger Agreement.

Pursuant to the Merger Agreement, ARCA and Oruka have further agreed that:

- ARCA will use its commercially reasonable efforts to maintain its listing on Nasdaq and cause the shares of ARCA common stock (including any shares of ARCA's common stock issuable upon conversion of the ARCA Series B Preferred Stock) being issued in the Merger to be approved for listing on Nasdaq at or prior to the First Merger Effective Time.
- ARCA will keep Oruka reasonably informed regarding any stockholder litigation against ARCA or any of its directors relating to the Merger Agreement or the transactions contemplated thereby.

ARCA will (i) give Oruka the opportunity to participate in, but not control, the defense, settlement or prosecution of any such litigation (to the extent that the attorney-client privilege is not undermined or otherwise adversely affected), (ii) consult with Oruka with respect to the defense, settlement and prosecution of any such litigation and (iii) consider in good faith Oruka's advice with respect to such litigation.

Conditions to the Completion of the Merger

The following contains a description of all material conditions to the completion of the Merger.

Each party's obligation to complete the Merger is subject to the satisfaction or, to the extent permitted by applicable law, the written waiver by each of the parties, at or prior to the closing, of various conditions, which include the following:

- the registration statement on Form S-4, of which this proxy statement/prospectus is a part, must have been declared effective by the SEC in accordance with the Securities Act and must not be subject to any stop order or any proceeding seeking a stop order that has not been withdrawn; and any material state securities laws applicable to the issuance of the shares of ARCA's capital stock in connection with the Merger or any of the other transactions contemplated by the Merger Agreement shall have been

complied with and no stop order (or similar order) shall have been issued or threatened in writing in respect of such shares of ARCA's capital stock by any applicable state securities commissioner or court of competent jurisdiction;

- there must not have been issued, and remain in effect, any order preventing the consummation of the Merger or any of the other transactions contemplated by the Merger Agreement by any governmental authority of competent jurisdiction, and no law, statute, rule, regulation, ruling or decree will be in effect which has the effect of making the consummation of the Merger or any of the other transactions contemplated by the Merger Agreement illegal;
- the holders of a majority of the outstanding shares of Oruka common stock, voting as a single class on an as-converted basis and the holders of a majority of the outstanding shares of Oruka Series A preferred stock, voting as a separate class, must have adopted and approved the Merger Agreement and the transactions contemplated thereby by written consent (the "Oruka stockholder approval");
- the holders of the shares of ARCA common stock constituting a majority of the votes properly cast at the ARCA special meeting must have approved the Merger Agreement and the transactions contemplated thereby;
- the initial listing application for ARCA's common stock on Nasdaq (including any shares of ARCA's common stock issuable upon conversion of the shares of ARCA Series B Preferred Stock) shall have been approved by Nasdaq;
- the lock-up agreements executed by certain stockholders of Oruka will continue to be in full force and effect;
- the ARCA Charter amendment shall have been duly filed with the Secretary of State of the State of Delaware, containing such amendments as are necessary to consummate the transactions contemplated by the Merger Agreement; and
- ARCA shall have filed a Certificate of Designation with the Secretary of State of the State of Delaware designating the ARCA Series B Preferred Stock.

In addition, each party's obligation to complete the Merger is further subject to the satisfaction or waiver by that party of the following additional conditions:

- the other party's representations and warranties being true and correct as of the closing date, subject to applicable materiality qualifiers;
- the other party to the Merger Agreement must have performed or complied with in all material respects all of such party's agreements and covenants required to be performed or complied with by it under the Merger Agreement at or prior to the First Merger Effective Time;
- the lack of a material adverse effect that is continuing with respect to the other party; and
- the other party having delivered certain certificates and other documents required under the Merger Agreement for the closing.

In addition, the obligation of ARCA and Merger Subs to complete the Merger is further subject to the Subscription Agreement being in full force and effect and cash proceeds of not less than $175 million having been received by Oruka, substantially simultaneously with the closing of the First Merger.

Termination and Termination Fees

Termination of the Merger Agreement

The Merger Agreement may be terminated at any time before the First Merger Effective Time, whether before or after the required stockholder approvals to complete the Merger have been obtained, as set forth below:

(a) by mutual written consent of ARCA and Oruka;

(b) by either ARCA or Oruka, if the Merger has not been consummated by October 3, 2024 (subject to possible extension as provided in the Merger Agreement); *provided, however*, that this right to terminate the Merger Agreement will not be available to any party whose action or failure to act has been a principal cause of the failure of the Merger to occur on or before October 3, 2024 and such action or failure to act constitutes a breach of the Merger Agreement; and *provided, further*, that such date will be extended by 60 days by either party in the event that the SEC has not declared effective the registration statement on Form S-4, of which this proxy statement/prospectus is a part, by the date which is 60 days following October 3, 2024;

(c) by either ARCA or Oruka, if a court of competent jurisdiction or governmental entity has issued a final and non-appealable order, decree or ruling or having the effect of permanently restrains, enjoins or otherwise prohibits the Merger or any of the transactions contemplated by the Merger Agreement;

(d) by ARCA, if the Oruka stockholder approval has not been obtained within two business days of the registration statement on Form S-4, of which this proxy statement/prospectus is a part, becoming effective; *provided* that this right to terminate the Merger Agreement will not be available to ARCA once Oruka obtains such stockholder approval;

(e) by either ARCA or Oruka, if the ARCA special meeting has been held and completed and ARCA stockholders have taken a final vote on the Merger proposals set forth herein to be considered at the ARCA special meeting, and such proposals have not been approved by the ARCA stockholders; *provided* that ARCA may not terminate the Merger Agreement pursuant to this provision if the failure to obtain the approval of ARCA stockholders was caused by the action or failure to act of ARCA and such action or failure to act constitutes a material breach by ARCA of the Merger Agreement;

(f) by Oruka, at any time prior to obtaining the approval by ARCA stockholders of the Merger proposals set forth herein to be considered at the ARCA special meeting, if any of the following circumstances shall occur:

- ARCA fails to include in this proxy statement/prospectus ARCA's board of directors' recommendation that ARCA stockholders vote to approve the Merger proposals set forth herein to be considered at the ARCA special meeting;
- ARCA's board of directors, or any committee thereof, makes an ARCA board recommendation change or publicly approves, endorses or recommends any Acquisition Proposal; or
- ARCA enters into any letter of intent or similar document or any contract relating to any Acquisition Proposal, other than a confidentiality agreement permitted pursuant to the Merger Agreement;

(g) by ARCA, at any time prior to obtaining the Oruka stockholder approval, if any of the following circumstances shall occur:

- Oruka's board of directors makes a Oruka board recommendation change or publicly proposes, endorses or recommends any Acquisition Proposal; or
- Oruka enters into any letter of intent or similar document or any contract relating to any Acquisition Proposal;

(h) by Oruka, if ARCA or Merger Subs have breached any of their representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warranty of ARCA has become inaccurate, in either case such that the conditions to the closing would not be satisfied as of time of such breach or inaccuracy; *provided* that Oruka is not then in material breach of any representation, warranty covenant or agreement under the Merger Agreement; *provided, further*, if such breach or inaccuracy is curable, then ARCA shall not be permitted to terminate the Merger Agreement pursuant to this paragraph as a result of a particular breach or inaccuracy until the earlier of the expiration of a 30-day period after delivery of written notice of such breach or inaccuracy from Oruka to ARCA or Merger Subs and Oruka's intention to terminate pursuant to this paragraph (it being understood that ARCA shall not be permitted to terminate the Merger Agreement pursuant to this paragraph as a result of such particular breach or inaccuracy if such breach by ARCA or Merger Subs is cured prior to such termination becoming effective);

(i) by ARCA, if Oruka has breached any of its representations, warranties, covenants or agreements contained in the Merger Agreement or if any representation or warranty of Oruka has become inaccurate, in either case such that the conditions to the closing would not be satisfied as of time of such breach or inaccuracy; *provided* that ARCA is not then in material breach of any representation, warranty covenant or agreement under the Merger Agreement; *provided, further*, if such breach or inaccuracy is curable, then ARCA shall not be permitted to terminate the Merger Agreement pursuant to this paragraph as a result of a particular breach or inaccuracy until the earlier of the expiration of a 30-day period after delivery of written notice of such breach or inaccuracy from ARCA to Oruka and ARCA's intention to terminate pursuant to this paragraph (it being understood that the Merger Agreement will not terminate pursuant to this paragraph as a result of such particular breach or inaccuracy if such breach by Oruka is cured prior to such termination becoming effective); or

(j) by ARCA (at any time prior to obtaining the ARCA stockholder approval), upon ARCA's board of directors authorizing ARCA to enter into a definitive agreement that contemplates or otherwise relates to an Acquisition Transaction that constitutes a superior offer, subject to certain conditions.

Termination Fees Payable by ARCA

ARCA must pay Oruka a termination fee of $440,000 if (i) the Merger Agreement is terminated by ARCA or Oruka pursuant to clause (e) above or by Oruka pursuant to clause (f) above, (ii) at any time after the date of the Merger Agreement and prior to the ARCA special meeting, an Acquisition Proposal with respect to ARCA will have been publicly announced, disclosed or otherwise communicated to ARCA's board of directors (and will not have been withdrawn), and (iii) in the event the Merger Agreement is terminated pursuant to clause (e) above, within 12 months after the date of such termination, ARCA enters into a definitive agreement with respect to a subsequent transaction or consummates a subsequent transaction.

Termination Fees Payable by Oruka

Oruka must pay ARCA a termination fee of $440,000 if (i) the Merger Agreement is terminated by ARCA pursuant to clause (d) or (g) above, (ii) at any time after the date of the Merger Agreement and before obtaining the Oruka stockholder approval, an Acquisition Proposal with respect to Oruka will have been publicly announced, disclosed or otherwise communicated to Oruka's board of directors (and will not have been withdrawn), and (iii) in the event the Merger Agreement is terminated pursuant to clause (d) above, within 12 months after the date of such termination, Oruka enters into a definitive agreement with respect to a subsequent transaction or consummates a subsequent transaction.

Amendment and Waiver

The Merger Agreement may not be amended except by an instrument in writing signed on behalf of each of the parties to the Merger Agreement and authorized by such party's boards of directors at any time, unless the Merger Agreement has been adopted and approved by any party's stockholders, in which case no amendment which by law requires further approval by the such party's stockholders, may be made without such further approval.

Any provision of the Merger Agreement may be waived by any party solely on that party's behalf, without the consent of any other party. The waiver must be expressly set forth in a written instrument duly executed and delivered on behalf of such party, which will only be valid in the specific instance in which it is given. No failure or delay on the part of any party with respect to the exercise of any power, right, privilege or remedy under the Merger Agreement will operate as a waiver of such power, right, privilege or remedy. Furthermore, no single or partial exercise of any such power, right, privilege or remedy will preclude any other or further exercise thereof or of any other power, right, privilege or remedy.

AGREEMENTS RELATED TO THE MERGER

Support Agreements

Certain Oruka stockholders holding approximately 90% of the outstanding shares of Oruka capital stock have entered into Oruka Support Agreements with ARCA and Oruka to vote all of their shares of Oruka capital stock in favor of the adoption and approval of the Merger Agreement and the transactions contemplated thereby and against any alternative acquisition proposals. Certain ARCA stockholders holding approximately 28.5% of the outstanding shares of ARCA common stock have entered into ARCA Support Agreements with ARCA and Oruka to vote all of their shares of ARCA common stock in favor of the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and the Reverse Stock Split Proposal and against any alternative acquisition proposals.

Lock-Up Agreements

Certain of Oruka's executive officers, directors and stockholders have entered into lock-up agreements, pursuant to which such parties have agreed not to, except in limited circumstances, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of ARCA's common stock or any securities convertible into or exercisable or exchangeable for ARCA common stock, currently or thereafter owned, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock issued in exchange for shares of Oruka preferred stock in the Merger, but excluding, as applicable, shares purchased by existing Oruka stockholders in the Oruka pre-closing financing (including any shares of ARCA common stock issuable upon exercise of pre-funded warrants issued in exchange for pre-funded warrants to purchase shares of Oruka common stock sold in the Oruka pre-closing financing), until 180 days after the effective time.

The Oruka stockholders who have executed lock-up agreements as of July 16, 2024 owned, in the aggregate, approximately 90% of the shares of Oruka's outstanding capital stock.

The foregoing description of the lock-up agreements does not purport to be complete and is qualified in its entirety by the full text of the form of lock-up agreement, which is attached hereto as *Annex E*.

Subscription Agreement

Concurrently with the execution and delivery of the Merger Agreement, certain new and existing investors of Oruka entered into the Subscription Agreement with Oruka, pursuant to which such investors have agreed to purchase immediately prior to the First Merger, shares of Oruka common stock or, in lieu thereof, Oruka pre-funded warrants, representing an aggregate commitment of approximately $275.0 million (which includes $25.0 million of proceeds previously received from the issuance of the Convertible Note and accrued interest on such note), in the Oruka pre-closing financing. Under the Subscription Agreement, the number of shares of Oruka common stock or pre-funded warrants, as applicable, shall be determined at a purchase price per share or warrant equal to (i) a valuation for Oruka equal to approximately $175.0 million, (ii) divided by the number of shares of Oruka common stock outstanding immediately prior to the First Effective Time of the Merger (but excluding the securities being issued under the Subscription Agreement). Each share of Oruka preferred stock will be converted into the right to receive a number of shares of ARCA Series B Preferred Stock, which are each convertible into 1,000 shares of ARCA common stock, calculated in accordance with the Merger Agreement.

The shares of Oruka common stock and Oruka pre-funded warrants that are issued in the Oruka pre-closing financing will be or will have the right to be, respectively, converted into shares of ARCA common stock in the Merger. Accordingly, by approving Proposal No. 1 relating to the Merger, ARCA stockholders will also be approving the issuance of shares of ARCA common stock to be issued in exchange for all shares of Oruka common stock and pre-funded warrants that are sold in the Oruka pre-closing financing.

The Subscription Agreement contains customary representations and warranties of Oruka and also contains customary representations and warranties of the purchaser parties thereto.

Each purchaser's obligation to purchase shares of Oruka common stock and/or Oruka pre-funded warrants from Oruka pursuant to the Subscription Agreement is subject to the satisfaction or waiver of certain conditions, including:

- Oruka's representations and warranties in the Subscription Agreement being true and correct in all respects as of the effective date of the Subscription Agreement and true and correct in all material respects as of the closing date for the Oruka pre-closing financing, subject to certain exceptions;
- Oruka having performed and complied in all material respects with all covenants, agreements, obligations and conditions required to be performed or complied with by it;
- the issuance of a compliance certificate by the chief executive officer of Oruka;
- all registrations, qualifications, permits and approvals, if any, required under applicable state securities laws having been obtained;
- the issuance of a secretary's certificate by the secretary of Oruka;
- the satisfaction or waiver of all conditions to the closing of the Merger set forth in the Merger Agreement (other than the condition regarding the Oruka pre-closing financing) and the closing of Merger being set to occur substantially concurrently with the closing of the Oruka pre-closing financing;
- no injunction having been issued prohibiting the consummation of the Oruka pre-closing financing;
- Oruka having delivered the registration rights agreement required by the Subscription Agreement;
- this registration statement on Form S-4 shall have been become effective under the Securities Act, no stop order shall be suspending the effectiveness of this registration statement and no proceeding for that purpose shall have been initiated or threatened in writing by the SEC;
- the Nasdaq Listing Application shall have been approved by Nasdaq;
- no material adverse effect shall have occurred that is continuing, since the date of the Subscription Agreement;
- Oruka shall receive at closing aggregate proceeds from the purchase of securities pursuant to the Subscription Agreement of not less than $175,000,000 (including in the proceeds any convertible securities contributed as consideration in accordance with the Subscription Agreement); and
- an opinion from Company counsel, dated as of the closing.

Oruka's obligation to sell shares of Oruka common stock to each purchaser pursuant to the Subscription Agreement is subject to the satisfaction or waiver of certain conditions, including:

- the representations and warranties made by the purchasers being true and correct as of the effective date of the Subscription Agreement and true and correct in all material respects as of the closing date of the Oruka pre-closing financing, subject to certain exceptions;
- each purchaser having performed and complied with all covenants, agreements, obligations and conditions required to be performed or complied with by each purchaser;
- all registrations, qualifications, permits and approvals, if any, required under applicable state securities laws having been obtained; and
- the satisfaction or waiver of all conditions to the closing of the Merger set forth in the Merger Agreement (other than those conditions which are to be satisfied at the closing of the transactions contemplated by the Merger Agreement)) and the closing of Merger being set to occur substantially concurrently with the closing of the Oruka pre-closing financing.

Registration Rights Agreement

The Subscription Agreement contemplates ARCA, Oruka and the investors participating in the Oruka pre-closing financing entering into a registration rights agreement at the closing of the Oruka pre-closing financing, pursuant to which, among other things, the combined company will agree to provide for the registration and resale of certain shares of Oruka common stock that are held by the investors participating in the Oruka pre-closing financing from time to time, including the shares of ARCA common stock issued in exchange for shares of Oruka common stock sold in the Oruka pre-closing financing and ARCA pre-funded warrants assumed upon conversion of the Oruka pre-funded warrants sold in the Oruka pre-closing financing (including shares issuable upon exercise of such warrants).

Pursuant to the registration rights agreement, the combined company will agree to prepare and file a resale registration statement covering the resale of the ARCA common stock within 45 days of the closing of the merger pursuant to Rule 415 and to use its reasonable best efforts to keep such registration statement continuously effective under the Securities Act until the earlier of (a) the date that all registrable securities covered by such registration statement (i) have been sold, thereunder or pursuant to Rule 144 of the Securities Act ("Rule 144"), or (ii) may be sold without volume or manner-of-sale restrictions pursuant to Rule 144 and without the requirement for the combined company to be in compliance with the current public information requirement under Rule 144, and (b) five years after the date of the registration rights agreement.

Pursuant to the registration rights agreement, the combined company will agree that neither the combined company nor securityholders of the combined company (other than the investors participating in the Oruka pre-closing financing and party to the registration rights agreement) may have "piggyback" registration rights and that the combined company will be prohibited from filing any other registration statements until all of the registerable securities subject to the registration rights agreement are registered pursuant to an effective registration statement, subject to certain exceptions. The registration rights agreement also provides that the combined company will pay certain expenses relating to such registrations and indemnify the applicable securityholders against certain liabilities. The form of registration rights agreement is attached as Exhibit A to the Subscription Agreement filed as Exhibit 10.2 to this registration statement on Form S-4 of which this proxy statement/prospectus is a part, and the foregoing description of the registration rights agreement is qualified in its entirety by reference thereto.

ARCA DIRECTORS, OFFICERS AND CORPORATE GOVERNANCE

The following sets forth certain information, as of July 16, 2024, concerning ARCA's directors and executive officers.

ARCA's directors, executive officers and key employees as of July 16, 2024 are as follows:

Name	Age	Position
Thomas A. Keuer	65	President and Chief Operating Officer
C. Jeffrey Dekker	60	Chief Financial Officer
Dr. Linda Grais[(1)(2)*(3)(4)]	68	Class I Director[(5)]
Mr. Robert E. Conway[(1)*(2)(3)(4)]	70	Class II Director[(5)]
Dr. Anders Hove[(2)(3)*(4)]	58	Class I Director[(5)]
Mr. Jacob Ma-Weaver	37	Class III Director[(5)]
Mr. James Flynn[(1)(4)]	43	Class I Director[(5)]

* Committee Chairperson
(1) Member of the Audit Committee of ARCA's board of directors
(2) Member of the Compensation Committee of ARCA's board of directors
(3) Member of the Nominating and Corporate Governance Committee of ARCA's board of directors
(4) Member of the Special Committee of ARCA's board of directors
(5) See "Election of Board of Directors" below for discussion of Class I — III Director service terms.

Thomas A. Keuer. Mr. Keuer has served as ARCA's Chief Operating Officer since December 2014, and ARCA's President since April 2024. Mr. Keuer served as ARCA's Executive Vice President, Pharmaceutical Operations from 2006 to 2014. Prior to joining ARCA, Mr. Keuer served as the SVP of Operations for Insmed, Inc. from 2004 to 2006. Prior to Insmed, Mr. Keuer served as the VP of Engineering for Baxter Healthcare from 1998 to 2004. Prior to Baxter, Mr. Keuer served as the VP of Operations for Somatogen, Inc. Mr. Keuer received his M.S. in Biochemical Engineering from Rice University and received his B.S. in Chemical Engineering from the University of Texas, Austin.

C. Jeffrey Dekker. Mr. Dekker has served as ARCA's Chief Financial Officer and Treasurer since May 2021 and ARCA's Secretary since April 2023. Prior to joining ARCA, Mr. Dekker served in multiple roles of increasing responsibility at GlobeImmune, Inc. from 2006 to 2021, including President, Vice President of Finance, and Senior Director, Finance and Controller. Before joining GlobeImmune, Mr. Dekker held leadership positions in finance and accounting at private software companies since 1993, including posts ranging from Corporate Controller to Vice President at Webroot Software Inc., Requisite Technology Inc. and NxTrend Technology Inc. Earlier in his career, Mr. Dekker worked at ITT Rayonier Port Angeles Pulp Division and at KPMG in Los Angeles. He earned a B.S. in accounting from Utah State University and is a certified public accountant.

Linda Grais, M.D. Dr. Grais has served as a member of ARCA's board of directors since May 2007. Dr. Grais was a director of Ocera Therapeutics, Inc., a public biopharmaceutical company, since January 2008 and became President and Chief Executive Officer of Ocera in June 2012, and served in that role until Ocera's acquisition by Mallinckrodt Pharmaceuticals in December 2017. Dr. Grais served as a Managing Member at InterWest Partners, a venture capital firm from May 2005 until February 2011. From July 1998 to July 2003, Dr. Grais was a founder and executive vice president of SGX Pharmaceuticals Inc., a drug discovery company. Prior to that, she was a corporate attorney at Wilson Sonsini Goodrich & Rosati, where she practiced in such areas as venture financings, public offerings and strategic partnerships. Before practicing law, Dr. Grais worked as an assistant clinical professor of Internal Medicine and Critical Care at the University of California, San Francisco. Dr. Grais received a B.A. from Yale University, magna cum laude, and Phi Beta Kappa, an M.D. from Yale Medical School and a J.D. from Stanford Law School. Since September 2015, Dr. Grais served on the board of PRA Health Sciences, which was acquired by ICON plc in 2021, a public contract research organization, and currently serves on the board of ICON plc. Dr. Grais also joined the board of Corvus Pharmaceuticals., a publicly traded pharmaceutical company, in January 2019, and joined the board of Collective Health, a private healthcare services company, in March 2023. ARCA believes Dr. Grais is an appropriate member of the Board of Directors because of her diverse training and experience as both a medical doctor and a lawyer, her experience as a founder and senior executive of a pharmaceutical company, and her experience as an investor in new life sciences companies. She also has extensive experience with and knowledge of ARCA's business from her service on ARCA's board of directors since 2007.

Robert E. Conway Mr. Conway was appointed to ARCA's board of directors in September 2013, and has served as the Chairman of ARCA's board of directors since 2014. Mr. Conway served as the Chief Executive Officer and member of the board of directors of Array Biopharma, a publicly traded biopharmaceutical company, from 1999 to 2012. Prior to joining Array, Mr. Conway was the Chief Operating Officer and Executive Vice President of Hill Top Research, Inc., from 1996 to 1999. From 1979 until 1996, Mr. Conway held various executive positions for Corning Inc. including Corporate Vice President and General Manager of Corning Hazleton, Inc., a contract research organization. From 2004 to 2013, he served on the board of directors of PRA International, Inc., which was a public company for a portion of his tenure there, from 2012 to the present, he has served on the board of directors of eResearch Technology, Inc., a private company, and from 2015 to July 2017, Advarra, Inc. from 2019 to August 2022, and he has served on the board of directors of Nivalis Therapeutics, Inc. a public, clinical stage pharmaceutical company. In July 2017, Nivalis Therapeutics, Inc. combined with Alpine Immune Sciences, Inc., a public, clinical stage pharmaceutical company, and Mr. Conway served on the board of directors following such combination until May 2024. In addition, Mr. Conway is a member of the Strategic Advisory Committee of Genstar Capital, LLC and is a member of the board of directors of Signant Health. In April 2023, Mr. Conway became Executive Chairman and member of the board of directors of ClinOne, Inc. Mr. Conway received a B.S. in accounting from Marquette University in 1976. ARCA believes Mr. Conway is an appropriate member of ARCA's board of directors given his experience and expertise in the pharmaceutical industry, in pharmaceutical development and clinical trials, and in corporate finance, governance, accounting and public company compliance.

Anders Hove, M.D. Dr. Hove has served as a member of ARCA's board of directors since February 2017. Dr. Hove is the manager of Acorn Bioventures, a partnership focusing on long-term investments in biotech, specialty pharma and medical device companies. Before Dr. Hove was a general partner of Venrock Associates, a venture capital firm, which he joined in 2004 and remained at through 2016. In 2008, Dr. Hove was a founder of Venrock Healthcare Capital Partners, Venrock's public funds focused on small capitalization biotech companies and late-stage private companies. From 1996 to 2004, Dr. Hove was a fund manager at BB Biotech, an investment firm, and from 2002 to 2003 he also served as Chief Executive Officer of Bellevue Asset Management, an investment company. Dr. Hove previously held senior level positions in the medical, clinical and business operations of the pharmaceuticals division of Ciba-Geigy and Novartis. Mr. Hove was a member of the boards of directors of Anacor Pharmaceuticals, a publicly traded pharmaceutical company, from 2005 until its acquisition by Pfizer in June 2016, and Edge Therapeutics, a publicly traded biotechnology company, from 2015 to 2016. In addition, Dr. Hove is a member of the board of directors of MC2 Therapeutics. He received a M.Sc. in Biotechnology Engineering from the Technical University of Denmark, an M.D. from the University of Copenhagen and an M.B.A. from INSEAD (the Institut Européen d'Administration des Affaires). ARCA believes Dr. Hove is an appropriate member of ARCA's board of directors, given his extensive training and experience as a medical doctor and masters of business administration, an executive in the pharmaceutical industry, and as an investor in biotechnology companies.

Jacob Ma-Weaver Mr. Ma-Weaver was appointed to ARCA's board of directors in June 2022. He is the Managing Member of Cable Car Capital LLC, an investment adviser he founded in 2013. Cable Car Capital LLC is the General Partner of Funicular Funds, LP, a hedge fund. From 2012 to 2013, Mr. Ma-Weaver was employed as an investment analyst at Amici Capital LLC, where he focused on healthcare. He was previously employed as an equity research associate at Dodge & Cox and a corporate finance business analyst at McKinsey & Company. Mr. Ma-Weaver received a Bachelor of Arts in Comparative Literature & Society and Economics and a Master of Arts in Statistics from Columbia University. He is a Chartered Financial Analyst (CFA) charterholder. ARCA believes Mr. Ma-Weaver is an appropriate member of ARCA's board of directors because of his experience as an investor in life sciences companies, an analyst for investment firms and his academic background.

James Flynn Mr. Flynn has served as a member of ARCA's board of directors since December 2022. Mr. Flynn is currently a Managing Member and Portfolio Manager of Nerium Capital LLC, an investment adviser he founded in 2021. Mr. Flynn has served as a board member for Axiom Health (a provider of software and big-data solutions to the healthcare industry) since 2022, a board member for MEI Pharma, Inc (a pharmaceutical company committed to the development of novel and differentiated cancer therapies) since 2023, joined the board of RiceBran Technologies (an innovative specialty ingredients company) in January 2024, and joined the board of Synlogic, Inc. (a publicly traded biopharmaceutical company with a focus on rare metabolic disorders) in March 2024. From 2017 to 2018, Mr. Flynn worked as a therapeutics analyst at Aptigon Capital (a Citadel Company), an investment firm. Prior to that, from 2003 to 2017, Mr. Flynn served in various roles at Amici Capital, LLC, an investment firm, including healthcare portfolio manager (2008 to 2017). From 2002 to 2003, Mr. Flynn worked in the credit research/high yield group at Putnam Investments, an investment firm. Mr. Flynn earned a S.B. degree in Management Science with a

concentration in Finance and a minor in Economic Science from the Massachusetts Institute of Technology (MIT). Mr. Flynn is a Chartered Financial Analyst (CFA) charterholder. ARCA believes Mr. Flynn is an appropriate member of ARCA's board of directors because of his experience as an investor in life sciences companies, an analyst for investment firms and his academic background.

Board Diversity Matrix (as of July 16, 2024)

The table below provides certain highlights of the composition of ARCA's board members as of July 16, 2024. Each of the categories listed in the table below has the meaning as it is used in Nasdaq Rule 5605(f).

Board Diversity Matrix as of July 16, 2024

Total Number of Directors and nominees:	**5**			
Part I: Gender Identity	**Male**	**Female**	**Non-Binary**	**Did Not Disclose Gender**
Directors	4	1	—	—
Part II: Demographic Background				
African American or Black	—	—	—	—
Alaskan Native or American Indian	—	—	—	—
Asian	—	—	—	—
Hispanic or Latinx	—	—	—	—
Native Hawaiian or Pacific Islander	—	—	—	—
White	4	1	—	—
Two or More Races or Ethnicities	—	—	—	—
LGBTQ+	—	—	—	—
Did Not Disclose Demographic Background	—	—	—	—

ADDITIONAL INFORMATION REGARDING THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

Independence of The Board of Directors

As required under the Nasdaq listing standards, a majority of the members of a listed company's board of directors must qualify as "independent," as affirmatively determined by the board of directors. ARCA's board of directors consults with ARCA's counsel to ensure that the board of directors' determinations are consistent with relevant securities and other laws and regulations regarding the definition of "independent," including those set forth in pertinent listing standards of the Nasdaq, as in effect from time to time.

Consistent with these considerations, after review of all relevant identified transactions or relationships between each director, or any of his or her family members, and ARCA, its senior management and its independent registered public accounting firm, the Board of Directors has affirmatively determined that the following four directors are independent directors within the meaning of the applicable Nasdaq listing standards: Mr. Conway, Dr. Grais, Dr. Hove and Mr. Flynn. In making this determination, the Board of Directors found that none of the directors had a material or other disqualifying relationship with ARCA. Dr. Bristow, ARCA's former President and Chief Executive Officer was not an independent director in 2023 by virtue of his employment relationship with ARCA.

Board Leadership Structure

ARCA has structured its board of directors in a way that ARCA believes effectively serves its objectives of corporate governance and management oversight. ARCA separates the roles of President and Chairman of the board of directors in recognition of the differences between the two roles. ARCA believes that the President should be responsible for the day-to-day leadership and performance of ARCA, while the Chairman of the board of directors should work with the President and the rest of the board of directors to set the strategic direction for ARCA and provide guidance to, and oversight of the President. The Chairman also sets the agenda for meetings of the board of directors and presides over them.

Mr. Conway, who is an independent director, was elected Chairman of the board of directors in 2014. In this capacity, Mr. Conway, among other things, calls and presides over board meetings, including meetings of the independent directors, and sets meeting agendas. In this role, Mr. Conway can effectively coordinate between the board of directors and management regarding risk management issues and the implementation of appropriate responses, and can help ensure the effective independent functioning of the board of directors in its oversight responsibilities. Accordingly, the Chairman has substantial ability to shape the work of the board of directors.

Role of the Board of Directors in Risk Oversight and Risk Management

One of the board of directors' key functions is informed oversight of ARCA's risk management process. The board of directors does not have a standing risk management committee, but rather administers this oversight function directly through the board of directors as a whole, as well as through various standing committees of the board of directors that address risks inherent in their respective areas of oversight. In particular, while the board of directors is responsible for monitoring and assessing strategic risk exposure, the Audit Committee has the responsibility to consider and discuss the major financial risk exposures and the steps management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The Audit Committee also monitors compliance with legal and regulatory requirements, in addition to oversight of the performance of ARCA's accounting and financial reporting processes. The Nominating and Corporate Governance Committee monitors the effectiveness of the corporate governance guidelines, including whether they are successful in preventing illegal or improper liability-creating conduct. The Compensation Committee of the board of directors of ARCA (the "Compensation Committee") assesses and monitors whether any compensation policies and programs have the potential to encourage excessive risk-taking. The entire board of directors and its committees address risk management issues from time-to-time and at least annually meet with the employees responsible for risk management in the committees' respective areas of oversight. Both the board of directors as a whole and the various standing committees receive periodic reports

from the employees responsible for risk management, as well as incidental reports as matters may arise. It is the responsibility of the committee chairs to report findings regarding material risk exposures to the board of directors as quickly as possible.

Meetings of The Board of Directors

ARCA's board of directors met three times during the 2023 fiscal year. The independent members of the board of directors met separately as a group at each of the board meetings in 2023. All members of the board of directors attended at least 75% of the aggregate of (i) the total number of meetings of the board of directors held during the period for which each director served and (ii) the total number of meetings held by all committees of the board of directors of which each director was a member during the periods that they served. All of ARCA's directors then on the board of directors attended ARCA's 2023 annual meeting of stockholders (the "2023 Annual Meeting") whether in person or via telephone.

Election of Board of Directors

Directors are elected by a plurality of the votes of the holders of shares present in person or represented by proxy and entitled to vote on the election of directors at ARCA's annual stockholders' meetings. The ARCA Charter, as amended, provides that the board of directors is divided into three classes to provide for staggered terms and that each director will serve for a term of three years or less, depending on the class to which the board of directors has assigned a director not previously elected by the stockholders. There is currently one Class III director whose term expires at the annual stockholders' meeting in 2024, three Class I directors whose terms expire at the annual stockholders' meeting in 2025 and one Class II directors whose term expires at the annual meeting in 2026. The one Class III director, Mr. Jacob Ma-Weaver, is currently scheduled for re-election to the board of directors at this 2024 special meeting in lieu of an annual stockholders' meeting, for a three-year term ending on the date of the annual meeting in 2027 or until his successor is duly elected and qualified or appointed.

ARCA's executive officers are appointed by and serve at the discretion of ARCA's board of directors. There are no family relationships between ARCA's directors and executive officers.

Code of Ethics

ARCA has adopted the ARCA biopharma, Inc. Code of Business Conduct and Ethics that applies to all officers, directors and employees. The Code of Business Conduct and Ethics is available on ARCA's website at *www.arcabiopharma.com*. If ARCA makes any substantive amendments to the Code of Business Conduct and Ethics or grants any waiver from a provision of the Code of Business Conduct and Ethics to any executive officer or director, ARCA will promptly disclose the nature of the amendment or waiver on its website and file any current report on Form 8-K required by applicable law or Nasdaq listing standards.

Insider Trading Policy

ARCA has adopted an Insider Trading Policy that governs the purchase, sale and/or other dispositions of its securities by its directors, officers and employees, as well as their immediate family members and entities owned or controlled by them, and that is designed to promote compliance with insider trading laws, rules and regulations.

Information Regarding Committees of the Board of Directors

ARCA's board of directors has three standing committees: The Audit Committee, the Compensation Committee, and the Nominating and Corporate Governance Committee. The following table provides membership and meeting information for the fiscal year ended December 31, 2023, for each of the committees of the board of directors:

Name	Audit	Compensation	Nominating and Corporate Governance
Dr. Michael R. Bristow			
Dr. Linda Grais	X	X*	
Dr. Raymond L. Woosley		X	X*
Mr. Robert E. Conway	X*	X	
Mr. Dan J. Mitchell	X		X
Dr. Anders Hove			X
Total meetings in fiscal 2023	6	2	1

* Committee Chairperson.

In 2022, the board of directors established a Special Committee to evaluate strategic options for maximizing stockholder value. The Special Committee includes ARCA board Chairman Robert E. Conway (chair), and board members Linda Grais, M.D., Anders Hove, M.D and James Flynn (joined the Special Committee in April 2024). Jacob Ma-Weaver served as a member of the Special Committee from June 2022 to April 2024.

Below is a description of each committee of the board of directors. Each of the committees has authority to engage legal counsel or other experts or consultants, as it deems appropriate to carry out its responsibilities. The board of directors has determined that each member of each committee meets the applicable Nasdaq rules and regulations regarding "independence" and that each member is free of any relationship that would impair his or her individual exercise of independent judgment regarding the Company.

Audit Committee

The Audit Committee of ARCA's board of directors of ARCA (the "Audit Committee") was established by the board of directors in accordance with Section 3(a)(58)(A) of the Exchange Act, to oversee ARCA's corporate accounting and financial reporting processes and audits of its financial statements. For this purpose, the Audit Committee performs several functions. The Audit Committee evaluates the performance of and assesses the qualifications of the independent registered public accounting firm; determines and approves the engagement of the independent registered public accounting firm; determines whether to retain or terminate the existing independent registered public accounting firm or to appoint and engage a new independent registered public accounting firm; reviews and approves the retention of the independent registered public accounting firm to perform any proposed permissible non-audit services; monitors the rotation of partners of the independent registered public accounting firm on ARCA's audit engagement team as required by law; reviews and approves or rejects transactions between the company and any related persons; confers with management and the independent registered public accounting firm regarding the effectiveness of internal controls over financial reporting; establishes procedures, as required under applicable law, for the receipt, retention and treatment of complaints received by ARCA regarding accounting, internal accounting controls or auditing matters and the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters; and meets to review ARCA's annual audited financial statements and quarterly financial statements with management and the independent registered public accounting firm, including a review of ARCA's disclosures under the "Management's Discussion and Analysis of Financial Condition and Results of Operations" discussion in its Annual Reports on Form 10-K and Quarterly Reports on Form 10-Q. The Audit Committee is currently composed of three directors: Mr. Conway (chair), Mr. Flynn and Dr. Grais. The Audit Committee met six times during the 2023 fiscal year. The board of directors has adopted a written charter of the Audit Committee that is available to stockholders on ARCA's website at *www.arcabio.com*.

ARCA's board of directors reviews the Nasdaq listing standards definition of independence for audit committee members on an annual basis and has determined that all members of the Audit Committee are independent (as independence is currently defined in Rule 5605(c)(2)(A)(i) and (ii) of the Nasdaq listing standards). The board of directors has also determined that Mr. Conway qualifies as an "audit committee financial expert," as defined in applicable SEC rules. The board of directors made a qualitative assessment of Mr. Conway's level of knowledge and experience based on several factors, including his prior experience, business acumen and independence.

Compensation Committee

The Compensation Committee is currently composed of three directors: Mr. Conway, Dr. Grais (chair) and Dr. Hove. All members of the Compensation Committee are independent, as independence is currently defined in Rule 5605(a)(2) of the Nasdaq listing standards. The Compensation Committee met two times during the 2023 fiscal year. The Compensation Committee has adopted a written charter that is available to stockholders on ARCA's website at *www.arcabio.com*.

The Compensation Committee of ARCA's board of directors acts on behalf of the board of directors to review, adopt and oversee ARCA's compensation strategy, policies, plans and programs, including:

- overseeing succession planning for senior management of ARCA, including a review of the performance and advancement potential of current and future senior management and succession plans for each and recommending, as appropriate, the retention of potential succession candidates;
- assessing the overall compensation structure of ARCA and evaluating and recommending changes to ARCA's compensation philosophies and strategies;
- reviewing and approving performance-based compensation plans or programs, including establishing goals and targets, applicable to the Chief Executive Officer and other members of the management team;
- administering, reviewing, and approving all executive compensation programs or plans, and all of ARCA's incentive compensation and stock plans and awards thereunder of ARCA, including amendments to the programs, plans or awards made thereunder; and
- preparing and approving the report of the Compensation Committee to be included as part of ARCA's annual meeting proxy statement, to the extent required.

Compensation Committee Processes and Procedures

Typically, the Compensation Committee meets, as it deems appropriate. The agenda for each meeting is usually developed by the Chair of the Compensation Committee. However, from time to time, various members of management and other employees as well as outside advisors or consultants may be invited by the Compensation Committee to make presentations, to provide financial or other background information or advice or to otherwise participate in Compensation Committee meetings. The Chief Executive Officer may not participate in, or be present during, any deliberations or determinations of the Compensation Committee regarding his compensation or individual performance objectives. The Compensation Committee has the sole authority to retain compensation consultants to assist in its evaluation of executive and director compensation, including the authority to approve the consultant's reasonable fees and other retention terms. In general, the Compensation Committee has set executive compensation to be in line with peer companies identified by the Compensation Committee and to incentivize ARCA's executive officers in achieving ARCA's short- and long-term corporate goals.

In 2020, the Compensation and Nominating and Corporate Governance Committees of ARCA reviewed ARCA's current employee and director compensation, including ARCA's 2013 Equity Incentive Plan. As part of this review, the Committees considered certain changes to the ARCA 2013 Equity Incentive Plan that were included in the 2020 ARCA Equity Incentive Plan. Both Committees recommended approval of the 2020 ARCA Equity Incentive Plan, and the Plan was subsequently approved by the board of directors and ARCA's stockholders on December 10, 2020.

The current compensation for the ARCA named executive officers was set by the Compensation Committee and the board of directors in 2020. On December 21, 2020, the Compensation Committee approved the following base salary compensation and target bonus percentages for the ARCA named executive officers and principal financial officer for the 2021 fiscal year:

- Michael R. Bristow, former President and Chief Executive Officer, $345,000 base salary and target bonus of 50% of base salary; and
- Thomas A. Keuer, Chief Operating Officer, $340,000 base salary and target bonus of 40% of base salary.

On May 3, 2021, the Compensation Committee approved a $270,000 base salary and target bonus of 35% of base salary for C. Jeffrey Dekker, Chief Financial Officer, ARCA's principal financial officer hired in May 2021.

Historically, the Compensation Committee has made most of the significant adjustments to annual compensation, determined bonus and equity awards and established new performance objectives at one or more meetings held during the first quarter of the year. However, the Compensation Committee also considers matters related to individual compensation, such as compensation for new executive hires, as well as high-level strategic issues, such as the efficacy of ARCA's compensation strategy, potential modifications to that strategy and new trends, plans or approaches to compensation, at various meetings throughout the year. Generally, the Compensation Committee's process comprises two related elements: the determination of compensation levels and the establishment of performance objectives for the current year.

The Compensation Committee reviews and approves the compensation of the President and the other executive officers of ARCA, including annual base salaries, annual and long-term incentive or bonus awards, employment agreements, and severance and change in control agreements/provisions, in each case as, when and if appropriate, and any special or supplemental benefits. For executives other than the President, the Compensation Committee solicits and considers evaluations and recommendations submitted to the Compensation Committee by the President. The Compensation Committee evaluates the performance of the President in light of Company and individual goals and objectives, and makes appropriate recommendations for improving performance. In performing the evaluation, the Chair of the Compensation Committee may solicit comments from the other non-employee members of the board of directors and lead the board of directors in an overall review of the President's performance in an executive session of non-employee members of the board of directors. If the compensation for the President or any other executive officer is governed by an employment agreement, the Compensation Committee approves such employment agreement and any amendments thereto.

For all executives as part of its deliberations, the Compensation Committee may review and consider, as appropriate, materials such as financial reports and projections, operational data, tax and accounting information, tally sheets that set forth the total compensation that may become payable to executives in various hypothetical scenarios, executive and director stock ownership information, company stock performance data, analyses of historical executive compensation levels and current Company-wide compensation levels.

The Compensation Committee also considers the results of any "say-on-pay" vote of ARCA's stockholders with regard to the compensation of ARCA's executive officers when making compensation decisions. At the 2023 Annual Meeting, ARCA's stockholders approved, on an advisory basis, the compensation of ARCA named executive officers as described in the proxy statement for such annual meeting, with over 81% of stockholder votes cast in favor of ARCA's "say-on-pay" resolution. The Compensation Committee believes that this advisory vote supports that ARCA's current compensation practices are aligned with the best interests of stockholders and anticipates taking into account the results of the advisory vote, and any future advisory votes, when making compensation decisions in the future.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee of the board of directors of ARCA (the "Nominating and Corporate Governance Committee") is responsible for identifying, reviewing and evaluating candidates to serve as directors of ARCA (consistent with criteria approved by the board of directors), reviewing and evaluating incumbent directors, recommending to the board of directors candidates for election to the board of directors , making recommendations to the board of directors regarding compensation for service on the board of directors and the committees thereof, making recommendations to the board of directors regarding the membership of the

committees of the board of directors, assessing the performance of the board of directors and developing a set of corporate governance principles for ARCA. The Nominating and Corporate Governance Committee is currently composed of three directors: Dr. Hove (chair), Mr. Conway and Dr. Grais. All members of the Nominating and Corporate Governance Committee in 2023 were independent (as independence is currently defined in Rule 5605(a)(2) of the Nasdaq listing standards). The Nominating and Corporate Governance Committee met once during the 2023 fiscal year. The Nominating and Corporate Governance Committee has adopted a written charter that is available to stockholders on ARCA's website at *www.arcabio.com*.

The Nominating and Corporate Governance Committee periodically reviews the compensation of non-employee Directors for service on the board of directors and committees thereof. In 2015, the Nominating and Corporate Governance Committee began a review of its Director compensation levels considering general market conditions in the life science industry, and in comparison to other clinical stage biopharmaceutical companies, and in early 2016, the Committee recommended, and the board of directors approved, revised compensation for non-employee Directors, discussed in "ARCA Director Compensation" below. Since adoption of this policy, the Nominating and Corporate Governance Committee has reviewed Director compensation on an annual basis.

In 2020, the Nominating and Corporate Governance Committee (together with the Compensation Committee) engaged a consultant to evaluate the current compensation of ARCA's non-employee directors and make recommendations to the Nominating and Corporate Governance Committee. The changes made as a result of this evaluation are discussed in "ARCA Director Compensation" below.

The board of directors has adopted a process for identifying and evaluating director nominees, including stockholder nominees. Before recommending an individual to the board of directors for membership on the board of directors, the Nominating and Corporate Governance Committee canvasses its members and ARCA's management team for potential candidates for the board of directors. The Nominating and Corporate Governance Committee also uses its network of contacts to identify potential candidates and, if it deems appropriate, may also engage a professional search firm. The Nominating and Corporate Governance Committee will consider stockholders' recommendations for nominees to serve as director if notice is timely received by the Secretary of ARCA. Candidates nominated by stockholders will be evaluated in the same manner as other candidates. The Nominating and Corporate Governance Committee keeps the board of directors apprised of its discussions with potential nominees, and the names of potential nominees received from its current directors, management, and stockholders, if the stockholder notice of nomination is timely made.

Although the board of directors has not adopted a fixed set of minimum qualifications for candidates for membership on the board of directors, the Nominating and Corporate Governance Committee generally considers several factors in its evaluation of a potential member, such as the candidate's education, professional background and field of expertise including industry or academic experience in the pharmaceutical and biotechnology fields, experience in corporate governance and management, the reasonable availability of the potential member to devote time to the affairs of ARCA, as well as any other criteria deemed relevant by the board of directors or the Nominating and Corporate Governance Committee. However, the Nominating and Corporate Governance Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the board of directors, the operating requirements of ARCA and the long-term interests of stockholders. In conducting this assessment, the Nominating and Corporate Governance Committee typically considers diversity, age, skills and such other factors as it deems appropriate given the current needs of the board of directors and ARCA, to maintain a balance of knowledge, experience and capability. The Nominating and Corporate Governance Committee believes it is essential that board of directors members come from a variety of backgrounds and experiences.

In the case of incumbent directors whose terms of office are set to expire, the Nominating and Corporate Governance Committee reviews these directors' overall contributions to ARCA and the board of directors during their terms, including level of attendance, level of participation, quality of performance and contribution to the board of directors' responsibilities and actions, and any relationships and transactions that might impair the directors' independence. In the case of new director candidates, the Nominating and Corporate Governance Committee also determines whether the nominee is independent for Nasdaq and SEC purposes, which determination is based upon applicable Nasdaq listing standards, applicable SEC rules and regulations and the advice of counsel, if necessary. The Nominating and Corporate Governance Committee conducts any appropriate and necessary inquiries into the

backgrounds and qualifications of possible candidates after considering the function and needs of the board of directors. The Nominating and Corporate Governance Committee meets to discuss and consider the candidates' qualifications and then determines whether to recommend a nominee to the board of directors by majority vote.

Stockholders who wish to recommend individuals for consideration by the Nominating and Corporate Governance Committee to become nominees for election to the board of directors may do so by delivering a written recommendation to the Nominating and Corporate Governance Committee addressed to the Corporate Secretary, between 60 and 90 days before the one-year anniversary date of ARCA's last annual meeting of stockholders. Recommendations must include the full name of the proposed nominee, a description of the proposed nominee's business experience for at least the previous five years, complete biographical information, a description of the proposed nominee's qualifications as a director, and a representation that the recommending stockholder is a beneficial or record owner of ARCA's stock. Any such submission must be accompanied by the written consent of the proposed nominee to be named as a nominee and to serve as a director if elected. To date, the Nominating and Corporate Governance Committee has not rejected a timely director nominee from a stockholder.

In 2023, the Nominating and Corporate Governance Committee did not pay any fees to assist in the process of identifying or evaluating director candidates.

Anti-Hedging Prohibition

ARCA's employees, directors and consultants are prohibited from engaging in any hedging transactions of ARCA's securities, including through the use of financial instruments such as prepaid variable forwards, equity swaps, collars and exchange funds, as required by ARCA's insider trading policy.

Stockholder Communications with the Board of Directors

Stockholders who wish to communicate with ARCA's board of directors may do so by e-mail by using the following email address: *directors@arcabio.com*; or by mail by following the directions as set forth on ARCA's website at *www.arcabio.com*, under the section titled "Corporate Governance" and the subsection titled "Governance Documents". Communications sent in accordance with this process will be transmitted by ARCA to the appropriate board members.

Executive Compensation

The following table shows for the fiscal years ended December 31, 2023 and December 31, 2022, compensation awarded to, paid to, or earned by ARCA's principal executive officer and its two most highly compensated executive officers as of December 31, 2023, collectively, the ARCA named executive officers:

Summary Compensation Table

Name and Principal Position	Year	Salary ($)[1]	Bonus ($)[2]	Stock Awards ($)	All Other Compensation ($)[3]	Total ($)
Michael R. Bristow	2023	345,000	—	—	13,800	358,800
Former President and Chief Executive Officer[4]	2022	345,000	—	—	13,800	358,800
Thomas A. Keuer	2023	340,000	35,000	—	25,802	400,802
President and Chief Operating Officer	2022	340,000	—	88,400	20,593	448,993
C. Jeffrey Dekker	2023	270,000	35,000	—	18,072	323,072
Chief Financial Officer						

(1) The amounts reported under "Salary" in the above table represent the actual amounts paid during the calendar year. Because ARCA's actual pay dates do not always coincide with the first and last days of the year, these amounts may differ from the base salary amounts authorized by ARCA's board of directors.

(2) The amounts reported under "Bonus" in the above table represent retention bonuses paid to each of Thomas A. Keuer and C. Jeffrey Dekker in December 2023. These amounts were previously reported as "All Other Compensation" in ARCA's Annual Report on Form 10-K for the fiscal year ended December 31, 2023.

(3) Represents 401(k) Company match in the amount of $13,800 for Michael R. Bristow in each of 2023 and 2022, $15,000 and $13,600 for Thomas A. Keuer in 2023 and 2022, and $11,579 for C. Jeffrey Dekker in 2023, Health Savings Account contributions by ARCA in the amount of $850 for Thomas A. Keuer in 2022, and $3,960 for C. Jeffrey Dekker in 2023, group term life premiums in the amount of $9,602 and $4,989 for Thomas A. Keuer in 2023 and 2022, and $2,533 for C. Jeffrey Dekker in 2023, and cell phone reimbursements in the amount of $1,200 and $1,154 for Thomas A. Keuer in 2023 and 2022.

(4) Dr. Bristow and ARCA mutually agreed to conclude Dr. Bristow's employment effective April 3, 2024.

Narrative Disclosure to Summary Compensation Table

Employment Agreements or Arrangements

Michael R. Bristow, M.D., Ph.D. Dr. Bristow served as ARCA's President and Chief Executive Officer under an Employment and Retention Agreement dated as of June 4, 2008, as amended. Pursuant to such employment agreement, Dr. Bristow was permitted to continue his academic work for the University of Colorado Health Sciences Center and for the Cardiovascular Institute, so long as it did not interfere with his duties as President and Chief Executive Officer of ARCA.

In connection with Dr. Bristow's separation on April 3, 2024, ARCA and Dr. Bristow entered into a separation agreement (the "Separation Agreement") pursuant to which ARCA paid Dr. Bristow a lump sum amount equal to $370,000, less applicable tax withholding, which consisted of (i) 12 months of Dr. Bristow's base salary as of the last date of his employment and (ii) a $25,000 cash payment. The separation payments were conditioned on Dr. Bristow not revoking the Separation Agreement.

ARCA and Dr. Bristow also entered into a consulting agreement, effective April 3, 2024 (the "Consulting Agreement"), pursuant to which Dr. Bristow provides certain consulting services to ARCA through the earlier of (i) the completion of services under the Consulting Agreement, (ii) a termination in accordance with the terms of the Consulting Agreement, and (iii) a change of control of ARCA (as defined in ARCA's 2020 Equity Incentive Plan (the "2020 Plan")). During the consulting term, Dr. Bristow will continue to vest in his outstanding equity awards.

Thomas A. Keuer. Mr. Keuer serves as ARCA's President and Chief Operating Officer under an Amended and Restated Employment Agreement that was effective as of January 1, 2015.

On December 8, 2022, the Compensation Committee approved a retention bonus of $100,000 for Mr. Keuer, subject to continued employment with ARCA through the earlier of a change in control of ARCA or certain clinical development decisions. On November 29, 2023, the Compensation Committee approved the amendment of the retention bonus letter between ARCA and Mr. Keuer to (i) increase the aggregate amount of the retention bonus by 50%, to $150,000, and (ii) in order to assist with tax obligations associated with the vesting of certain ARCA restricted stock unit awards, provided that $35,000 of Mr. Keuer's retention bonus was paid on December 8, 2023. On April 20, 2024, the board of directors of ARCA approved the second amendment of the retention bonus letter between ARCA and Mr. Keuer to increase the aggregate amount of the retention bonus by 33.33% to $200,000. The remaining portion of the retention bonus with respect to Mr. Keuer, consisting of $165,000, will become payable consistent with the original terms of the retention bonus letter and the first amendment to the retention bonus letter.

If ARCA terminates Mr. Keuer's employment without "cause," or if Mr. Keuer terminates his employment with "good reason" (as these terms are defined in his employment agreement), ARCA has agreed to pay Mr. Keuer a severance payment equivalent to (i) (a) 12 months of his base salary, if such termination occurs on the same day as or within 13 months after a change of control of ARCA, or (b) six months of his base salary if such termination does not occur on the same day as or within 13 months after a change of control of ARCA, (ii) a pro rata portion of any bonus compensation under any employee bonus plan that has been approved by ARCA's board of directors payable to him for the fiscal year in which his employment terminated to be paid at the same time that such incentive bonus would have been paid had the termination not occurred, and (iii) reimbursement to cover out-of-pocket costs to continue group health insurance benefits under COBRA for (x) 12 months, if such termination occurs on the same day as or within 13 months after a change of control of ARCA, or (y) six months if such termination does not occur on the same day as or within 13 months after a change of control of ARCA, whether he elects or is eligible to receive COBRA (provided, in either event, that even if he does not elect or is not eligible to receive COBRA, he will receive the equivalent of such out-of-pocket expenses paid by him not to exceed the costs that the benefits would equal under COBRA if he were so eligible). In addition, ARCA may elect in its sole discretion, to pay additional severance equal to up to 12 months of base salary, which additional payment would extend the covenants and obligations under Mr. Keuer's Employee Intellectual Property, Confidentiality and Non-Compete Agreement for such additional period. The severance payment is conditioned on the execution by Mr. Keuer of a legal release in a form acceptable to ARCA. A termination for "cause" includes Mr. Keuer's willful misconduct, gross negligence, theft, fraud, or other illegal or dishonest conduct, any of which are considered to be materially harmful to ARCA; refusal, unwillingness, failure, or inability to perform his material job duties or habitual absenteeism; or violation of fiduciary duty, violation of any duty of loyalty, or material breach of any material term of his employment agreement or his Employee Intellectual Property, Confidentiality and Non-Compete Agreement, or any other agreement, with ARCA. "Good reason" includes a relocation by us of Mr. Keuer's normal work location greater than 30 miles; a decrease in current base salary by more than 15%, with certain exceptions; and ARCA's unilateral decision to significantly and detrimentally reduce Mr. Keuer's job responsibilities.

Effective as of April 3, 2024, ARCA's board of directors appointed Mr. Keuer to serve as ARCA's President and principal executive officer. Mr. Keuer will not receive any additional compensation in connection with his appointment as President and principal executive officer. Mr. Keuer's employment is expected to conclude upon closing of the Merger.

C. Jeffrey Dekker. Mr. Dekker serves as ARCA's Chief Financial Officer under an Employment Agreement that was effective as of May 10, 2021. Mr. Dekker has served as ARCA's Secretary since April 2023.

Under his employment agreement, Mr. Dekker is entitled to receive an annual base salary of $270,000, subject to annual increases if approved by ARCA's board of directors or Compensation Committee and is eligible to receive an annual target bonus of 35% of his base salary as determined by ARCA's board of directors or Compensation Committee in its sole discretion.

On December 8, 2022, the Compensation Committee approved a retention bonus of $100,000 for Mr. Dekker, subject to continued employment with ARCA through the earlier of a change in control of ARCA or certain clinical development decisions. On November 29, 2023, the Compensation Committee approved the amendment of the retention bonus letter between ARCA and Mr. Dekker to (i) increase the aggregate amount of the retention bonus by 50%, to $150,000, and (ii) in order to assist with tax obligations associated with the vesting of certain ARCA

restricted stock unit awards, provided that $35,000 of Mr. Dekker's retention bonus was paid on December 8, 2023. On April 20, 2024, the board of directors of ARCA approved the second amendment of the retention bonus letter between ARCA and Mr. Dekker to increase the aggregate amount of the retention bonus by 33.33% to $200,000. The remaining portion of the retention bonus with respect to Mr. Dekker, consisting of $165,000, will become payable consistent with the original terms of the retention bonus letter and the first amendment to the retention bonus letter.

If ARCA terminates Mr. Dekker's employment without "cause," or if Mr. Dekker terminates his employment with "good reason" (as these terms are defined in his employment agreement), ARCA has agreed to pay Mr. Dekker a severance payment equivalent to (i) (a) 12 months of his base salary, if such termination occurs on the same day as or within 13 months after a change of control of ARCA, or (b) six months of his base salary if such termination does not occur on the same day as or within 13 months after a change of control of ARCA, (ii) a pro rata portion of any bonus compensation under any employee bonus plan that has been approved by ARCA's board of directors payable to him for the fiscal year in which his employment terminated to be paid at the same time that such incentive bonus would have been paid had the termination not occurred, and (iii) reimbursement to cover out-of-pocket costs to continue group health insurance benefits under COBRA for (x) 12 months, if such termination occurs on the same day as or within 13 months after a change of control of ARCA, or (y) six months if such termination does not occur on the same day as or within 13 months after a change of control of ARCA, whether he elects or is eligible to receive COBRA (provided, in either event, that even if he does not elect or is not eligible to receive COBRA, he will receive the equivalent of such out-of-pocket expenses paid by him not to exceed the costs that the benefits would equal under COBRA if he were so eligible). In addition, ARCA may elect in its sole discretion, to pay additional severance equal to up to 12 months of base salary, which additional payment would extend the covenants and obligations under Mr. Dekker's Employee Intellectual Property, Confidentiality and Non-Compete Agreement for such additional period. The severance payment is conditioned on the execution by Mr. Dekker of a legal release in a form acceptable to ARCA. A termination for "cause" includes Mr. Dekker's willful misconduct, gross negligence, theft, fraud, or other illegal or dishonest conduct, any of which are considered to be materially harmful to ARCA; refusal, unwillingness, failure, or inability to perform his material job duties or habitual absenteeism; or violation of fiduciary duty, violation of any duty of loyalty, or material breach of any material term of his employment agreement or his Employee Intellectual Property, Confidentiality and Non-Compete Agreement, or any other agreement, with ARCA. "Good reason" includes a relocation by us of Mr. Dekker's normal work location greater than 30 miles; a decrease in current base salary by more than 15%, with certain exceptions; and ARCA's unilateral decision to significantly and detrimentally reduce Mr. Dekker's job responsibilities.

Outstanding Equity Awards at Fiscal Year End

The following table shows for the fiscal year ended December 31, 2023, certain information regarding outstanding equity awards at fiscal year-end for ARCA named executive officers.

	Option Awards			
Name	**Number of Securities Underlying Unexercised Options (#) Exercisable**	**Number of Securities Underlying Unexercised Options (#) Unexercisable**	**Option Exercise Price ($)**	**Option Expiration Date**
Michael R. Bristow, Former President and Chief Executive Officer	408	—	245.70	2/26/2024
	205	—	84.42	2/11/2025
	1,511	—	59.40	6/8/2026
	2,333	—	45.00	2/15/2027
	142,500	47,500[1][4]	4.27	12/21/2030
	63,334	31,666[2][4]	2.29	12/14/2031
Thomas A. Keuer, President and Chief Operating Officer	83	—	245.70	2/26/2024
	108	—	84.42	2/11/2025
	866	—	59.40	6/8/2026
	1,400	—	45.00	2/15/2027
	52,500	17,500[1][4]	4.27	12/21/2030
	23,334	11,666[2][4]	2.29	12/14/2031
C. Jeffrey Dekker, Secretary, Chief Financial Officer	35,521	19,479[3][4]	3.06	5/10/2031
	11,800	5,900[2][4]	2.29	12/14/2031

(1) Options vest in 48 monthly installments measured from December 21, 2020.

(2) Options vest in 36 monthly installments measured from December 14, 2021.

(3) Options vested 25% after one year, then in 36 monthly installments measured from May 10, 2021.

(4) In the event of a change in control of ARCA, 50% of the unvested shares subject to this award shall become fully and immediately vested upon the closing date of such change in control, provided, however, that on the earlier of (i) the one-year anniversary of the closing date or (ii) involuntary termination, any options that remain unvested on such earlier date shall become fully and immediately vested.

ARCA Director Compensation

The following table shows for the fiscal year ended December 31, 2023, certain information with respect to the compensation of all non-employee directors of ARCA:

Director Compensation[1]

Name	Fees Earned or Paid in Cash ($)	Option Awards ($)[2]	Nonqualified Deferred Compensation Earnings ($)	All Other Compensation ($)	Total ($)
Linda Grais, M.D.[3]	162,500	—	—	—	162,500
Raymond L. Woosley, M.D.[4][10]	55,000	—	—	—	55,000
Robert E. Conway[5]	195,000	—	—	—	195,000
Dan J. Mitchell[6][10]	52,500	—	—	—	52,500
Anders Hove[7]	150,000	—	—	—	150,000
Jacob Ma-Weaver[8]	130,000	—	—	—	130,000
James Flynn[9]	40,000	—	—	—	40,000

(1) Dr. Bristow, ARCA's former President and Chief Executive Officer, was also a director during the year ended December 31, 2023, but did not receive any additional compensation for his service as a director. Dr. Bristow's compensation as an executive officer is set forth above under "Executive Compensation — Summary Compensation Table."

(2) The amounts reported under "Option Awards" in the above table reflect the grant date fair value of these awards as determined in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, Compensation — Stock Compensation, excluding the effects of estimated forfeitures. The value of stock option awards was estimated using the Black-Scholes option-pricing model. The valuation assumptions used in the valuation of option grants may be found in Note 8 to ARCA's financial statements included in this annual report on Form 10-K for the year ended December 31, 2023.

(3) The aggregate number of shares issuable upon exercise of option awards outstanding at December 31, 2023, for Dr. Grais was 19,458, all of which were fully vested. Includes $52,500 for Special Committee compensation for 2022 approved and paid in 2023, as discussed below and $52,500 for 2023 approved and paid in 2024.

(4) The aggregate number of shares issuable upon exercise of option awards outstanding at December 31, 2023, for Dr. Woosley was 19,458, all of which were fully vested.

(5) The aggregate number of shares issuable upon exercise of option awards outstanding at December 31, 2023, for Mr. Conway, Chairman of ARCA's board of directors, was 19,458, all of which were fully vested. Includes $52,500 for Special Committee compensation for 2022 approved and paid in 2023, as discussed below and $52,500 for 2023 approved and paid in 2024.

(6) The aggregate number of shares issuable upon exercise of option awards outstanding at December 31, 2023, for Mr. Mitchell was 19,577, all of which were fully vested.

(7) The aggregate number of shares issuable upon exercise of option awards outstanding at December 31, 2023, for Dr. Hove was 18,999, all of which were fully vested. Includes $52,500 for Special Committee compensation for 2022 approved and paid in 2023, as discussed below and $52,500 for 2023 approved and paid in 2024.

(8) The aggregate number of shares issuable upon exercise of option awards outstanding at December 31, 2023, for Mr. Ma-Weaver was 18,000, of which 12,000 shares were fully vested. Includes $37,500 for Special Committee compensation for 2022 approved and paid in 2023, as discussed below and $52,500 for 2023 approved and paid in 2024.

(9) The aggregate number of shares issuable upon exercise of option awards outstanding at December 31, 2023, for Mr. Flynn was 12,000, of which 4,000 shares were vested.

(10) These directors resigned from ARCA's board of directors effective February 2, 2024.

In 2021, ARCA revised its compensation plan for non-employee directors to provide that non-employee directors will be compensated for their service on ARCA's board of directors, as follows:

- Each non-employee director will receive an annual retainer fee of $40,000;
- As additional compensation for their services, each non-employee director will receive (i), upon joining ARCA's board of directors, an initial option grant to purchase 12,000 shares of ARCA's Common Stock under the 2020 Plan, (ii), in 2021 the members of the board of directors received a one-time retention option grant to purchase 12,000 shares of ARCA's Common Stock under the 2020 Plan and (iii), on an annual basis as of the date of ARCA's annual stockholder meeting, an annual option grant to purchase 6,000 shares of ARCA's Common Stock under the 2020 Plan; provided that such non-employee director

has served on ARCA's board of directors for at least six months prior to the date of grant (unless such six-month period is modified by recommendation of the Nominating and Corporate Governance Committee and approved by the Compensation Committee);

- The Chairman of ARCA's board of directors will receive an additional annual retainer fee of $30,000;
- ARCA's Audit Committee chair will receive an additional annual retainer fee of $15,000;
- The chairs of ARCA's Compensation Committee and Nominating and Corporate Governance Committee will each receive an additional annual retainer fee of $10,000;
- Each non-chair member of ARCA's Audit Committee will receive an additional annual retainer fee of $7,500; and
- Each non-chair member of ARCA's Compensation Committee and Nominating and Corporate Governance Committees will receive an additional annual retainer fee of $5,000.

On January 30, 2024, ARCA approved paying compensation to its existing non-employee directors, pursuant to ARCA's Director Compensation Policy, by granting to Dr. Linda Grais, Dr. Anders Hove, Mr. Robert Conway, Mr. Daniel Mitchell, Dr. Raymond Woosley, Mr. James Flynn and Mr. Jacob Ma-Weaver options to purchase 6,000 shares of common stock at an exercise price of $1.64 per share, the closing price of ARCA's common stock on January 30, 2024. The options are subject to the terms and conditions of the Plan and ARCA's standard forms of Stock Option Agreement and Option Grant Notice for the Plan. The options vest in 12 equal monthly installments beginning on January 30, 2024, assuming Dr. Grais', Dr. Hove's, Mr. Conway's, Mr. Mitchell's, Dr. Woosley's, Mr. Flynn's and Mr. Ma-Weaver's continued service on the Board for such periods.

In 2022, ARCA's board of directors established a Special Committee to evaluate strategic options for maximizing stockholder value. The Special Committee includes ARCA board Chairman Robert E. Conway (chair), and board members Linda Grais, M.D., Anders Hove, M.D. and Jacob Ma-Weaver. In December 2023, based on the recommendation of the Nominating and Corporate Governance Committee, the board determined that each member of the Special Committee will be paid $7,500 per month for each month of substantive service on the Special Committee. In December 2023, payments for 2022 service were made to the members of the Special Committee of $52,500 to each of Robert E. Conway, Linda Grais, M.D., Anders Hove, M.D. and $37,500 to Jacob Ma-Weaver (joined the Committee in June 2022). Payments for 2023 service were paid in 2024 to the members of the Special Committee consisting of $52,500 to each of Robert E. Conway, Linda Grais, M.D., Anders Hove, M.D. and Jacob Ma-Weaver. Payments for 2024 service through April 2024 were paid in 2024 to the members of the Special Committee consisting of $30,000 to each of Robert E. Conway, Linda Grais, M.D., Anders Hove, M.D. and Jacob Ma-Weaver.

ARCA EQUITY COMPENSATION PLAN INFORMATION

The following table sets forth information as of December 31, 2023, for all of ARCA's equity compensation plans:

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options or Upon Vesting of Restricted Stock Units (a)	Weighted Average Exercise Price of Outstanding Options ($) (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a)) (c)
Equity compensation plans approved by security holders	616,707	$ 4.76	459,718
Equity compensation plans not approved by security holders	—	—	—
Total	616,707	$ 4.76	459,718

On December 10, 2020, ARCA stockholders approved the ARCA biopharma, Inc. 2020 Equity Incentive Plan (the "2020 Plan") at ARCA's 2020 annual meeting of stockholders. The 2020 Plan is the successor to the Amended and Restated ARCA biopharma, Inc. 2013 Equity Incentive Plan (the "2013 Plan"). A description of the 2020 Plan is set forth in Note 8 to ARCA's financial statements included in this proxy statement/prospectus. The 2020 Plan only has options outstanding as of December 31, 2023; no warrants or rights are outstanding under this plan; therefore, all values in the above table relate solely to the outstanding options.

On September 17, 2013, ARCA stockholders approved the 2013 Plan at ARCA's 2013 annual meeting of stockholders. On June 9, 2016, ARCA stockholders approved an amendment to the 2013 Plan (as amended, the "Amended 2013 Plan"). A description of the 2013 Plan and the Amended 2013 Plan is set forth in Note 8 to ARCA's financial statements included in this proxy statement/prospectus. The Amended 2013 Plan only has options outstanding as of December 31, 2023; no warrants or rights are outstanding under this plan; therefore, all values in the above table relate solely to the outstanding options.

Compensation Risks

ARCA believes its approach to goal setting, setting of targets with payouts at multiple levels of performance, and evaluation of performance results assist in mitigating excessive risk-taking that could harm the value or reward poor judgment by its executives. ARCA believes several features of its programs reflect sound risk management practices. ARCA believes it has allocated compensation among base salary and short and long-term compensation target opportunities in such a way as to not encourage excessive risk-taking. The multi-year vesting of equity awards properly accounts for the time horizon of risk. Furthermore, ARCA's Compensation Committee assesses and monitors whether any of ARCA's compensation policies and programs has the potential to encourage excessive risk-taking on an annual basis.

ORUKA EXECUTIVE COMPENSATION

Following completion of the Merger, certain executive officers of Oruka will become executive officers of the combined company. Because Oruka was not formed until 2024, there were no executive officers during 2023. This section sets forth the current compensatory arrangements for the following executive officers of Oruka as of March 31, 2024, each of whom is expected to become an executive officer of the combined company.

Name	Position	Appointment Date
Lawrence Klein	President and Chief Executive Officer	February 26, 2024
Paul Quinlan	General Counsel and Secretary	April 30, 2024
Joana Goncalves	Chief Medical Officer	April 18, 2024
Arjun Agarwal	Senior Vice President, Finance and Treasurer	March 22, 2024

Employment Agreements

Employment Agreement with Dr. Klein

Oruka and Dr. Klein are party to an employment letter agreement, pursuant to which Dr. Klein receives an annual base salary of $600,000 and a target annual bonus of 50% of his base salary, pro-rated for 2024. In connection with his entry into his employment agreement, Dr. Klein purchased 1,491,646 shares of Oruka common stock at the fair market value on the purchase date, which will vest as to 25% on February 26, 2025 and in equal monthly installments for the 36 months thereafter. The employment agreement also provides that Dr. Klein will receive periodic grants of stock options, subject to approval by Oruka's board of directors, sufficient to maintain Dr. Klein's ownership at approximately 5% on a fully-diluted basis (the "Target Ownership Percentage") until Oruka has raised an aggregate of $200 million in financing (the "Covered Limit"). As a result, Oruka expects to issue Dr. Klein warrants of Oruka in full satisfaction of such obligation to maintain his ownership in Oruka at the Target Ownership Percentage concurrently with the closing of the Oruka pre-closing financing up to the Covered Limit. Such warrants will vest 25% on April 3, 2025 and in equal monthly installments thereafter over 36 months.

In the event of Dr. Klein's termination by Oruka without cause prior to (or more than 12 months following) a change in control of Oruka, Dr. Klein is eligible for the following severance benefits, subject to his execution and non-revocation of a release of claims: (i) severance payments equal to 12 months of his base salary, (ii) any earned but unpaid bonus for the year preceding the date of termination, (iii) accelerated vesting of 30% of the unvested portion of any outstanding time-based equity awards, and (iv) Oruka-subsidized continuation coverage under Oruka's group health plans for up to 12 months. If Dr. Klein is terminated by Oruka without cause or by Dr. Klein for good reason on or within 12 months following a change in control of Oruka, Dr. Klein will receive the foregoing benefits, as well as full acceleration of all outstanding time-based equity awards.

Employment Agreements with Other Executive Officers

Oruka and Mr. Quinlan are party to an employment letter agreement, pursuant to which Mr. Quinlan receives an annual base salary of $460,000 and a target annual bonus of 40% of his base salary, pro-rated for 2024. Mr. Quinlan's employment agreement also provided for an initial grant of stock options to purchase 400,000 shares of Oruka common stock, which vest as to 25% on the first anniversary of his start date and in equal monthly installments for the 36 months thereafter.

Oruka and Dr. Goncalves are party to an employment letter agreement, pursuant to which Dr. Goncalves receives an annual base salary of $460,000 and a target annual bonus of 40% of her base salary, pro-rated for 2024. In connection with her appointment, Dr. Goncalves was granted stock options to purchase 400,000 shares of Oruka common stock, which vest as to 25% on the first anniversary of her start date and in equal monthly installments for the 36 months thereafter. The employment agreement also provided for a $100,000 signing bonus, which is subject to pro-rata repayment if Dr. Goncalves is terminated for cause or resigns within one year following her start date.

Oruka and Mr. Agarwal are party to an employment letter agreement, pursuant to which Mr. Agarwal receives an annual base salary of $360,000 and a target annual bonus of 35% of his base salary. Mr. Agarwal's employment agreement also provided for an initial grant of stock options to purchase 225,000 shares of Oruka common stock, which vest as to 25% on the first anniversary of his start date and in equal monthly installments for the 36 months thereafter.

The employment agreements with Messrs. Quinlan and Agarwal and Dr. Goncalves provide for the following severance benefits upon their termination by Oruka without cause prior to (or more than 12 months following) a change in control of Oruka, subject to the executive's execution and non-revocation of a release of claims: (i) severance payments equal to six months of the executive's base salary, (ii) any earned but unpaid bonus for the year preceding the date of termination and (iii) Oruka-subsidized continuation coverage under Oruka's group health plans for up to six months. If the executive is terminated by Oruka without cause or by the executive for good reason on or within 12 months following a change in control of Oruka, the executive will receive the foregoing benefits, as well as full acceleration of all outstanding time-based equity awards.

Summary Description of Oruka's 2024 Equity Incentive Plan

Oruka maintains the 2024 Equity Incentive Plan, the purpose of which is to advance the interests of Oruka's stockholders by enhancing Oruka's ability to attract, retain and motivate persons who are expected to make important contributions to Oruka and by providing such persons with equity ownership opportunities and performance-based incentives that are intended to better align the interests of such persons with those of Oruka's stockholders. The 2024 Equity Incentive Plan provides for the issuance of up to 872,912 shares of Oruka common stock, which may be granted as stock options, restricted stock, restricted stock units and other stock-based awards to eligible employees, officers, directors, consultants and advisors of Oruka on such terms and conditions as approved by Oruka's board of directors or any committee appointed by Oruka's board of directors to administer the 2024 Equity Incentive Plan. No grants will be made under the 2024 Equity Incentive Plan following consummation of the Merger.

ORUKA DIRECTOR COMPENSATION

Because Oruka was not formed until 2024, there were no directors during 2023. In connection with his appointment as a member of Oruka's board of directors, Dr. Kulkarni entered into a letter agreement, pursuant to which he received: (i) stock options to purchase 250,000 shares of Oruka common stock, which vest 25% on the first anniversary of his appointment date and in equal monthly installments for the 36 months thereafter; and (ii) stock options to purchase 100,000 shares of Oruka common stock, which vest upon the first anniversary of the date Dr. Kulkarni is appointed Chairman of Oruka's board of directors and will be forfeited if Dr. Kulkarni is not appointed Chairman of Oruka's board of directors prior to March 22, 2025. In connection with her appointment as a member of Oruka's board of directors, Ms. Ball entered into a letter agreement, pursuant to which she received stock options to purchase 125,000 shares of Oruka common stock, which vest 25% on the first anniversary of her appointment date and in equal monthly installments for the 36 months thereafter. In connection with his appointment as a member of Oruka's board of directors, Mr. Dambkowski received stock options to purchase 125,000 shares of Oruka common stock, which vest 25% on the first anniversary of his appointment date and in equal monthly installments for the 36 months thereafter.

In anticipation of his service on the Oruka board of directors, Dr. Turtle purchased 149,164 shares of Oruka common stock at the fair market value on the purchase date. The purchased shares are subject to vesting as to 25% on the first anniversary of his appointment date and in equal monthly installments for the 36 months thereafter.

It is expected that Oruka will implement cash retainers for all non-employee directors, including an annual cash retainer.

MATTERS BEING SUBMITTED TO A VOTE OF ARCA STOCKHOLDERS

PROPOSAL NO. 1 — THE NASDAQ STOCK ISSUANCE PROPOSAL

General

At the ARCA special meeting, ARCA will ask its stockholders to approve (i) the issuance of shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, to the stockholders of Oruka pursuant to the Merger Agreement, which shares of ARCA common stock will represent more than 20% of the shares of ARCA common stock outstanding immediately prior to the First Merger and (ii) the change of control of ARCA resulting from the First Merger, pursuant to Nasdaq Listing Rules 5635(a) and 5635(b), respectively.

Immediately after the First Merger, ARCA securityholders as of immediately prior to the First Merger are expected to own approximately 2.39% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis), and former holders of Oruka securities are expected to own approximately 97.61% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis), subject to certain assumptions, including, but not limited to, ARCA's net cash as of closing being equal to $5.0 million. Under certain circumstances further described in the Merger Agreement, the ownership percentages may be adjusted up or down, including if ARCA's net cash as of closing is lower than $5.0 million. ARCA management currently anticipates ARCA's net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, and the currently estimated ownership percentages reflect this projection.

ARCA will assume outstanding and unexercised options and warrants to purchase shares of Oruka common stock, and such securities will be converted into options and warrants, as applicable, to purchase shares of ARCA common stock, subject to certain adjustments.

In addition, prior to the closing of the First Merger, ARCA expects to declare a cash dividend to the pre-First Merger ARCA stockholders equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash (as determined pursuant to the Merger Agreement) will exceed $5.0 million.

The terms of, reasons for and other aspects of the Merger Agreement and the Merger are described in detail in the section of this proxy statement/prospectus titled "*The Merger Agreement*." A copy of the Merger Agreement is attached as *Annex A* to this proxy statement/prospectus.

Reason for the Proposal

Under Nasdaq Listing Rule 5635(a)(1), a company listed on Nasdaq is required to obtain stockholder approval prior to the issuance of common stock, among other things, in connection with the acquisition of another company's stock, if the number of shares of common stock to be issued is in excess of 20% of the number of shares of common stock then outstanding. The potential issuance of the shares of ARCA common stock in the Merger exceeds the 20% under the Nasdaq Listing Rules and is expected to represent approximately 97.61% of ARCA common stock on a fully-diluted basis immediately following the Merger. Accordingly, in order to ensure compliance with Nasdaq Listing Rule 5635(a)(1), ARCA must obtain the approval of ARCA stockholders for the issuance of these shares of common stock in the Merger.

Under Nasdaq Listing Rule 5635(b), a company listed on Nasdaq is required to obtain stockholder approval prior to an issuance of stock that will result in a "change of control" of the listed company. It is expected that Nasdaq will determine that the Merger constitutes a "change of control" of the listed company. Accordingly, in order to ensure compliance with Nasdaq Listing Rule 5635(b), ARCA must obtain the approval of ARCA stockholders of the change of control resulting from the Merger.

Required Vote

The affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present in person or represented by proxy at the ARCA special meeting is required to approve the Nasdaq Stock Issuance Proposal. Abstentions will have the same effect as votes "**AGAINST**" the Nasdaq Stock Issuance Proposal and broker non-votes, if any, will have no effect on the Nasdaq Stock Issuance Proposal.

The Merger is conditioned upon the approval of the Nasdaq Stock Issuance Proposal. Notwithstanding the approval of the Nasdaq Stock Issuance Proposal, if the Merger is not consummated for any reason, the actions contemplated by the Nasdaq Stock Issuance Proposal will not be effected.

The Nasdaq Stock Issuance Proposal is conditioned on the approval of the Authorized Share Increase Proposal. Notwithstanding the approval of the Nasdaq Stock Issuance Proposal, if the Authorized Share Increase Proposal is not approved, the actions contemplated by the Nasdaq Stock Issuance Proposal will not be effected and the Merger will not be consummated.

Certain ARCA stockholders have agreed to vote any shares of ARCA common stock owned by them in favor of the Nasdaq Stock Issuance Proposal. See "*Agreements Related to the Merger — Support Agreements*" beginning on page 153 of this proxy statement/prospectus for more information.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the approval of the Nasdaq Stock Issuance Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE NASDAQ STOCK ISSUANCE PROPOSAL.

PROPOSAL NO. 2 — THE AUTHORIZED SHARE INCREASE PROPOSAL

General

At the ARCA special meeting, ARCA will ask its stockholders to approve an amendment to the ARCA Charter to increase the number of authorized shares of ARCA common stock (the "ARCA Share Increase Amendment"). On July 20, 2024, ARCA's board of directors approved a proposal to amend the ARCA Charter to increase the number of authorized shares of ARCA common stock from 100,000,000 shares to 545,000,000, which would also have the effect of increasing the total number of authorized shares from 105,000,000, including ARCA preferred stock, to 550,000,000 (the "ARCA Share Increase"), in the form attached as *Annex G* to this proxy statement/prospectus. On the Record Date, there were 14,507,143 shares of ARCA common stock issued and outstanding, and 1,070,425 shares of ARCA common stock reserved for issuance. Accordingly, approximately 84,422,432 shares of the total number of ARCA common stock currently authorized remain available for issuance or may be reserved for issuance.

Form of the ARCA Share Increase Amendment

The ARCA Share Increase Amendment would amend and restate the first paragraph of Article IV of the ARCA Charter in its entirety as follows:

"The total number of shares of all classes of stock this Corporation shall have authority to issue is 550,000,000, consisting of 545,000,000 shares of Common Stock, par value $0.001 per share, and 5,000,000 shares of Preferred Stock, par value $0.001 per share. The Preferred Stock may be issued from time to time, in one or more series, each series to be appropriately designated by a distinguishing letter or title, prior to the issue of any shares thereof."

Background and Reasons for the ARCA Share Increase Amendment

The ARCA Charter currently authorizes the issuance of up to 100,000,000 shares of ARCA common stock and 5,000,000 shares of preferred stock. As of the close of business on the Record Date, there were 14,507,143 shares of ARCA common stock issued and outstanding, and 1,070,425 shares of ARCA common stock reserved for issuance. Accordingly, 84,422,432 shares of the total number of ARCA common stock currently authorized remain available for issuance or may be reserved for issuance.

As described in greater detail in the section of this proxy statement/prospectus titled "*The Merger Agreement*," pursuant to the Merger Agreement, ARCA will be required to issue shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, to Oruka stockholders and to assume Oruka's 2024 Equity Incentive Plan and outstanding options and warrants to purchase Oruka common stock.

The number of shares of ARCA common stock currently authorized and unissued and not reserved for issuance is not sufficient for (i) the issuance of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, pursuant to the Merger Agreement and (ii) the assumption of Oruka's 2024 Equity Incentive Plan and outstanding options and warrants to purchase Oruka common stock. In addition, there will not be sufficient shares of ARCA common stock available for issuance in connection with possible future acquisitions, equity and equity-based financings, possible future awards under employee benefit plans and other corporate purposes that ARCA's board of directors may determine to be desirable. Therefore, ARCA's board of directors has determined that the ARCA Share Increase Amendment is in the best interests of ARCA and its stockholders.

If the ARCA Share Increase Amendment is approved by stockholders, upon its effectiveness, and without giving effect to the proposed reverse stock split described in Proposal No. 3 of this proxy statement/prospectus, ARCA will have a total of 545,000,000 authorized shares of ARCA common stock, with 14,507,143 shares of ARCA common stock issued and outstanding (as of the Record Date), and 1,070,425 shares reserved for issuance (as of the Record Date), leaving a balance of 529,422,432 shares of ARCA common stock authorized and unissued and not reserved for any specific purpose. Such outstanding share amounts will be correspondingly adjusted to the extent the proposed reverse stock split is effected prior to effectiveness of the ARCA Share Increase Amendment, but the reverse stock split will not change the number of authorized shares of common or preferred stock. The ARCA Share Increase Amendment will have no effect on the authorized shares of ARCA Preferred Stock.

Except for (i) the issuance of shares of ARCA common stock, including shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock, and (ii) the issuance of shares of ARCA common stock that may result from the assumption of Oruka's 2024 Equity Incentive Plan and outstanding options and warrants to purchase Oruka common stock, each pursuant to the terms of the Merger Agreement, ARCA does not currently have any plans, proposals or arrangement to issue any of its authorized but unissued shares of common stock.

Possible Effects of the ARCA Share Increase Amendment

If the ARCA Share Increase Amendment is approved and becomes effective, the additional authorized shares would be available for issuance at the discretion of ARCA's board of directors and without further stockholder approval, except as may be required by law or Nasdaq rules. The additional shares of authorized ARCA common stock would have the same rights and privileges as the shares of ARCA common stock currently issued and outstanding. Holders of ARCA common stock have no preemptive rights. The ARCA Share Increase would not change the number of shares of common stock outstanding, nor will it have any immediate dilutive effect; however, the issuance of additional shares of ARCA common stock authorized by the ARCA Share Increase may, among other things, have a dilutive effect on earnings per share and on stockholders' equity and voting rights. Furthermore, future sales of substantial amounts of ARCA common stock, or the perception that these sales might occur, could adversely affect the prevailing market price of ARCA common stock or limit ARCA's ability to raise additional capital. ARCA stockholders should recognize that, as a result of this proposal, they will own a smaller percentage of shares relative to the total authorized shares of the company than they presently own.

Appraisal or Dissenters' Rights

Pursuant to the DGCL, stockholders are not entitled to appraisal rights or dissenter's rights with respect to the ARCA Share Increase Amendment or the ARCA Share Increase.

Effectiveness of Amendment

If the ARCA Share Increase Amendment is approved by the stockholders at the ARCA special meeting, it will become effective upon the filing of a certificate of amendment, a copy of which is attached as *Annex G* to this proxy statement/prospectus, with the Delaware Secretary of State or such later effective date and time as specified in the certificate of amendment in accordance with Delaware law.

Copies of the ARCA Charter and the certificates of amendment to the ARCA Charter are available as exhibits to this proxy statement/prospectus.

Required Vote

The affirmative vote of a majority of the votes properly cast for or against the Authorized Share Increase Proposal by the holders of ARCA common stock is required to approve the Authorized Share Increase Proposal. Abstentions and broker non-votes, if any, will have no effect on the Authorized Share Increase Proposal.

The Nasdaq Stock Issuance Proposal and the Merger are conditioned upon the approval of the Authorized Share Increase Proposal. In order to have an adequate number of available shares to effect the Merger, the stockholders of ARCA will need to approve the Authorized Share Increase Proposal. Additionally, ARCA's board of directors may determine to effect the Authorized Share Increase Proposal, if approved, even if the Nasdaq Stock Issuance Proposal is not approved by the ARCA stockholders.

Certain ARCA stockholders have agreed to vote any shares of ARCA common stock owned by them in favor of the Authorized Share Increase Proposal. See "*Agreements Related to the Merger — Support Agreements*" beginning on page 153 of this proxy statement/prospectus for more information.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the approval of the Authorized Share Increase Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE AUTHORIZED SHARE INCREASE PROPOSAL.

PROPOSAL NO. 3 — THE REVERSE STOCK SPLIT PROPOSAL

General

At the ARCA special meeting, ARCA will ask its stockholders to approve an amendment to the ARCA Charter to effect a reverse stock split of ARCA's issued and outstanding common stock at a ratio in the range of 6-for-1 to 12-for-1, to be determined mutually by ARCA's board of directors and Oruka's board of directors (the "Split Ratio"). The final Split Ratio and effectiveness of such amendment and the abandonment of such amendment will be mutually agreed by ARCA's board of directors and Oruka's board of directors prior to the First Effective Time, assuming this proposal is approved by ARCA's stockholders. On July 20, 2024, ARCA's board of directors adopted resolutions approving the proposed certificate of amendment to the ARCA Charter in the form attached as *Annex H* to this proxy statement/prospectus. If this certificate of amendment is filed with the Secretary of State of the State of Delaware, upon its effectiveness (the "reverse stock split effective time"), it will effect the reverse stock split by the Split Ratio but will not increase the par value of ARCA common stock. At the reverse stock split effective time, the issued and outstanding shares of ARCA common stock immediately prior to the reverse stock split effective time will automatically without further action on the part of ARCA be combined into a smaller number of shares in accordance with the final Split Ratio.

By approving the Reverse Stock Split Proposal, ARCA stockholders will approve the amendment to the ARCA Charter pursuant to which any whole number of issued and outstanding shares of ARCA common stock, between and including six (6) and twelve (12), would be combined into one share of ARCA common stock, and will authorize ARCA's board of directors to file the certificate of amendment. As of the Record Date, 100,000,000 shares of ARCA common stock were authorized, 14,507,143 shares of ARCA common stock were outstanding and no shares of ARCA common stock were held in treasury.

The reverse stock split will not change the number of authorized shares of ARCA common stock or preferred stock.

All holders of ARCA common stock will be affected proportionately by the reverse stock split. No fractional shares of ARCA common stock will be issued as a result of the reverse stock split. Instead, ARCA stockholders who otherwise would be entitled to receive fractional shares will be entitled to receive cash as set forth below under the caption "No Fractional Shares." Each ARCA stockholder will hold the same percentage of the outstanding ARCA common stock immediately following the reverse stock split as that ARCA stockholder did immediately prior to the reverse stock split, except to the extent that the reverse stock split results in ARCA stockholders receiving cash in lieu of fractional shares.

Reasons for the Reverse Stock Split

ARCA's board of directors approved the proposal approving the amendment to the ARCA Charter effecting the reverse stock split for the following reasons:

- ARCA's board of directors believes effecting the reverse stock split will result in an increase in the minimum bid price of ARCA common stock and reduce the risk of a delisting of ARCA common stock from Nasdaq in the future;
- ARCA's board of directors believes a higher stock price may help generate investor interest in ARCA, and ultimately the combined company, and help ARCA attract and retain employees;
- ARCA's board of directors believes a higher stock price may increase trading volume in ARCA common stock and facilitate future financings by the combined company;
- ARCA's board of directors believes that the resulting increase in the number of authorized and unissued shares available for future issuance will be necessary for the issuance of shares to the stockholders of Oruka pursuant to the Merger Agreement, as described in the Nasdaq Stock Issuance Proposal, the issuance of shares of ARCA common stock that may result from the assumption of Oruka's 2024 Equity Incentive Plan and outstanding options and warrants to purchase Oruka common stock, pursuant to the Merger Agreement, and ultimately the consummation of the Merger; and
- ARCA's board of directors believes that a range of reverse stock split ratios provides it with the most flexibility to achieve the desired results of the reverse stock split.

Requirements for Listing on Nasdaq

ARCA common stock is currently listed on The Nasdaq Capital Market under the symbol "ABIO." ARCA intends to file an initial listing application pursuant to the terms of the Merger Agreement for the combined company to list the securities of the combined company on Nasdaq.

According to the Nasdaq rules, an issuer must, in a case such as this, apply for initial inclusion following a transaction whereby the issuer combines with a non-Nasdaq entity, resulting in a change of control of the issuer and potentially allowing the non-Nasdaq entity to obtain a Nasdaq listing. Accordingly, the listing standards of Nasdaq will require ARCA to have, among other things, a $4.00 per share minimum bid price for a certain number of trading days preceding the closing of the Merger. Therefore, the reverse stock split may be necessary in order to satisfy Nasdaq requirements and consummate the Merger.

In addition, it is a condition to the closing of the Merger that the shares of ARCA common stock to be issued in the Merger pursuant to the Merger Agreement have been approved for listing on Nasdaq.

One of the effects of the reverse stock split will be to effectively increase the proportion of authorized shares which are unissued relative to those which are issued. This could result in ARCA's management being able to issue more shares without further stockholder approval. The reverse stock split will not affect the number of authorized shares of ARCA capital stock, which will continue to be authorized pursuant to the ARCA Charter.

Potential Increased Investor Interest

On July 19, 2024, ARCA common stock closed at $3.29 per share. An investment in ARCA common stock may not appeal to brokerage firms that are reluctant to recommend lower priced securities to their clients. Investors may also be dissuaded from purchasing lower priced stocks because the brokerage commissions, as a percentage of the total transaction, tend to be higher for such stocks. Moreover, the analysts at many brokerage firms do not monitor the trading activity or otherwise provide research coverage of lower priced stocks. Also, ARCA's board of directors believes that most investment funds are reluctant to invest in lower priced stocks.

There are risks associated with the reverse stock split, including that the reverse stock split may not result in an increase in the per share price of ARCA common stock.

ARCA cannot predict whether the reverse stock split will increase the market price for ARCA common stock. The history of similar stock split combinations for companies in like circumstances is varied. There is no assurance that:

- the market price per share of ARCA common stock after the reverse stock split will rise in proportion to the reduction in the number of shares of ARCA common stock outstanding before the reverse stock split;
- the reverse stock split will result in a per share price that will attract brokers and investors who do not trade in lower priced stocks;
- the reverse stock split will result in a per share price that will increase the ability of ARCA to attract and retain employees;
- the market price per share will either exceed or remain in excess of the $1.00 minimum bid price as required by Nasdaq for continued listing; or
- the market price per share will achieve and maintain the $4.00 minimum bid price requirement for a sufficient period of time for the combined company's common stock to be approved for listing by Nasdaq.

The market price of ARCA common stock will also be based on the performance of ARCA, and after the Merger, on the performance of the combined company, and other factors, some of which are unrelated to the number of shares outstanding. If the reverse stock split is effected and the market price of ARCA common stock declines, the percentage decline as an absolute number and as a percentage of the overall market capitalization of ARCA may be greater than would occur in the absence of a reverse stock split. Furthermore, the liquidity of ARCA common stock could be adversely affected by the reduced number of shares that would be outstanding after the reverse stock split.

Effects of the Reverse Stock Split

General

If the reverse stock split is implemented, after the reverse stock split effective time, the issued and outstanding shares of ARCA common stock immediately prior to the reverse stock split effective time will automatically, without further action on the part of ARCA, be combined into a smaller number of shares proportionately based on the Split Ratio and each ARCA stockholder will own a reduced number of shares of ARCA common stock. The reverse stock split will affect all ARCA stockholders uniformly and will not affect any stockholder's percentage ownership interests in ARCA, except that ARCA stockholders who would have otherwise received fractional shares will receive cash in lieu of such fractional shares. After the reverse stock split, each share of ARCA common stock will have the same voting rights and rights to dividends and distributions and will be identical in all other respects to the ARCA common stock now authorized, and ARCA common stock issued pursuant to the reverse stock split will remain fully paid and non-assessable. The reverse stock split is not intended as, and will not have the effect of, a "going private transaction" covered by Rule 13e-3 under the Exchange Act. ARCA will continue to be subject to the periodic reporting requirements of the Exchange Act.

Effect on Shares of ARCA Common Stock

The reverse stock split will not change the number of authorized shares of ARCA common stock.

After the reverse stock split effective time, ARCA common stock would have a new committee on uniform securities identification procedures number, which is used to identify ARCA common stock. ARCA common stock is currently registered under Section 12(b) of the Exchange Act and ARCA is subject to the periodic reporting and other requirements of the Exchange Act.

Effect on ARCA Preferred Stock

The reverse stock split will not change the number of authorized shares of ARCA preferred stock.

Reduction in Stated Capital

The reverse stock split will not affect the par value of ARCA common stock. As a result, after the reverse stock split effective time, the stated capital on ARCA's balance sheet attributable to ARCA common stock will be reduced proportionately based on the Split Ratio, subject to a minor adjustment in respect of the treatment of fractional shares, and the additional paid-in capital account will be credited with the amount by which the stated capital is reduced. ARCA stockholders' equity, in the aggregate, will remain unchanged.

Effect on Equity Plans and Outstanding Derivative and Convertible Securities

Proportionate adjustments will be made to the per share exercise price, the number of shares issuable upon the exercise, vesting or settlement of all outstanding options and warrants to purchase or acquire, as applicable, shares of ARCA common stock, and the number of shares reserved for issuance pursuant to ARCA's existing equity incentive, stock option and employee stock purchase plans will be reduced proportionately based on the Split Ratio.

Procedure for Effecting Reverse Stock Split and Exchange of Stock Certificates

If (i) the ARCA stockholders approve the Nasdaq Stock Issuance Proposal and the Reverse Stock Split Proposal, (ii) ARCA's board of directors and Oruka's board of directors mutually agree that a reverse stock split is necessary, and (iii) ARCA's board of directors still believes that a reverse stock split is in the best interests of ARCA and its stockholders, ARCA will file the certificate of amendment to the ARCA Charter with the Secretary of State of the State of Delaware at such time as ARCA's board of directors has determined to be the appropriate reverse stock split effective time at the Split Ratio. If the Reverse Stock Split Proposal is approved and the Nasdaq Stock Issuance Proposal is not approved by ARCA stockholders, ARCA's board of directors and Oruka's board of directors may mutually agree to delay effecting the reverse stock split without resoliciting stockholder approval or abandon effecting the reverse stock split; otherwise, ARCA's board of directors may, in its sole discretion, delay without resolicitation of stockholder approval or abandon effecting the reverse stock split. Beginning at the reverse stock split effective time, each stock certificate representing pre-split shares will be deemed for all corporate purposes to evidence ownership of post-split shares.

Beneficial Owners of Common Stock

Upon the implementation of the reverse stock split, ARCA intends to treat shares held by stockholders in "street name" (i.e., through a bank, broker, custodian or other nominee), in the same manner as registered stockholders whose shares are registered in their names. Banks, brokers, custodians or other nominees will be instructed to effect the reverse stock split for their beneficial holders holding ARCA common stock in street name. However, these banks, brokers, custodians or other nominees may have different procedures than registered stockholders for processing the reverse stock split and making payment for fractional shares. If a stockholder holds shares of ARCA common stock with a bank, broker, custodian or other nominee and has any questions in this regard, stockholders are encouraged to contact their bank, broker, custodian or other nominee.

Registered Holders of Common Stock in Book-Entry Form

Certain of ARCA's registered holders of common stock hold some or all of their shares electronically in book-entry form with ARCA's transfer agent, Computershare Trust Company, N.A. These stockholders do not hold physical stock certificates evidencing their ownership of ARCA common stock. However, they are provided with a statement reflecting the number of shares of ARCA common stock registered in their accounts. If a stockholder holds registered shares in book-entry form with ARCA's transfer agent, no action needs to be taken to receive post-reverse stock split shares or payment in lieu of fractional shares, if applicable. If a stockholder is entitled to post-reverse stock split shares, a transaction statement will automatically be sent to the stockholder's address of record indicating the number of shares of ARCA common stock held following the reverse stock split.

Registered Holders of Common Stock in Certificate Form

As soon as practicable after the reverse stock split effective time, the ARCA stockholders will be notified that the reverse stock split has been effected. ARCA expects that the ARCA transfer agent will act as exchange agent for purposes of implementing the exchange of stock certificates. Holders of pre-split shares will be asked to surrender to the exchange agent certificates representing pre-split shares held in certificated form in exchange for certificates representing post-split shares in accordance with the procedures to be set forth in a letter of transmittal to be sent by ARCA. No new certificates will be issued to a stockholder until such stockholder has surrendered such stockholder's outstanding certificate(s) together with the properly completed and executed letter of transmittal to the exchange agent. Any pre-split shares submitted for transfer, whether pursuant to a sale or other disposition, or otherwise, will automatically be exchanged for post-split shares. **Stockholders should not destroy any stock certificate(s) and should not submit any certificate(s) unless and until requested to do so**.

No Fractional Shares

No fractional shares will be issued in connection with the reverse stock split. Stockholders of record who otherwise would be entitled to receive fractional shares because they hold a number of pre-split shares not evenly divisible by the number of pre-split shares for which each post-split share is to be reclassified, will be entitled, upon surrender to the exchange agent of certificates representing such shares, to a cash payment in lieu thereof at a price equal to the fraction of a share to which the stockholder would otherwise be entitled multiplied by the closing price of the common stock on Nasdaq on the date of the filing of the certificate of amendment to the ARCA Charter effecting the reverse stock split. For the foregoing purposes, all shares of common stock held by a holder will be aggregated (thus resulting in no more than one fractional share per holder). The ownership of a fractional interest will not give the holder thereof any voting, dividend or other rights except to receive payment therefor as described herein.

Stockholders should be aware that, under the escheat laws of the various jurisdictions where stockholders reside, where ARCA is domiciled and where the funds will be deposited, sums due for fractional interests that are not timely claimed after the effective date of the split may be required to be paid to the designated agent for each such jurisdiction, unless correspondence has been received by ARCA or the exchange agent concerning ownership of such funds within the time permitted in such jurisdiction. Thereafter, stockholders otherwise entitled to receive such funds will have to seek to obtain them directly from the state to which they were paid.

Potential Anti-Takeover Effect

Although the increased proportion of unissued authorized shares to issued shares could, under certain circumstances, have an anti-takeover effect, for example, by permitting issuances that would dilute the stock ownership of a person seeking to effect a change in the composition of ARCA's board of directors or contemplating a tender offer or other transaction for the combination of ARCA with another company, the reverse stock split is not being proposed in response to any effort of which ARCA is aware to accumulate shares of ARCA common stock or obtain control of ARCA, other than in connection with the Merger, nor is it part of a plan by management to recommend a series of similar amendments to ARCA's board of directors and stockholders. Other than the proposals being submitted to the ARCA stockholders for their consideration at the ARCA special meeting, ARCA's board of directors does not currently contemplate recommending the adoption of any other actions that could be construed to affect the ability of third parties to take over or change control of ARCA. For more information, please see the section titled "*Risk Factors — Risks Related to the Combined Company*" beginning on page 80 of this proxy statement/prospectus.

Material U.S. Federal Income Tax Consequences of the Reverse Stock Split

The following is a discussion of material U.S. federal income tax consequences of the reverse stock split that are applicable to a U.S. holder (as defined below) of ARCA common stock. This discussion applies only to a U.S. holder that holds its ARCA common stock as a capital asset for U.S. federal income tax purposes (generally, property held for investment). This discussion is a summary only and does not discuss all aspects of U.S. federal income taxation that may be relevant to U.S. holders in light of their particular circumstances or U.S. holders with special status including:

- brokers, dealers or traders in securities, banks, insurance companies, other financial institutions or mutual funds;
- real estate investment trusts; regulated investment companies; tax-exempt organizations or governmental organizations;
- pass-through entities such as partnerships, S corporations, disregarded entities for federal income tax purposes and limited liability companies (and investors therein);
- persons that have a functional currency other than the U.S. dollar;
- taxpayers that are subject to the mark-to-market accounting rules;
- persons who hold their shares of ARCA common stock that constitute "qualified small business stock" under Section 1202 of the Code or as "Section 1244 stock" for purposes of Section 1244 of the Code;
- persons that hold their ARCA common stock as part of a straddle, constructive sale, hedging, conversion or other integrated or similar transaction;
- persons who acquired their shares of ARCA common stock pursuant to the exercise of options or otherwise as compensation or through a tax-qualified retirement plan or through the exercise of a warrant or conversion rights under convertible instruments;
- persons who acquired their ARCA common stock in a transaction subject to the gain rollover provisions of Section 1045 of the Code; and
- expatriates or former citizens or long-term residents of the United States.

This discussion is based on the Code, proposed, temporary and final Treasury Regulations promulgated under the Code, and judicial and administrative interpretations thereof, all as of the date hereof and all of which are subject to change, which change could apply retroactively and could affect the tax consequences described herein. This discussion does not address (i) the tax consequences of the reverse stock split under U.S. federal non-income tax law (including estate, gift, or other non-income taxes), (ii) the tax consequences of the reverse stock split under state, local or non-U.S. tax laws, (iii) the impact of the alternative minimum tax provisions of the Code (including the 15% minimum tax applicable to the adjusted financial statement income of certain corporations) or the Medicare contribution tax on net investment income, or (iv) the tax consequences of transactions effectuated before,

subsequent to or concurrently with the reverse stock split (whether or not any such transactions are consummated in connection with the reverse stock split), including, any transaction in which shares of ARCA common stock are acquired.

We have not and do not intend to seek any rulings from the IRS regarding the reverse stock split. There can be no assurance that the IRS will not take positions inconsistent with the considerations discussed below or that any such positions would not be sustained by a court.

If any entity or arrangement classified as a partnership for U.S. federal income tax purposes holds ARCA common stock, the tax treatment of such partnership and any person treated as a partner of such partnership will generally depend on the status and activities of the partner and the activities of the partnership. Each partnership holding any ARCA common stock and each person that is treated as a partner of such partnerships is urged to consult its tax advisor as to the particular U.S. federal income tax consequences of the reverse stock split.

As used herein, a "U.S. holder" is a beneficial owner of ARCA common stock that is for U.S. federal income tax purposes:

- an individual citizen or resident of the United States;
- a corporation (or other entity that is classified as a corporation for U.S. federal income tax purposes) that is created or organized (or treated as created or organized) in or under the laws of the United States, any state thereof, or the District of Columbia or otherwise treated as a U.S. tax resident for U.S. federal income tax purposes;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust if (1) a U.S. court can exercise primary supervision over the administration of such trust and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) it has a valid election in place to be treated as a U.S. person.

Treatment of U.S. Holders in the Reverse Stock Split

ARCA intends to treat the reverse stock split as a "recapitalization" within the meaning of Section 368(a) of the Code. Assuming the reverse stock split so qualifies, a U.S. holder generally will not recognize gain or loss upon the reverse stock split. A U.S. holder's aggregate tax basis in the shares of ARCA common stock received pursuant to the reverse stock split will equal the aggregate tax basis of the shares of the ARCA common stock surrendered, and such U.S. holder's holding period in the shares of ARCA common stock received will include the holding period in the shares of ARCA common stock surrendered. Treasury Regulations provide detailed rules for allocating the tax basis and holding period of the shares of ARCA common stock surrendered for the shares of ARCA common stock received in a recapitalization pursuant to the reverse stock split. If a U.S. holder holds different blocks of ARCA common stock (generally, ARCA common stock acquired on different dates or at different prices), such U.S. holder is urged to consult its tax advisor with respect to the determination of the tax bases and/or holding periods of the shares of ARCA common stock received in the reverse stock split.

A U.S. holder that receives cash in lieu of a fractional share of ARCA common stock pursuant to the reverse stock split will generally recognize capital gain or loss in an amount equal to the difference between the amount of cash received and the U.S. holder's tax basis in the shares of ARCA common stock surrendered that is allocated to such fractional share of ARCA common stock. Any such gain or loss will be long-term capital gain or loss if, as of the effective time of the reverse stock split, the U.S. holder's holding period for such fractional share exceeds one year. Long-term capital gains of certain non-corporate taxpayers, including individuals, are generally taxed at preferential rates. The deductibility of capital losses is subject to limitations.

Information Reporting and Backup Withholding

Assuming the reverse stock split qualifies as a recapitalization within the meaning of Section 368(a) of the Code, each U.S. holder who receives shares of ARCA common stock in the reverse stock split is required to retain permanent records pertaining to the reverse stock split and make such records available to any authorized IRS officers and employees. Such records should specifically include information regarding the amount, basis, and fair market value of all transferred property and relevant facts regarding any liabilities assumed or extinguished

as part of such reorganization. Each U.S. holder who owned immediately before the reverse stock split at least five percent (by vote or value) of the total outstanding stock of ARCA is required to attach a statement to its tax return for the year in which the reverse stock split is consummated that contains the information listed in Treasury Regulation Section 1.368-3(b). Such statement must include the U.S. holder's tax basis in such holder's ARCA common stock surrendered in the reverse stock split, the fair market value of such stock, the date of the reverse stock split and the name and employer identification number of ARCA. Each U.S. holder is urged to consult with its tax advisor to comply with these rules.

A U.S. holder may be subject to information reporting and backup withholding for U.S. federal income tax purposes on cash paid in lieu of fractional shares in connection with the reverse stock split. Backup withholding will not apply, however, to a U.S. holder who (i) furnishes a correct taxpayer identification number and certifies the holder is not subject to backup withholding on IRS Form W-9 or a substantially similar form, or (ii) certifies the holder is otherwise exempt from backup withholding. If a U.S. holder does not provide a correct taxpayer identification number on IRS Form W-9 or other proper certification, the stockholder may be subject to penalties imposed by the IRS. Any amounts withheld under the backup withholding rules may be refunded or allowed as a credit against the federal income tax liability of a U.S. holder of ARCA common stock, if any, provided the required information is timely furnished to the IRS. U.S. holders should consult their tax advisors regarding their qualification for an exemption from backup withholding, the procedures for obtaining such an exemption, and in the event backup withholding is applied, to determine if any tax credit, tax refund or other tax benefit may be obtained.

This discussion of U.S. federal income tax considerations of the reverse stock split is for general information purposes only and is not intended to be, and should not be construed as, tax advice. Determining the actual tax consequences of the reverse stock split to you may be complex and will depend on your specific situation and on factors that are not within ARCA's knowledge or control. You should consult your tax advisor with respect to the application of U.S. federal income tax laws to your specific situation as well as any tax consequences arising under the U.S. federal estate or gift tax rules or under the laws of any state, local, non-U.S. or other taxing jurisdiction.

Appraisal or Dissenters' Rights

Pursuant to the DGCL, stockholders are not entitled to appraisal rights or dissenter's rights with respect to the proposed amendment to the ARCA Charter to effect the reverse stock split.

Required Vote

The affirmative vote of a majority of the votes properly cast for or against the Reverse Stock Split Proposal by the holders of ARCA common stock is required to approve the Reverse Stock Split Proposal. Abstentions and broker non-votes, if any, will have no effect on the Reverse Stock Split Proposal.

The Merger is **not** conditioned upon the approval of the Reverse Stock Split Proposal. Additionally, ARCA's board of directors may determine to effect the Reverse Stock Split Proposal, if approved, even if Proposal No. 1 is not approved by the ARCA stockholders.

Certain ARCA stockholders have agreed to vote any shares of ARCA common stock owned by them in favor of the Reverse Stock Split Proposal. See "*Agreements Related to the Merger — Support Agreements*" beginning on page 153 of this proxy statement/prospectus for more information.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the approval of the Reverse Stock Split Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE REVERSE STOCK SPLIT PROPOSAL.

PROPOSAL NO. 4 — THE OFFICER EXCULPATION PROPOSAL

General

Section 102(b)(7) of the DGCL was amended effective August 1, 2022 to authorize exculpation of certain officers of Delaware corporations (the "Section 102(b)(7) Amendment"). Specifically, the amendments extend the opportunity for Delaware corporations to exculpate their officers, in addition to their directors, for personal liability for breach of the duty of care in certain actions (the "officer exculpation"). This provision would not exculpate officers from liability for breach of the duty of loyalty, acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, or any transaction in which the officer derived an improper personal benefit. Nor would this provision exculpate such officers from liability for claims brought by or in the right of the corporation, such as derivative claims.

ARCA's board of directors believes it is necessary to provide protection to officers to the fullest extent permitted by law in order to attract and retain top talent. Similar protection has long been afforded to directors. Accordingly, ARCA's board of directors believes that the proposal to extend exculpation to officers is fair and in the best interests of ARCA and its stockholders.

A copy of the proposed form of certificate of amendment to the ARCA Charter to effect the officer exculpation is attached as *Annex I* to this proxy statement/prospectus.

ARCA's board of directors may determine to effect the officer exculpation, if it is approved by the stockholders, even if the other proposals to be acted upon at the meeting are not approved, including the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and the Reverse Stock Split Proposal. In addition, notwithstanding approval of this proposal by ARCA stockholders, ARCA's board of directors may, in its sole discretion, abandon the proposed amendment and determine prior to the effectiveness of any filing with the Secretary of State of the State of Delaware not to effect the officer exculpation, as permitted under Section 242(c) of the DGCL.

Reasons for the Proposal

ARCA's board of directors desires to amend the ARCA Charter to maintain provisions consistent with the governing statutes contained in the DGCL, as it may be amended from time to time. Prior to the Section 102(b)(7) Amendment, Delaware law has permitted Delaware corporations to exculpate directors from personal liability for monetary damages associated with breaches of the duty of care, but that protection did not extend to a Delaware corporation's officers. Consequently, stockholder plaintiffs have employed a tactic of bringing certain claims that would otherwise be exculpated if brought against directors, against individual officers to avoid dismissal of such claims. The Section 102(b)(7) Amendment was adopted to address inconsistent treatment between officers and directors and address rising litigation and insurance costs for stockholders.

As is currently the case with directors under the ARCA Charter, this provision would not exculpate officers from liability for breach of the duty of loyalty, acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law, or any transaction in which the officer derived an improper personal benefit. Nor would this provision exculpate such officers from liability for claims brought by or in the right of the corporation, such as derivative claims. ARCA's board of directors believes it is necessary to provide protection to officers to the fullest extent permitted by law in order to attract and retain top talent. Similar protection has long been afforded to directors, and accordingly, ARCA's board of directors believes that this proposal which would extend exculpation to officers, as specifically permitted by the Section 102(b)(7) Amendment, is fair and in the best interests of ARCA and its stockholders.

Required Vote

The affirmative vote of a majority of the outstanding shares of ARCA common stock is required to approve the Officer Exculpation Proposal. Abstentions and broker non-votes, if any, will have the same effect as votes "**AGAINST**" the Officer Exculpation Proposal.

The Merger is **not** conditioned upon the approval of the Officer Exculpation Proposal. If the Merger is not consummated for any reason, the actions contemplated by the Officer Exculpation Proposal may still be effected if the Officer Exculpation Proposal is approved.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the approval of the Officer Exculpation Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE OFFICER EXCULPATION PROPOSAL.

PROPOSAL NO. 5 — THE DIRECTOR ELECTION PROPOSAL

General

ARCA's board of directors currently consists of five members. In accordance with the terms of the ARCA Charter and ARCA Bylaws, ARCA's board of directors is divided into three classes, Class I, Class II and Class III, with members of each class serving staggered three-year terms. The members of the classes are divided as follows:

- the Class I directors are James Flynn, Linda Grais, M.D. and Anders Hove, M.D., whose terms will expire at ARCA's annual meeting of stockholders to be held in 2025;
- the Class II director is Robert E. Conway, whose term will expire at ARCA's annual meeting of stockholders to be held in 2026; and
- the Class III director is Jacob Ma-Weaver, whose term will expire at ARCA's annual meeting of stockholders to be held in 2024.

Upon the expiration of the term of a class of ARCA's board of directors, any director in that class will be eligible to be elected for a new three-year term at the annual meeting of stockholders in the year in which their term expires.

The ARCA Charter and ARCA Bylaws provide that the authorized number of directors shall not be less than two nor more than ten and may be changed only by resolution of ARCA's board of directors. ARCA Bylaws also provide that ARCA's directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds of the voting rights of the shares of capital stock then entitled to vote in an annual election of directors, and that any vacancy on ARCA's board of directors, including a vacancy resulting from an increase in the size of ARCA's board of directors, may be filled only by vote of a majority of its directors then in office.

ARCA's board of directors has nominated Jacob Ma-Weaver for election as a Class III director at the ARCA special meeting. Mr. Ma-Weaver is currently a director and has consented to continue to serve as a director if elected. If Mr. Ma-Weaver becomes unable or unwilling to serve, however, the proxies may be voted for a substitute nominee selected by ARCA's board of directors.

ARCA stockholders should understand, however, that if the Merger is consummated, the approval of the director nominee named in the Director Election Proposal will only have an effect until the completion of the Merger because the composition of ARCA's board of directors will be reconstituted upon completion of the Merger, in accordance with the Merger Agreement. Following the Merger, the combined company's board of directors will consist of six members designated by Oruka, including Carl Dambkowski, Peter Harwin, Lawrence Klein, Samarth Kulkarni, Cameron Turtle and Kristine Ball. All of ARCA's current directors are expected to resign from their positions as directors of ARCA, effective as of the closing of the Merger.

Required Vote

The nominee for Class III director who receives the most votes properly cast (also known as a plurality) will be elected. You may either vote "**FOR**" the nominee or "**WITHHOLD**" your vote from the nominee. Withheld votes and broker non-votes, if any, will have no effect on the Director Election Proposal.

The Merger is **not** conditioned upon the election of the director nominee named in the Director Election Proposal.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the election of the director nominee named in the Director Election Proposal. However, if the nominee is unable to serve or for good cause will not serve as a director, the proxies will be voted for the election of such substitute nominee as ARCA's board of directors may designate.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE DIRECTOR NOMINEE NAMED IN THE DIRECTOR ELECTION PROPOSAL.

PROPOSAL NO. 6 — THE AUDITOR RATIFICATION PROPOSAL

General

At the ARCA special meeting, ARCA will ask its stockholders to ratify the appointment by the audit committee of ARCA's board of directors (the "ARCA audit committee") of KPMG LLP as ARCA's independent registered public accounting firm for the fiscal year ending December 31, 2024, provided that PricewaterhouseCoopers LLP is expected to be appointed for the fiscal year ending December 31, 2024 if the Merger is completed. KPMG LLP has served as ARCA's independent registered public accounting firm since 2006.

The ARCA audit committee is solely responsible for selecting ARCA's independent registered public accounting firm for the fiscal year ending December 31, 2024. Stockholder approval is not required to appoint KPMG LLP as ARCA's independent registered public accounting firm. However, ARCA's board of directors believes that submitting the selection of KPMG LLP to ARCA stockholders for ratification is good corporate governance. If ARCA stockholders do not ratify this appointment, the ARCA audit committee will reconsider whether to retain KPMG LLP. If the selection of KPMG LLP is ratified, the ARCA audit committee, at its discretion, may direct the selection of a different independent registered public accounting firm at any time it decides that such a change would be in the best interest of ARCA and its stockholders.

A representative of KPMG LLP is expected to be present at the ARCA special meeting and will have an opportunity to make a statement if he or she desires to do so and to respond to appropriate questions from ARCA stockholders.

Required Vote

The affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present in person or represented by proxy at the ARCA special meeting required to approve the Auditor Ratification Proposal. Abstentions will have the same effect as votes "**AGAINST**" the Auditor Ratification Proposal and broker non-votes, if any, will have no effect on the Auditor Ratification Proposal.

The Merger is **not** conditioned upon the approval of the Auditor Ratification Proposal.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the Auditor Ratification Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE AUDITOR RATIFICATION PROPOSAL, PROVIDED THAT PRICEWATERHOUSECOOPERS LLP IS EXPECTED TO BE APPOINTED FOR THE FISCAL YEAR ENDING DECEMBER 31, 2024 IF THE MERGER IS COMPLETED.

PROPOSAL NO. 7 — THE STOCK PLAN PROPOSAL

General

At the ARCA special meeting, ARCA will ask its stockholders to approve the Oruka Therapeutics, Inc. 2024 Stock Incentive Plan (the "2024 Stock Plan") to be effective on the closing date of the Merger. The 2024 Stock Plan was approved by ARCA's board of directors on July 20, 2024, subject to stockholder approval. If the 2024 Stock Plan is approved by stockholders, no further awards will be granted under the 2020 Plan.

The purpose of the 2024 Stock Plan is to promote and closely align the interests of employees, officers, non-employee directors and individual consultants of the combined company and its stockholders by providing stock-based compensation and other performance-based compensation. The objectives of the 2024 Stock Plan are to attract and retain the best available employees, officers, non-employee directors and individual consultants for positions of substantial responsibility and to motivate participants to optimize the profitability and growth of the combined company through incentives that are consistent with the combined company's goals and that link the personal interests of participants to those of the combined company's stockholders. The 2024 Stock Plan allows for the grant of stock options, stock appreciation rights ("SARs"), restricted stock, restricted stock units ("RSUs"), other stock-based awards and incentive bonuses (collectively, "Awards").

If the ARCA stockholders approve the Stock Plan Proposal, subject to the closing of the Merger, the combined company will file with the SEC a registration statement on Form S-8, as soon as reasonably practicable after the closing of the Merger, to register the shares available for issuance under the 2024 Stock Plan.

Summary of the 2024 Stock Plan

The following description of the 2024 Stock Plan is not intended to be complete and is qualified in its entirety by the complete text of the 2024 Stock Plan, a copy of which is attached as *Annex K* to this proxy statement. Stockholders are urged to read the 2024 Stock Plan in its entirety.

Federal Income Tax Consequences

The following is a summary of the U.S. federal income tax treatment applicable to the combined company and the participants who receive Awards under the 2024 Stock Plan based on the federal income tax laws in effect on the date of this proxy statement/prospectus. This summary is not intended to be exhaustive and does not address all matters relevant to a particular participant based on their specific circumstances. The summary expressly does not discuss the income tax laws of any state, municipality, or non-U.S. taxing jurisdiction, or the gift, estate, excise (including the rules applicable to deferred compensation under Section 409A of the Code), or tax laws other than U.S. federal income tax law. Because individual circumstances may vary, all participants should consult their own tax advisor concerning the tax implications of Awards granted under the 2024 Stock Plan.

Incentive Stock Options

Options granted under the 2024 Stock Plan may be either incentive stock options, which satisfy the requirements of Section 422 of the Code, or non-qualified stock options, which are not intended to meet such requirements. No taxable income is recognized by the optionee at the time of the option grant, and no taxable income is recognized for ordinary income tax purposes at the time the option is exercised, although taxable income may arise at that time for alternative minimum tax purposes. Unless there is a "disqualifying disposition", as described below, the optionee will recognize long-term capital gain in an amount equal to the excess of (i) the amount realized upon the sale or other disposition of the purchased shares over (ii) the exercise price paid for the shares. A disqualifying disposition occurs if the disposition is less than two years after the date of grant or less than one year after the exercise date. If there is a disqualifying disposition of the shares, then the excess of (i) the fair market value of those shares on the exercise date or (if less) the amount realized upon such sale or disposition over (ii) the exercise price paid for the shares will be taxable as ordinary income to the optionee. Any additional gain or loss recognized upon the disposition will be a capital gain or loss. If the optionee makes a disqualifying disposition of the purchased shares, then the combined company will be entitled to an income tax deduction for the taxable year in which such disposition occurs equal to the amount of ordinary income recognized by the optionee as a result of the disposition. The combined company will not be entitled to any income tax deduction if the optionee makes a qualifying disposition of the shares.

Nonqualified Stock Options

No taxable income is recognized by an optionee upon the grant of a non-qualified stock option. The optionee in general will recognize ordinary income, in the year in which the option is exercised, equal to the excess of the fair market value of the purchased shares on the exercise date over the exercise price paid for the shares, and the optionee will be required to satisfy the tax withholding requirements applicable to such income. The combined company will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the optionee with respect to the exercised non-qualified stock option.

Stock Appreciation Rights

No taxable income is recognized upon receipt of a SAR. The participant will recognize ordinary income in the year in which the SAR is exercised, in an amount equal to the excess of the fair market value of the underlying shares of common stock on the exercise date over the base price in effect for the exercised right, and the participant will be required to satisfy the tax withholding requirements applicable to such income. The combined company will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the participant in connection with the exercise of the SAR.

Restricted Stock Awards

A participant who receives unvested shares of combined company common stock will not recognize any taxable income at the time those shares are granted but will have to report as ordinary income, as and when those shares subsequently vest, an amount equal to the excess of (i) the fair market value of the shares on the vesting date over (ii) the cash consideration (if any) paid for the shares. The participant may, however, elect under Section 83(b) of the Code to include as ordinary income in the year the unvested shares are issued an amount equal to the excess of (a) the fair market value of those shares on the issue date over (b) the cash consideration (if any) paid for such shares. If the Section 83(b) election is made, the participant will not recognize any additional income as and when the shares subsequently vest. The combined company will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the participant at the time such ordinary income is recognized by the participant.

Restricted Stock Units, Other Stock-Based Awards, Incentive Bonuses

Generally, no taxable income is recognized upon the grant of RSUs, other stock-based awards or incentive bonuses. The participant will recognize ordinary income in the year in which the award is settled in shares or cash. The amount of that income will be equal to the fair market value of the shares on the date of issuance or the amount of the cash paid in settlement of the award, and the participant will be required to satisfy the tax withholding requirements applicable to the income. The combined company will be entitled to an income tax deduction equal to the amount of ordinary income recognized by the participant at the time the shares are issued or the cash amount is paid.

Deductibility of Executive Compensation

Section 162(m) of the Code limits the deductibility for federal income tax purposes of certain compensation paid to any "covered employee" in excess of $1 million. It is expected that compensation deductions for any covered employee with respect to awards granted under the 2024 Stock Plan will be subject to the $1 million annual deduction limitation. The Administrator may grant Awards under the 2024 Stock Plan or otherwise that are or may become non-deductible when it believes doing so is in the best interests of the combined company and its stockholders.

New Plan Benefits

ARCA cannot currently determine the benefits or number of shares subject to Awards that may be granted in the future to eligible participants under the 2024 Stock Plan because the grant of Awards and terms of such Awards are to be determined in the sole discretion of the Administrator.

Required Vote

The affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present in person or represented by proxy at the ARCA special meeting required to approve the Stock Plan Proposal. Abstentions will have the same effect as votes "**AGAINST**" the Stock Plan Proposal and broker non-votes, if any, will have no effect on the Stock Plan Proposal.

The Merger is **not** conditioned upon the approval of the Stock Plan Proposal.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the Stock Plan Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE STOCK PLAN PROPOSAL.

PROPOSAL NO. 8 — THE ESPP PROPOSAL

General

At the ARCA special meeting, ARCA will ask its stockholders to approve the Oruka Therapeutics, Inc. 2024 Employee Stock Purchase Plan (the "ESPP") to be effective on the closing date of the Merger. The ESPP was approved by ARCA's board of directors on July 20, 2024, subject to stockholder approval.

The purpose of the ESPP is to provide employees of the combined company and its designated subsidiaries with an opportunity to purchase Common Stock through accumulated contributions. The ESPP, and the rights of participants to make purchases thereunder, is intended to qualify under Section 423 of the Code; however, sub-plans that do not meet the requirements of Section 423 of the Code may be established for the benefit of eligible employees of non-U.S. subsidiaries of the combined company.

If the ARCA stockholders approve the ESPP Proposal, subject to the closing of the Merger, the combined company will file with the SEC a registration statement on Form S-8, as soon as reasonably practicable after the closing of the Merger, to register the shares available for issuance under the ESPP.

Summary of the ESPP

The following description of the ESPP is not intended to be complete and is qualified in its entirety by the complete text of the ESPP, a copy of which is attached as *Annex L* to this proxy statement. Stockholders are urged to read the 2024 Stock Plan in its entirety.

Federal Income Tax Consequences

The following is a brief description of the federal income tax treatment that will generally apply to the grant and exercise of rights under the ESPP, based on federal income tax laws in effect on the date of this proxy statement/prospectus. The exact federal income tax treatment of options will depend on the specific nature of any such option and the individual tax attributes of the participant. The following summary is not intended to be exhaustive and, among other considerations, does not describe gift, estate, social security, state, local or international tax consequences. In addition, if one or more sub-plans are established for employees of non-U.S. subsidiaries, the tax rules may be different than discussed below.

The ESPP is intended to qualify as an "employee stock purchase plan" under Section 423 of the Code and, as a result, employees who participate in the ESPP will be afforded favorable tax treatment subject to meeting certain requirements specified by the Code. In general, there are no federal income tax consequences to a participant upon the grant of the option to purchase shares under the ESPP at the beginning of an option period or upon its exercise on the exercise date at the end of an option period. Upon the disposition of shares of common stock acquired upon exercise of an option, the participant will generally be subject to tax and the nature and amount of the tax will depend on whether the employee has satisfied the statutory holding period.

If the employee holds shares acquired under the ESPP for at least two years from the grant date of his or her option and at least one year from the date he or she acquired the shares (referred to as the "statutory holding period"), any gain on the sale of the shares will be taxed as ordinary income to the extent of the lesser of (i) the amount by which the fair market value of the shares on the grant date (i.e., the first day of the option period) exceeded the exercise price for the option, or (ii) the amount by which the fair market value of the shares on the date of sale exceeds the exercise price of the option. Any additional gain or loss will be taxed as long-term capital gain or loss.

If the participant sells or otherwise disposes of the shares before the expiration of the statutory holding period, then in the year of such "disqualifying" disposition, the participant will be required to recognize ordinary income equal to the difference between the fair market value of the shares on the date of the exercise of the option and the exercise price of the option. Any additional gain or loss will be short-term or long-term capital gain or loss depending on the length of time the employee has held the shares.

The combined company is not entitled to any deduction with respect to the difference between the fair market value of the common stock and the option exercise price if the participant satisfies the statutory holding period described above. If shares are sold before the statutory holding period is satisfied, the combined company receives a tax deduction for any ordinary income recognized by the participant.

New Plan Benefits

The benefits that will be received by or allocated to eligible employees under the ESPP cannot be determined at this time because the amount of payroll deductions contributed to purchase shares of combined company common stock under the ESPP is entirely within the discretion of each participant (subject to the limitations discussed above).

Required Vote

The affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present in person or represented by proxy at the ARCA special meeting required to approve the ESPP Proposal. Abstentions will have the same effect as votes "**AGAINST**" the ESPP Proposal and broker non-votes, if any, will have no effect on the ESPP Proposal.

The Merger is **not** conditioned upon the approval of the ESPP Proposal.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the ESPP Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ESPP PROPOSAL.

PROPOSAL NO. 9 — THE MERGER COMPENSATION PROPOSAL

General

Pursuant to Section 14A of the Exchange Act and Rule 14a-21(c) thereunder, ARCA is seeking non-binding, advisory stockholder approval of certain compensation arrangements for ARCA named executive officers that are based on or otherwise relate to the Merger, as disclosed pursuant to Item 402(t) of Regulation S-K in the section titled "*The Merger — Interests of ARCA's Directors and Executive Officers in the Merger — Quantification of Potential Payments and Benefits to ARCA Named Executive Officers*" beginning on page 123 of this proxy statement/prospectus. At the ARCA special meeting, ARCA will therefore ask its stockholders to adopt the following resolution:

> **"RESOLVED: That certain compensation arrangements for ARCA named executive officers in connection with the Merger, as disclosed pursuant to Item 402(t) of Regulation S-K in the section titled "*The Merger — Interests of ARCA's Directors and Executive Officers in the Merger — Quantification of Potential Payments and Benefits to ARCA Named Executive Officers*" in the proxy statement/prospectus, are hereby APPROVED on a non-binding, advisory basis."**

Because the vote is advisory in nature only, it will not be binding on ARCA. Accordingly, to the extent ARCA is contractually obligated to pay the compensation, the compensation will be payable to the named executive officers, subject only to the conditions applicable thereto, if the Merger is completed, regardless of the outcome of the advisory vote.

Required Vote

The affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present in person or represented by proxy at the ARCA common stock is required to approve the Merger Compensation Proposal. Abstentions will have the same effect as votes "**AGAINST**" the Merger Compensation Proposal and broker non-votes, if any, will have no effect on the Merger Compensation Proposal.

The Merger is **not** conditioned upon the approval of the Merger Compensation Proposal.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the approval of the Merger Compensation Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE MERGER COMPENSATION PROPOSAL.

PROPOSAL NO. 10 — THE ADJOURNMENT PROPOSAL

General

If ARCA fails to receive a sufficient number of votes to approve the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal, ARCA may propose to adjourn the ARCA special meeting, for a period of not more than 60 days, for the purpose of soliciting additional proxies to approve the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal. ARCA currently does not intend to propose adjournment at the ARCA special meeting if there are sufficient votes to approve the Nasdaq Stock Issuance Proposal, the Authorized Share Increase Proposal and/or the Reverse Stock Split Proposal.

If a quorum is not present at the ARCA special meeting, under ARCA Bylaws, stockholders holding a majority of the shares present in person or by proxy and entitled to vote, or if no stockholders are present any officer entitled to preside at or act as secretary of the special meeting, will have the power to adjourn the special meeting until a quorum is present or represented.

Required Vote

If a quorum is present, the affirmative vote of a majority of the shares of ARCA common stock entitled to vote on the subject matter and present in person or represented by proxy at the ARCA special meeting is required to approve the Adjournment Proposal. Abstentions will have the same effect as votes "**AGAINST**" the Adjournment Proposal and broker non-votes, if any, will have no effect on the Adjournment Proposal.

The Merger is **not** conditioned upon the approval of the Adjournment Proposal.

Unless otherwise instructed, it is the intention of the persons named in the accompanying proxy card to vote shares represented by properly executed proxy cards "**FOR**" the approval of the Adjournment Proposal.

THE ARCA BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE ADJOURNMENT PROPOSAL, IF NECESSARY.

ARCA'S BUSINESS

Overview

ARCA is a biopharmaceutical company applying a precision medicine approach to the development and commercialization of targeted therapies for cardiovascular diseases. Precision medicine refers to the tailoring of medical treatment to the individual characteristics of patients, using genomic, non-genomic biomarker and other information that extends beyond routine diagnostic categorization. ARCA believes that when implemented correctly precision medicine can enhance therapeutic response, improve patient outcomes, and reduce healthcare costs.

In April 2022, ARCA's board of directors established a Special Committee and subsequently retained Lucid to evaluate strategic options, including transactions involving a merger, sale of all or part of ARCA's assets, or other alternatives with the goal of maximizing stockholder value (the "Strategic Review"). ARCA and Lucid have reviewed several potential strategic transactions and continue to evaluate further potential development of ARCA's existing assets, in order to maximize stockholder value. ARCA does not have a defined timeline for the strategic review process and the review may not result in any specific action or transaction.

On April 3, 2024, following a comprehensive review of strategic alternatives, ARCA, First Merger Sub, Second Merger Sub and Oruka entered into the Merger Agreement, pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, First Merger Sub will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the First Merger and as part of the same overall transaction, the surviving corporation in the First Merger will merge with and into Second Merger Sub with Second Merger Sub continuing as a wholly owned subsidiary of ARCA and the surviving entity of the Second Merger. The Merger is intended to qualify for federal income tax purposes as a tax-free reorganization under the provisions of Section 368(a) of the Internal Revenue Code of 1986, as amended.

In connection with the Merger, ARCA will dispose of (or is in the process of disposing of) its legacy technology and intellectual property, including those related to Gencaro and rNAPc2. Any such disposal of legacy technology and intellectual property will be contingent upon obtaining stockholder approval for the Merger and is expected to occur immediately prior to or concurrently with the closing of the Merger. In the event that ARCA shall enter into an agreement for any such sale or other disposition of its legacy assets at or prior to the closing of the Merger, the net proceeds received at or prior to the closing of the Merger will be included in the calculation of the net cash of ARCA as of the closing.

ARCA's future operations are highly dependent on the success of the Merger and there can be no assurances that the Merger will be successfully consummated. In the event that ARCA does not complete the Merger, ARCA may explore strategic alternatives, including, without limitation, another strategic transaction and/or pursue a dissolution and liquidation of ARCA.

ARCA's lead product candidate is Gencaro™ (bucindolol hydrochloride) for the treatment of atrial fibrillation, ("AF") in patients with chronic heart failure ("HF"). Gencaro is being developed for patients who have a genotype that identifies a drug target associated with heightened efficacy.

Gencaro™ (bucindolol hydrochloride) for Atrial Fibrillation

Gencaro™ (bucindolol hydrochloride) is a pharmacogenetically-targeted beta-adrenergic receptor antagonist with mild vasodilator properties that ARCA is developing for the treatment of atrial fibrillation in patients with heart failure. ARCA believes the pharmacology of Gencaro is unique and its efficacy can be enhanced by prescribing it to patients with a common genotypic variant that is present in approximately 50% of the North American and European general populations. This gene can be detected with a simple genetic test.

ARCA is developing Gencaro to treat AF in patients with HF. AF is the most common form of cardiac arrhythmia, a disruption of the heart's normal rhythm or rate. HF is a chronic condition in which the heart is unable to pump enough blood to meet the body's needs. AF and HF commonly occur together. In HF patients, the development of AF leads to worsening symptoms, and increased risk of hospitalization and death. Current treatment options for AF in HF patients are limited, and can be invasive, costly and dangerous.

ARCA's development plan for Gencaro focuses on the treatment of AF in patients with higher ejection fraction HF, those who have an ejection fraction ("EF") of 40% and higher who also have the genotype ARCA believes is optimal for Gencaro efficacy. This population of HF encompasses more than half of all HF patients in the United States and Europe. There are currently few approved or effective drug therapies to treat AF or HF in this patient population.

ARCA's development plan for Gencaro is based on ARCA's published analysis of the Phase 2b clinical trial of Gencaro for the prevention of AF in HF patients, known as GENETIC-AF. This analysis showed novel results for Gencaro in patients in the clinical trial with EF's of 40% and higher. ARCA currently has an agreement with the FDA, known as a Special Protocol Assessment ("SPA") for the requirements of a Gencaro Phase 3 clinical trial, PRECISION-AF, that would support approval of Gencaro if successful. The Phase 3 pivotal clinical trial of Gencaro conducted under an SPA will include secondary endpoints that are intended to capture some of this information, such as a reduction in the need to deploy rhythm control interventions including electrical cardioversion, catheter ablation and use of anti-arrhythmic drugs and avoidance of drug-related complications such as bradycardia. ARCA was issued a United States patent in February 2021 for the use of Gencaro in a patient population identified as part of the clinical trial. ARCA believes this patent will substantially extend the patent protection for ARCA's planned development of Gencaro into 2039. ARCA has sought or is seeking similar patent protection in other countries.

ARCA believes that patients with HF and AF represent a major unmet medical need, and this need is most pronounced in patients with EF values of 40% and above. This EF range constitutes more than half of all chronic HF in the United States and Europe, as well as in Japan and China, and there are currently few approved, effective or guideline-recommended therapies for these patients to treat either their AF or HF. AF is a very common complication in these patients, with estimates of AF incidence ranging from 40% to 60%. Beta-blockers approved for HF are commonly used off-label to control heart rate in these patients, but they are not considered effective in preventing AF and none are approved for patients with EF ≥ 40%. Other anti-arrhythmic drugs approved for the treatment of AF have adverse side effects and in HF patients are either contraindicated or have label warnings for use due to an increased risk of mortality. Interventional procedures for AF, such as catheter ablation and electrical cardioversion, are invasive, expensive, and often temporary; these interventions also typically require the continued use of beta blockers and other anti-arrhythmic drugs post-intervention.

ARCA believes that Gencaro, if approved, may be a safe and more effective therapy for the treatment of higher ejection fraction HF patients with AF. ARCA believes there are several potentially important attributes that would differentiate Gencaro from existing therapies, including:

- More effective rhythm control compared to the current standard of care;
- Reduction in the need for catheter ablation, electrical cardioversion, or toxic anti-arrhythmic drugs;
- Maintenance of rhythm control after a successful AF catheter ablation;
- Effective rate control with lower risk of treatment-limiting, adverse event producing bradycardia;
- Reduction in symptoms and improvement in quality of life;
- Reduced health care burden;
- Foundational beta-blocker benefits for HF and unique evidence of efficacy in HF patients with AF;
- One of the only drug therapies approved and shown effective for AF in HF patients with EF ≥ 40%, and the only one in its drug class.

ARCA has an international patent portfolio for Gencaro in the United States, the EU, and other major markets, as well as new chemical entity status, including a new patent that ARCA believes will give it a strong intellectual property position to at least approximately 2039 in the United States; ARCA has filed applications similar to this new patent in international territories. ARCA has developed a laboratory platform for the diagnostic test that would be used to prescribe Gencaro; this platform was approved by FDA for use in the Phase 2B clinical trial. ARCA retains all rights to this test platform; ARCA expects to use it in future clinical trials, and ARCA believes it could be one of multiple diagnostic platforms used for commercialization.

rNAPc2 (AB201) for treatment of COVID-19

Recombinant Nematode Anticoagulant Protein c2 ("rNAPc2") (AB201), is a protein therapeutic in clinical development as a potential treatment for patients with COVID-19. Based on its unique mechanism of action, development history and the clinical evidence from the SARS-CoV-2 pandemic, ARCA believes rNAPc2 has potential to be a beneficial therapy for patients with this serious viral disease. ARCA initiated a Phase 2b clinical trial of rNAPc2 as a potential treatment for patients hospitalized with COVID-19 in the fourth quarter of 2020 and

completed patient enrollment in the fourth quarter 2021. In the clinical trial, both doses of rNAPc2 demonstrated a treatment benefit for patients based on the coagulation biomarker D-dimer, however, neither dose achieved statistical significance for the primary efficacy endpoint of change in D-dimer level from Baseline to Day 8 compared to standard of care heparin.

On the secondary endpoints measuring thrombotic events and time-to-recovery, there was a numerical imbalance in favor of rNAPc2 that was non-significant. rNAPc2 was well-tolerated at both doses. There were no serious treatment-related adverse events and no dose dependent increase in adverse events was observed. There was no difference between rNAPc2 and standard-of-care heparin in major or non-major clinically relevant bleeding. ARCA currently does not plan additional clinical development of rNAPc2 unless ARCA is able to find a commercial or government partner to pay for development and commercialization or expansion into clinical trials for other disease indications.

To support the continued development of Gencaro and rNAPc2, ARCA will need additional financing to fully fund any clinical trials, and ARCA's general and administrative costs through the clinical trials' projected completion and potential commercialization. Considering the substantial time and costs associated with the development of Gencaro and rNAPc2 and the risk that ARCA may be unable to raise a significant amount of capital on acceptable terms, ARCA is also pursuing co-development and commercialization partnering opportunities with large pharmaceutical and/or specialty pharmaceutical companies and may pursue a strategic combination or other strategic transactions. If ARCA is unable to obtain sufficient financing or are unable to complete a strategic transaction, ARCA may discontinue its development activities on Gencaro or rNAPc2 or discontinue operations.

ARCA believes its cash and cash equivalents as of March 31, 2024 will be sufficient to fund its operations through the middle of fiscal year 2025. ARCA's review of its strategic options may impact this projection. Conducting a Phase 3 PRECISION-AF trial would likely require additional financing. However, changing circumstances may cause ARCA to consume capital significantly faster or slower than currently anticipated. ARCA has based these estimates on assumptions that may prove to be wrong, and ARCA could exhaust its available financial resources sooner than it currently anticipate; therefore, ARCA may have to raise additional capital for other clinical trials. Initiating any Phase 3 clinical trial of Gencaro will require additional financing.

ARCA's Strategy

ARCA's mission is to become a leading biopharmaceutical company developing precision targeted cardiovascular therapies to enhance therapeutic response, improve patient outcomes, and reduce healthcare costs. To achieve this goal, ARCA is pursuing the following strategies:

- *Evaluate strategic options.* In April 2022, ARCA's board of directors established the Special Committee and, subsequently retained Ladenburg Thalmann to evaluate the Strategic Review. In March 2024, ARCA terminated its engagement with Ladenburg Thalmann and retained Lucid Capital Markets to evaluate the Strategic Review. ARCA and Lucid have reviewed several potential strategic transactions and continue to evaluate further potential development of ARCA's existing assets, in order to maximize stockholder value. ARCA does not have a defined timeline for the strategic review process and the review may not result in any specific action or transaction. Following a comprehensive review, on April 3, 2024, ARCA, First Merger Sub, Second Merger Sub and Oruka, entered into Merger Agreement pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, First Merger Sub will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the merger and as part of the same overall transaction, the surviving corporation in the First Merger will merge with and into Second Merger Sub with Second Merger Sub continuing as a wholly owned subsidiary of ARCA and the surviving entity of the merger.

- *Advance the development of Gencaro for the treatment of AF in HF patients.* ARCA is planning a Phase 3 clinical trial for Gencaro as a therapy for AF in HF patients, focusing on patients with EF ≥ 40%, a patient population for whom few approved or effective drug therapies currently exist.

- *Partner the development of rNAPc2.* ARCA plans to pursue strategic development and partnering opportunities with commercial or government partners for rNAPc2 development and commercialization or expansion into clinical trials for other disease indications.

- *Build a cardiovascular pipeline.* ARCA's management, employees and consultants are experienced in cardiovascular research, molecular genetics and clinical development of cardiovascular therapies. ARCA is seeking to leverage this expertise to identify, acquire and develop other cardiovascular products or candidates, particularly those with potential for targeted development based on genetic or other biomarkers.

The above strategies are dependent upon ARCA's ability to obtain additional funding through the sale of public or private equity or debt securities, the completion of a strategic transaction, or a combination thereof. If ARCA is unable to secure additional funding or complete a strategic transaction, ARCA may not be able to continue development of Gencaro or rNAPc2, or to continue operations.

Atrial Fibrillation in Heart Failure

Market Background and Opportunity

Heart failure is a chronic condition in which the heart is unable to pump enough blood to meet the body's needs. HF has numerous serious consequences, including severe impacts on quality of life, increased hospitalizations, loss of economic productivity, and premature death. HF is a leading cause of death in the developed world, and despite the availability of multiple effective drug classes, mortality due to HF is increasing. According to the 2020 American Heart Association ("AHA") Heart Disease and Stroke Statistics, there were an estimated 6.2 million Americans aged 20 years or more with HF in 2016, projected to increase to between 8.3 million and 10.7 million by 2030. One of the fundamental classifications of heart failure is based on the percentage of blood in the left ventricle of the heart that is ejected with each heartbeat, known as EF. The spectrum of HF includes HF in which EF is 50% or more and is considered preserved ejection fraction, known as HFpEF; HF in which the EF is less than 40%, considered reduced ejection fraction ("HFrEF"); and HF in which the EF is at least 40%, but less than 50%, sometimes referred to as mid-range ejection fraction, known as HFmrEF. Together, HFmrEF and HFpEF, that is HF with EF ≥ 40%, comprise more than half of all chronic HF in the United States and Europe. In 2012, the economic cost of HF in the United States was estimated to be nearly $31 billion, of which two-thirds, or over $20 billion, was attributable to direct medical costs.

Atrial fibrillation, the most common sustained cardiac arrhythmia, is a serious disorder in which the normally regular and coordinated contraction pattern of the heart's two small upper chambers, or the atria, becomes irregular, rapid and uncoordinated. AF can have significant quality of life impacts and potentially serious medical consequences, including increasing the risk of stroke and other cardiovascular problems. In individuals with HF, AF contributes to the disease processes that lead to the progression of HF and worsening of clinical outcomes. AF is considered an epidemic cardiovascular disease and a major public health burden, similar to HF. The estimated number of individuals with AF globally in 2015 was 33.3 million. According to AHA Heart Disease and Stroke Statistics Reports from 2017-2020, the prevalence of AF in the United States was estimated to be 5.2 million people in 2015. In the European Union, the prevalence of AF was estimated to be 8.8 million (age 55 and over) in 2010. It is estimated that AF costs the U.S. economy about $6.0 billion annually.

AF and HF share many of the same risk factors and commonly occur together. It has been estimated that 30-60% of HF patients will also develop AF, with this incidence increasing in HF patients with higher EF; ARCA estimates that 40-60% of HF patients with EF ≥ 40% will also be diagnosed with AF.

Medical Need and Current Therapy

The goals of current medical therapy for AF are to provide anticoagulation to reduce the risk of stroke, and also either maintain sinus rhythm (known as rhythm control), or reduce the high heart rate caused by AF (known as rate control), in both cases to minimize patient symptoms and reduce the risk of further complications and disease progression. Unfortunately, the current treatment options for treating AF in patients with HF have significant limitations.

Beta-blockers are considered standard of care for the treatment of HF patients, including in patients with co-morbid AF. They are also viewed as foundational therapy to treat AF in HF patients for their ability to provide rate control. Their safety in this patient population is well established.

However, current beta blockers approved for HF patients are only modestly effective at providing rhythm control, and none are FDA approved for this indication. Importantly, none of these drugs have been shown to be effective for treating HF in patients with EF ≥ 40%, so they are currently used off-label in this setting. When used for rate control, these drugs can cause bradycardia, a condition in which the heart rate drops below a safe threshold, which often leads to dose reductions and potential loss of the drug's treatment effect. Furthermore, recent evidence indicates that the mortality and other clinical benefits of these beta blockers in heart failure patients are uncertain when sustained or permanent AF is present.

Anti-arrhythmic drugs are a drug class that is often prescribed to provide rhythm control. These drugs are frequently used in patients with both HF and AF when a rate control strategy using a beta blocker fails to control the patient's symptoms. However, these agents have significant safety issues. For example, in the United States, anti-arrhythmic drug therapy for AF used in addition to beta-blockers is generally confined to the drugs amiodarone and dofetilide, which have multiple safety and toxicity concerns. Because of these concerns, physicians treating HF patients seek to limit the use of these anti-arrhythmic drugs.

Non-pharmacologic interventions such as catheter ablation and electrical cardioversion (ECV), are also used to treat AF in patients with HF. Catheter ablation is now guideline-recommended in this patient population and its use is increasing. However, it is not a replacement for drug therapy; it is invasive, expensive and generally impermanent. Drug therapy, including beta blockers, is generally continued in patients post-ablation, both for rhythm control and for HF benefit. ECV is expensive and less permanent than ablation, but like ablation, post-ECV patients will generally remain on drug therapy to treat their AF and HF, including beta-blockers.

In light of the serious medical consequences presented by AF in the presence of HF as well as, the limitations of current therapies, ARCA believes there is an unmet need for a drug therapy that can provide greater rhythm control compared to the current standard of care; can reduce the need for toxic anti-arrhythmic drugs, catheter ablation, and electrical cardioversion; can provide effective rate control with a lower risk of treatment-limiting bradycardia; and can provide foundational beta-blocker benefits for HF. This need is particularly significant for HF patients with EF ≥ 40%, for whom there are few approved or Class I guideline-recommended drug therapies.

Gencaro Clinical Development

The GENETIC-AF Phase 2B Clinical Trial

GENETIC-AF enrolled 267 patients from the United States, Canada and Europe. The primary analysis compared the evidence of safety and efficacy of Gencaro versus an active comparator, TOPROL-XL. The primary endpoint of the trial was time to first event of AF/atrial flutter (AFL) or All Cause Mortality (ACM) during a 24-week follow-up period after the establishment of sinus rhythm. Randomized patients had an EF ≤ 55%, a history of AF in the past 6 months, and the beta-1 389 arginine homozygous genotype that ARCA believes responds best to Gencaro. Laboratory Corporation of America ("LabCorp") developed the genetic test, obtained an IDE from the FDA and provided the companion diagnostic test and services to support ARCA's GENETIC-AF clinical trial.

For the primary endpoint of time to AF recurrence, Gencaro demonstrated a similar treatment benefit in the overall population ($p = 0.961$) compared to the active comparator, TOPROL-XL. However, based on further analysis of the trial, ARCA believes it has identified a population that shows greater response to Gencaro compared to TOPROL-XL across multiple important clinical assessments, including the primary endpoint of time to AF recurrence, maintenance of normal sinus rhythm, cumulative AF burden, and AF-related clinical interventions and complications. ARCA plans to study this population in ARCA's Phase 3 clinical trial.

These further analyses of the GENETIC-AF population (shown in the table below) demonstrated that Gencaro, as compared to metoprolol, reduced AF burden, improved maintenance of sinus rhythm and lowered the need for additional rhythm control interventions.

Endpoint	Entire GENETIC-AF Cohort	
Time to 1st AF/AFL/ACM (Primary Endpoint)	**1.01 (neutral)**	(0.71, 1.42) p = 0.961 N = 267
Cumulative 24-week AF Burden (substudy)	**0.64 (↓36%)**	(0.46, 0.86) p = 0.002 N = 67
AF Burden at Week 24	**0.45 (↓55%)**	(0.39, 0.50) p < 0.001 N = 67
ECGs in Normal Sinus Rhythm	**1.39 (↓39%)**	(1.22, 1.58) p < 0.001 N = 257
AF Interventions (ECVs, Ablations, & Class 3 AA Drugs)	**0.68 (↓32%)**	(0.50, 0.91) p = 0.011 N = 257
Bradycardia prevalence (Buc. vs. met., VR < 60 bpm)	**0.39 (↓61%)**	(0.31, 0.49) P < 0.001 N = 256
Dose reductions (pts. w/bradycardia vs. non-b.)	**4.25 (↑4X)**	(2.06, 9.60) P < 0.001 N = 257

Time to first AF/AFL/ACM treatment effect = hazard ratio (95% CI). AF burden = % time in AF per day. Cumulative AF burden treatment effect = AUC ratio (i.e., AUC_{BUC}/AUC_{MET}) over 24-week follow-up period with significance assessed via null permutation. AFB at Week 24 = Instantaneous estimates of average daily AF burden at week 24 with comparison between groups expressed as the ratio of the estimates and tested for significance using a Wald test. Normal Sinus Rhythm = total number ECGs in sinus rhythm with ventricular rate ≥ 60 and ≤ 100 bpm during efficacy follow-up period. AF Interventions = ECV, ablation, or guideline-recommended antiarrhythmic use during efficacy follow-up period. Treatment effect for normal sinus rhythm, AF interventions and bradycardia = prevalence rate ratio (i.e., PRR_{BUC}/PRR_{MET}) modeled to test significance using Poisson regression.

Treatment with Gencaro was associated with a 36% reduction in cumulative AF burden over 24 weeks of follow-up compared to metoprolol, leading to a 55% reduction in AF burden at the end of 24 weeks. Consistent with the results in the device substudy, there was a 39% increase in the prevalence of ECGs demonstrating normal sinus rhythm in the overall study population. Treatment with Gencaro also led to a 32% lower utilization of adjunctive rhythm control therapies, including electrical cardioversion, catheter ablation and antiarrhythmic drug therapy. There was also a 61% reduction in bradycardia with Gencaro versus metoprolol. The consequence of bradycardia is a reduction in beta-blocker dose, which 4.2-fold higher in patients exhibiting bradycardia than without bradycardia.

The BEST Phase 3 Heart Failure Trial

The effect of Gencaro on heart failure endpoints in an advanced HFrEF population was evaluated in the 2,708 patient, placebo-controlled Phase 3 BEST clinical trial co-sponsored by the NHLBI and Department of Veterans Affairs. In addition to the parent population, BEST included a 1,040 patient DNA substudy that evaluated the effects of adrenergic receptor ("AR") polymorphisms on Gencaro effectiveness. The BEST trial was terminated early because, after positive mortality results from two HF trials involving other beta-blockers had been reported, a substantial number of BEST trial investigators concluded that it was unethical to continue to give placebo to BEST trial participants. ARCA's reanalysis of the BEST results in accordance with the FDA approved, pre-specified statistical analysis plans (which had not been performed by the sponsors of BEST) demonstrated a 13% risk reduction on the primary endpoint of ACM in the BEST trial with a p-value of 0.053. The risk reduction on HF clinical efficacy endpoints such as mortality and hospitalization ranged from 34% to 48% in this beta-1 389 arginine homozygous genotype. The DNA substudy revealed that Gencaro exhibited greater efficacy in patients homozygous for the beta-1 389 arginine homozygous genotype (*ADRB1* Arg389Arg), encoding for receptors that exhibit higher function and greater affinity for norepinephrine compared to the patients who did not have the beta-1 389 arginine homozygous genotype (i.e., beta-1 389 Gly carriers). In the 47% of BEST trial patients with a *ADRB1* Arg389Arg genotype Gencaro reduced ($p < 0.05$) the primary endpoint of mortality or heart transplantation by 43%, all-cause mortality, cardiovascular mortality, heart failure hospitalizations, heart failure progression, development of atrial

fibrillation, and incidence of ventricular tachycardia or ventricular fibrillation with degrees of reduction (effect sizes) ranging from 34% (heart failure progression) to 74% (atrial fibrillation). Beta-1 389 Gly carriers had no statistically significant reduction in any endpoint.

Pharmacology and Pharmacogenetics of Gencaro

Gencaro (bucindolol hydrochloride) is a nonselective (blocks both beta-1 and beta-2 adrenergic receptors) beta- receptor blocking agent with mild vasodilator properties. This combination of properties initially placed Gencaro in the "3rd Generation" category of beta-blockers that is based on the strategy of their development. When its pharmacogenetic properties were elucidated and its development became pharmacogenetically based, ARCA subsequently considered Gencaro a fourth-generation beta-blocker. The dominant beta-receptor on human heart cells is the beta-1, with smaller number of beta-2 receptors present. Importantly, beta-2 receptors are also present on adrenergic nerve terminals in the heart, where they regulate the release of the neurotransmitter norepinephrine ("NE"). The blocking of these receptors prevents them from binding with other molecules, primarily NE, which activates these receptors to release more NE. ARCA believes Gencaro has two unique anti-adrenergic properties not possessed by other beta-blockers currently approved for the treatment of HF: (1) it is moderately sympatholytic, i.e., by blocking beta-2 receptors on adrenergic nerves it lowers adrenergic drive to a level that can be detected on measurements of central or systemic venous NE levels, and, (2) through "inverse agonism," as it binds to a polymorphic "389 arginine" form of heart cell beta-1 receptor in isolated human heart preparations it promotes the inactivation of the active-state of this receptor. These properties, as described below, were observed to interact with receptor polymorphisms in such a way that ARCA believes targeting a specific genotype of the beta-1 receptor gene (known as ADRB1) could improve the therapeutic response of patients. ARCA believes Gencaro's efficacy is enhanced in patients with the beta-1 389 arginine homozygous genotype (*ADRB1* Arg389Arg), which has been shown to be present in approximately 50% of the North American and European general populations. To date no other beta-blocker has been shown to possess pharmacological sympatholysis, or beta-1 AR inverse agonism in human heart preparations. ARCA believes that Gencaro's sympatholytic and beta-1 AR inverse agonist properties contribute to its enhanced lowering of HF and arrhythmia event rates in patients who have an *ADRB1* Arg389Arg genotype.

Gencaro Clinical and Regulatory Strategy

ARCA intends to advance Phase 3 clinical development of Gencaro as a therapy for HF patients with AF, focusing on HF with EF ≥ 40%. The regulatory strategy for Gencaro is to obtain an initial approval to treat AF in a HF population with EF ≥ 40% and ≤ 55% and the beta-1 389 arginine homozygous genotype; the population demonstrating the greatest efficacy in the Phase 2B GENETIC-AF clinical trial. Indication expansion for Gencaro will focus on genotype-positive HF patients with EF >55%, which ARCA believes would substantially expand the addressable patient population, if successful. ARCA has obtained an SPA agreement with the FDA to conduct a single, 400-patient Phase 3 clinical trial that, if successful at a statistical threshold of $p \leq 0.01$, may be sufficient to support an NDA for the marketing approval of Gencaro.

The clinical trial design is similar to GENETIC-AF, including the active comparator, TOPROL-XL, and the primary endpoint of time to AF or atrial flutter ("AF/AFL") recurrence or mortality during a 6-month follow-up period. The planned clinical trial will use a standard significance criterion of $p \leq 0.05$ for the primary endpoint; however, if the primary endpoint is significant with a p-value ≤ 0.01, then this single Phase 3 clinical trial may be sufficient for regulatory approval per the SPA agreement. The NDA submission for Gencaro is eligible for expedited review in the United States under the Fast Track development program designation that was granted to Gencaro in 2015. Based on the use of this same endpoint in GENETIC-AF it is anticipated that ≥90% of the primary events will be due to recurrent AF/AFL. Secondary objectives will examine other important endpoints, such as AF burden and AF treatment-related interventions. The planned clinical trial will use a standard significance criterion of $p \leq 0.05$ for the primary endpoint; however, if the primary endpoint is significant with a p-value ≤ 0.01, then this single Phase 3 clinical trial may be sufficient for regulatory approval per the SPA agreement.

The Gencaro Test

If approved, ARCA believes that Gencaro will be the first cardiovascular drug to be integrated with a companion diagnostic. This would be a test for the patient genotype approved for the drug, and could be performed by a variety of laboratory processes or platforms.

In collaboration with LabCorp, ARCA developed one such genetic test, obtained an IDE from the FDA and used this test in ARCA's GENETIC-AF clinical trial. ARCA retains all rights to this particular test platform, and ARCA believes it could be used for commercialization. Future clinical trials of Gencaro, including PRECISION-AF, are expected to use a similar diagnostic test to identify the patient's receptor genotype (the "Gencaro Test"). ARCA believes the Gencaro Test could be developed and commercialized through one or more diagnostic providers, by the company potentially marketing Gencaro, or a combination of approaches. ARCA also believes that point of care genetic tests, which could be performed during the patient's visit to the physician, will be part of the commercialization strategy for Gencaro.

Development Pipeline

ARCA's lead product candidate is Gencaro™ (bucindolol hydrochloride) for the treatment of atrial fibrillation in patients with chronic heart failure.

Gencaro, is a potential treatment for HF patients with AF. Gencaro (bucindolol hydrochloride) is a pharmacogenetic-targeted beta-adrenergic receptor antagonist with mild vasodilator properties that is considered a fourth-generation beta-blocker based on its novel pharmacogenetic profile. ARCA believes the treatment of AF in HF patients with EF ≥ 40% is an unmet medical need with a near term and straightforward regulatory pathway.

ARCA's plan is to obtain an initial approval for Gencaro to treat AF in a genotype specific HF population; HF patients with EF between 40% and 55% in patients with the genotype ARCA studied in the Phase 2B GENETIC-AF clinical trial. ARCA believes that, if approved, there are additional indication expansion opportunities for Gencaro in other AF populations, including expanding the patient population to selected HF patients with EF >55%. ARCA continues to evaluate the feasibility and potential timing for initiating PRECISION-AF relative to the COVID-19 pandemic. ARCA may seek additional capital or a strategic partnership for the Phase 3 clinical trial and potential commercialization of Gencaro.

ARCA plans to pursue strategic development and partnering opportunities with commercial or government partners for rNAPc2 development and commercialization or expansion into clinical trials for other disease indications.

ARCA also has exclusive pharmacogenetic and other patent rights to drug targets and candidates that have potential indications in cardiovascular disease, oncology and other therapeutic areas. ARCA may seek partners to assist it in the development of these candidates or who may license them. ARCA may also seek funds to advance the development of the compounds on ARCA's own.

Financial Resources

To support the continued development of Gencaro and rNAPc2, ARCA will need additional financing to fully fund any clinical trials, and its general and administrative costs through the clinical trials' projected completion and potential commercialization. Considering the substantial time and costs associated with the development of Gencaro and rNAPc2 and the risk that ARCA may be unable to raise a significant amount of capital on acceptable terms, ARCA is also pursuing co-development and commercialization partnering opportunities with large pharmaceutical and/or specialty pharmaceutical companies and may pursue a strategic combination or other strategic transactions. If ARCA is unable to obtain sufficient financing or is unable to complete a strategic transaction, ARCA may discontinue its development activities on Gencaro or rNAPc2 or discontinue operations.

ARCA believes ARCA's cash and cash equivalents as of March 31, 2024 will be sufficient to fund ARCA's operations through the middle of fiscal year 2025. ARCA's review of its strategic options may impact this projection. Conducting a Phase 3 PRECISION-AF trial would likely require additional financing. However, changing circumstances may cause ARCA to consume capital significantly faster or slower than currently anticipated. ARCA has based these estimates on assumptions that may prove to be wrong, and ARCA could exhaust its available financial resources sooner than it currently anticipate; therefore, ARCA may have to raise additional capital for other clinical trials. Initiating any Phase 3 clinical trial of Gencaro will require additional financing.

Licensing and Royalty Obligations

Gencaro

ARCA's patent portfolios relating to Gencaro, including a patent issued in 2021, are either owned by ARCA or are subject to licenses that impose no royalty obligations or milestone payments relating to the further development, approval and commercialization of Gencaro.

ARCA is also a party to licenses for patents relating to Gencaro that are now expired. ARCA believes that there are no future milestone or royalty obligations that will be payable under these licenses.

Competition

Gencaro

Current HF treatments include three beta-blockers approved for HF in the United States. However, their efficacy in providing control of the arrhythmia caused by AF, or rhythm control, is only mild. It is also now acknowledged that evidence is lacking that the approved beta-blockers provide outcome benefits for patients who develop permanent AF. Furthermore, these drugs have not demonstrated efficacy for HF patients with EF ≥ 40%, which is the focus of the Gencaro development program. Current AF treatments include pharmaceutical, procedural or device intervention. There are several antiarrhythmic drugs approved by the FDA for the treatment and/or prevention of recurrent AF. However, these drugs have safety and/or administration concerns and all but one have contraindications or label warnings regarding their prescription in patients with HF.

Drugs that are currently approved or used for the treatment or prevention of AF in HF either have not demonstrated efficacy in these patients, or have notable risks due to adverse side effects or lack sufficient efficacy. Therefore, in HF, and specifically in HF patients with EF ≥ 40%, ARCA believes there is a substantial unmet medical need for AF therapies that are more effective and have fewer side effects than those currently available. ARCA believes that Gencaro's treatment of AF in HF patients could provide a more effective and safer pharmacotherapy than treatments currently used in these patients.

The pharmaceutical industry is highly competitive. ARCA faces significant competition from pharmaceutical companies and biotechnology companies that are researching and selling products designed to treat cardiovascular conditions. Most of these companies have significantly greater financial, product development, manufacturing, and commercial resources than ARCA has.

If approved, some of the drugs which Gencaro would potentially compete with are generic in the United States and are used, though not approved or shown to be effective, for the treatment of AF or in HF patients with EF ≥ 40%. Gencaro could be priced at a premium compared to some of these therapies. In addition, Gencaro, if approved, would be prescribed in conjunction with a diagnostic test, adding additional procedures to the process of prescribing Gencaro, which could make it more difficult for ARCA to compete against existing or future therapies.

Manufacturing and Product Supply

Gencaro is a small molecule drug with an established manufacturing history. Multiple manufacturers of both the active pharmaceutical ingredients ("API") and drug product have successfully produced Gencaro for use in clinical trials over the course of its clinical development. ARCA outsources all manufacturing and analytical testing of the Gencaro API and drug product. ARCA has selected third-party contract manufacturing organizations on the basis of their technical and regulatory expertise. ARCA's approach with its contract manufacturing partners has been to replicate the manufacturing processes that were used to support the prior pivotal clinical trial with Gencaro, and to minimize any changes from these baseline processes, thereby reducing technical and regulatory risk. For API production, ARCA contracted with Groupe Novasep which completed the drug substance registration batches successfully. The resulting drug substance was used to manufacture the drug product used in the clinical trial material for the Phase 2B clinical trial and is expected to be used in the proposed Phase 3 clinical trial.

For drug product production, ARCA has contracted with Patheon, Inc. to manufacture the Gencaro tablets. Gencaro is produced in a tablet form, utilizing standard solid oral dosage processing techniques. Six separate dosage strengths have been manufactured, with the maximum recommended dose of 100mg twice daily. Registration

batches were successfully completed by Patheon, Inc. and tablets from these runs were placed in cGMP storage to supply clinical trials. In addition, ARCA contracted with a separate service provider for packaging and distribution of its clinical trial materials.

Government Regulation

Governmental authorities in the United States at the federal, state, and local levels and foreign countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, promotion, advertising, marketing, distribution, sampling, and import and export of pharmaceutical and medical device products. In the United States, the FDA regulates these activities at the federal level pursuant to the Federal Food Drug and Cosmetic Act ("FDCA") and the regulations promulgated thereunder. In Canada, Health Canada regulates these activities. In Europe, the Competent Authorities and Ethics Committees of the respective countries regulate these activities. In South America, the Health Authorities and Ethics Committees of their respective countries regulate these activities. ARCA anticipates that all of its product candidates will require regulatory approval by governmental agencies prior to commercialization. The process of obtaining approval and the subsequent process of maintaining compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. In addition, these statutes, rules, regulations and policies may change and ARCA's products may be subject to new legislation or regulations. Both before and after approval or clearance, failure to comply with the requirements of the FDA and other state and federal statutes can lead to significant penalties or could disrupt ARCA's ability to manufacture and sell these products. In addition, the FDA could refuse to provide certificates needed to export ARCA's products if the agency determines that ARCA is not in compliance.

Premarket Approval of Drugs

FDA approval is required for marketing of any new drug, dosage form, indication, or strength. The steps required before new human therapeutic drug products are marketed in the United States and foreign countries include rigorous preclinical and clinical testing and other approval requirements by regulatory agencies, such as the FDA and comparable agencies in foreign countries. There is no guarantee that products will be approved in a specific timeframe or at all.

Preclinical Phase. Preclinical studies are generally conducted in the laboratory to identify potential drug candidates and to evaluate their potential efficacy and safety. These studies include laboratory evaluation of product chemistry, formulation and stability, as well as studies to evaluate short and long-term toxicity in animals. Preclinical studies are governed by numerous regulations, including but not limited to FDA's Good Laboratory Practices.

Clinical Phase. Before human clinical trials can commence, an Investigational New Drug ("IND") application, submitted to FDA must become effective. For an IND to become effective, the applicant must submit, among other things, information on design of the proposed investigation, reports necessary to assess the safety of the drug for use in clinical investigation, and information on the chemistry and manufacturing of the drug, controls available for the drug, and primary data tabulations from animal or human studies. The clinical phase of development involves the performance of human studies, including adequate and well-controlled human clinical trials to establish the safety and efficacy of the product candidate for each proposed indication. Typically, clinical evaluation involves three sequential phases, which may overlap. During Phase 1, clinical trials are conducted with a relatively small number of subjects or patients to determine the early safety profile of a product candidate, as well as dose tolerance, absorption, and the pattern of drug distribution and drug metabolism. Phase 2 trials are conducted with groups of patients afflicted by a specific target disease to determine preliminary efficacy, optimal dosages and dosage tolerance and to identify possible adverse effects and safety risks. In Phase 3, larger-scale, multi- center trials are conducted with patients afflicted with a specific target disease over a longer term to confirm Phase 2 results and provide reliable and conclusive data supporting efficacy and safety of a drug as required by regulatory agencies for drug approval. The conduct of clinical trials is subject to extensive regulation. FDA may delay or suspend clinical trials through clinical holds.

NDA Submission. In the United States, the results of preclinical and clinical testing along with chemistry, manufacturing and controls information, are submitted to the FDA in the form of a NDA. Under the current Prescription Drug User Fee Act after submission of an NDA and payment, or waiver, of the required fee, the FDA's goal is to review most standard NDAs within 10 months from the time that a sponsor's application is accepted as

filed by the FDA, which can occur within a 60-day window following the initial submission of the application. At the end of the 10 months, the FDA's goal is to issue a "complete response," or approve the NDA. While FDA's goal is to issue a complete response within 10 months, the process may take longer than 10 months, particularly if multiple review cycles are required. Gencaro has been granted Fast Track Designation which allows for a rolling review of a marketing application. A rolling review allows FDA to consider reviewing portions of an NDA before the sponsor submits the complete application.

In responding to an NDA, the FDA may grant marketing approval or deny the application if the FDA determines that the application does not satisfy the statutory and regulatory approval criteria. A denial may include a request for additional information, including additional clinical data and/or an additional Phase 3 clinical trial. Data from clinical trials are not always conclusive and FDA may interpret data differently than ARCA interprets data. Under the Food and Drug Modernization Act of 1997, the FDA is authorized to approve a drug based on a single adequate and well-controlled study if such study and other confirmatory data are sufficient to establish the drug's effectiveness. However, it has long been the FDA's general position that the standard of proof of a drug's effectiveness generally requires at least two well-controlled and adequate Phase 3 clinical studies demonstrating statistically significant results as compared to a placebo or active control (with p-values of less than 0.05) with respect to the primary endpoint or endpoints of the trial.

In addition, in accordance with current FDA law and regulations, the FDA may refer a drug to an advisory committee for review prior to approval. Most new compounds are referred to an FDA advisory committee, which could add additional time to the review process. There is no guarantee that the advisory committee will recommend approval of a drug candidate. In some cases, FDA may require completion, within a specified time period, of additional clinical studies after approval, referred to as Phase 4 clinical studies, to monitor the effect of a new product and may prevent or limit future marketing of the product based on the results of these post-marketing programs. Furthermore, prior to granting approval, the FDA generally conducts an inspection of the facilities, including outsourced facilities that will be involved in the manufacture, production, packaging, testing and control of the drug substance and finished drug product for compliance with current Good Manufacturing Practice ("cGMP") requirements.

If the FDA approves the NDA, the sponsor is authorized to begin commercialization of the drug in accordance with the approval. Even if the FDA approves the NDA, the FDA may decide later to suspend or withdraw product approval if compliance with regulatory standards is not maintained or if safety problems are recognized after the product reaches the market. In addition, the FDA requires surveillance programs to monitor approved products that have been commercialized, and the agency has the power to require additional clinical studies, to require changes in labeling or to prevent further marketing of a product based on the results of these post-marketing programs. The FDA also has authority to request implementation of a risk evaluation and mitigation strategy ("REMS") that could restrict distribution of Gencaro or require ARCA to provide additional risk information to prescribers. Whether or not FDA approval has been obtained, approval of a product candidate by comparable foreign regulatory authorities is necessary prior to the commencement of marketing of a product candidate in those countries. The approval procedures vary among countries and can involve additional testing. The time required to obtain approval may differ from that required for FDA approval.

Post-approval Compliance. If regulatory approval for a drug or medical device is obtained, the product and the facilities manufacturing the product are subject to periodic inspection and continued regulation by regulatory authorities, including compliance with cGMP, as well as labeling, advertising, promotion, recordkeeping, and reporting requirements, including the reporting of adverse events. In addition, the FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for labeling, promotion to health care professionals, direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the Internet. Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Companies are responsible for compliance with such requirements and would be responsible to ensure that all contract manufacturing organizations who perform work for them also comply with such requirements. Similarly, if a drug manufacturer hires contract sales representatives or consultants to promote its products, such organizations or individuals must comply with all of the same requirements applicable to the drug manufacturer. The FDA regularly inspects companies to determine compliance with cGMPs and other post-market requirements. Failure to comply with statutory requirements and the FDA's regulations can result in a variety of administrative or enforcement actions, including but not limited to an FDA Form 483 (which is issued by the FDA at the conclusions of an inspection when an investigator has observed

any conditions that may constitute violations), a public warning letter, suspension or withdrawal of regulatory approvals, product recalls, product detentions, refusal to provide export certificates, seizure of products and criminal prosecution.

Drug Price Competition and Patent Term Restoration Act of 1984. Under the Drug Price Competition and Patent Term Restoration Act of 1984, also known as the Hatch-Waxman Act, Congress created an abbreviated FDA review process for generic versions of pioneer (brand name) drug products. The Hatch-Waxman Act also provides for patent term restoration and the award, in certain circumstances, of non-patent marketing exclusivities.

Generic Drug Approval. The Hatch-Waxman Act established an abbreviated FDA review process for drugs that are shown to be equivalent to approved pioneer drugs. Approval for a generic drug is obtained by filing an abbreviated NDA, or ANDA. Generic drug applications are "abbreviated" because they generally do not include clinical data to demonstrate safety and effectiveness. Instead, an ANDA applicant must establish that its product is bioequivalent to an approved drug and that it is the same as the approved drug with respect to active ingredient(s), route of administration, dosage form, strength and recommended conditions of use (labeling). The FDA will approve the generic as suitable for an ANDA if it finds that the generic does not raise questions of safety and effectiveness as compared to the pioneer drug. A drug is not eligible for ANDA approval if the FDA determines that it is not equivalent to the pioneer drug or if it is intended for a different use. Any applicant who files an ANDA seeking approval of a generic version of an approved drug listed in FDA's Approved Drug Products with Therapeutic Equivalence Evaluations (the "Orange Book") must certify to the FDA that (i) no patent information on the drug has been listed in the Orange Book; (ii) that each patent listed in the Orange Book for that approved drug has expired; (iii) FDA should approve the product on the date on which a listed patent expires; or (iv) that such patent is invalid, unenforceable or will not be infringed by the manufacture, use or sale of the generic drug. If the ANDA applicant makes a certification pursuant to (iv) above, or a Paragraph IV certification, and the NDA holder files an infringement suit against the ANDA applicant within 45 days of receiving the Paragraph IV notification, the NDA owner is entitled to an automatic 30-month stay of FDA's ability to approve the ANDA. This 30-month stay will end early upon any decision by a court that the patent is invalid, unenforceable or not infringed by the generic drug.

Patent Term Extension. While the term of a U.S. patent is generally 20 years from the earliest priority date of a patent application (excluding a provisional patent application), a U.S. patent that covers subject matter requiring regulatory approval to market is eligible for an extension of that patent term. The Hatch-Waxman Act provides for the restoration of a portion of the patent term lost during product development and FDA review of an application. Patent Term Extension ("PTE"), extends the term of an issued patent for generally (i) the length of the FDA approval process, i.e., the complete period of NDA review, and (ii) half of the time spent in clinical trials, i.e., the IND period. However, the maximum period of restoration cannot exceed five years, or restore the total remaining term of the patent to greater than 14 years from the date of FDA approval of the product.

Under 35 U.S.C. § 156(a), a patent covering a method of using a product is eligible for PTE if the following conditions are met:

1) the patent has not yet expired;

2) the patent was not previously extended;

3) the patent owner submits an application for PTE that includes all necessary supporting information within 60 days of FDA approval;

4) the product was subject to regulatory review before its commercial marketing or use; and

5) the drug application is for the first permitted commercial marketing of the product.

ARCA believes that, if Gencaro is approved by the FDA, one of its U.S. patents may be eligible for PTE, which could provide up to 5 years of additional patent life for that patent based on ARCA's current clinical trial plans.

A Supplementary Protection Certificate ("SPC") is a form of patent term extension that is available for pharmaceutical products approved for marketing in the European Union ("EU"). ARCA obtained a patent in Europe on methods for using Gencaro that is similar to one of its U.S. patents and this EU patent is in force in certain countries in Europe, including the United Kingdom, France, Germany, Italy and Spain. ARCA believes that this

patent may be eligible for an SPC, if Gencaro is approved for marketing in any European country in which the patent is in force, which could provide up to five years of additional patent life. ARCA believes that its patents in other jurisdictions may also be eligible for similar term extensions.

Non-Patent Marketing Exclusivities. Separate and apart from patent protection, the Hatch-Waxman Act entitles approved drugs to various periods of non-patent statutory protection, known as marketing exclusivity. The Hatch-Waxman Act provides five years of "new chemical entity" marketing exclusivity to the first applicant to gain approval of an NDA for a product that contains an active moiety not found in any other approved product. This exclusivity means that another manufacturer cannot submit an ANDA or 505(b)(2) NDA until the marketing exclusivity period ends. This exclusivity protects the entire new chemical entity franchise, including all products containing the active ingredient for any use and in any strength or dosage form, but will not prevent the submission or approval of stand-alone NDAs where the applicants have conducted their own clinical studies to demonstrate safety and effectiveness. There is an exception, however, for a competitor that seeks to challenge a patent with a Paragraph IV certification. Four years into the five-year exclusivity period, a manufacturer who alleges that one or more of the patents listed with the NDA is invalid, unenforceable or not infringed may submit an ANDA or 505(b)(2) NDA for a generic or modified version of the product.

The Hatch-Waxman Act also provides three years of "new use" marketing exclusivity for the approval of NDAs, and supplements, where those applications contain the results of new clinical investigations (other than bioavailability studies) essential to the FDA's approval of the applications. Such applications may be submitted for new indications, dosage forms, strengths, or new conditions of use of approved products. So long as the studies are essential to the FDA's approval or were conducted by or for the applicant, this three-year exclusivity prohibits the final approval of ANDAs or 505(b)(2) NDAs for products with the specific changes associated with those studies. It does not prohibit the FDA from approving ANDAs or 505(b)(2) NDAs for other products containing the same active ingredient, without those changes.

Similar non-patent market exclusivity is provided for in the EU and other international jurisdictions. ARCA believes that, if approved in the EU, Gencaro may be eligible for ten years of market exclusivity in the EU, measured from the date of approval there.

FDA Premarket Review of Medical Devices

Unless an exemption applies, each medical device that a company wishes to market in the United States requires either approval of a premarket approval application ("PMA"), or clearance of a premarket notification, commonly known as a "510(k)" from the FDA. The FDA classifies medical devices into one of three classes. Devices deemed to pose lower risks are placed in either class I or II, which may require the manufacturer to submit to the FDA a 510(k) requesting permission to commercially distribute the device. Clearance of a 510(k) usually requires between three months and one year from the time of submission of the 510(k), although the process may take longer. The FDA's 510(k) clearance procedure is less rigorous than the PMA approval procedure, but is available only to companies who can establish that their device is substantially equivalent to a legally-marketed "predicate" device that was (i) on the market prior to the enactment of the Medical Device Amendments of 1976, (ii) reclassified from Class III to Class II, or (iii) has been cleared through the 510(k) procedure. 510(k)s must typically be supported by performance data, including preclinical data, bench testing, and in some cases, clinical data. Some low risk devices are exempted from this requirement. Devices deemed by the FDA to pose the greatest risks, or for which there is no predicate, are placed in class III, and require a PMA.

PMA Pathway. Generally, a PMA must be supported by extensive data and valid scientific evidence, including, but not limited to, technical, preclinical, clinical trials, manufacturing and labeling to demonstrate to the FDA's satisfaction a reasonable assurance of the safety and effectiveness of the device for its intended use. After a PMA is sufficiently complete, the FDA will accept the application and begin an in-depth review of the submitted information and will generally conduct a pre-approval inspection of the manufacturing facility or facilities to ensure compliance with FDA's QSR. By statute, the FDA has 180 days to review the "accepted application", although, generally, review of the application can take between one and three years, and it may take significantly longer. The PMA application process can be expensive, and there is a substantial "user fee" that must be paid to FDA in connection with the submission of a PMA application. If the FDA's evaluation of the PMA application or the manufacturing facility is not favorable, the FDA may deny approval of the PMA application or issue a "not approvable" letter. The FDA may also require additional clinical trials, which can delay the PMA approval process by several years. In addition, if FDA discovers that an applicant has

submitted false or misleading information, FDA may refuse to review submissions until certain requirements are met pursuant to its Application Integrity Policy. If the FDA approves the PMA, it may place restrictions on the device. After the PMA is approved, if significant changes are made to a device, its manufacturing or labeling, a PMA supplement containing additional information must be filed for prior FDA approval. PMA supplements often must be approved by the FDA before the modification to the device, the labeling, or the manufacturing process may be implemented. Delays in receipt of or failure to receive such clearances or approvals, the loss of previously received clearances or approvals, or the failure to comply with existing or future regulatory requirements could have a material adverse effect on ARCA's business, financial condition and results of operations.

Clinical Trials. Clinical trials are generally required to support a PMA application and are sometimes required for 510(k) clearance. These trials generally require an IDE application approved in advance by the FDA for a specified number of patients, unless the proposed study is deemed a non-significant risk study, which is eligible for an exemption from the IDE requirements. The IDE application must be supported by appropriate data, such as animal and laboratory testing results. Clinical trials may begin if the IDE application is approved by the FDA and the appropriate IRBs at the clinical trial sites. Submission of an IDE application does not give assurance that the FDA will issue the IDE. If the IDE application is approved, there can be no assurance the FDA will determine that the data derived from the trials support the safety and effectiveness of the device or warrant the continuation of clinical trials. An IDE supplement must be submitted to and approved by the FDA before a sponsor or investigator may make a change to the investigational plan in such a way that may affect its scientific soundness, study indication or the rights, safety or welfare of human subjects. The trial must also comply with the FDA's regulations, including the requirement that informed consent be obtained from each subject. Even if a trial is completed, the results of clinical testing may not adequately demonstrate the safety and efficacy of the device or may otherwise not be sufficient to obtain FDA clearance to market the product in the United States.

In Vitro Diagnostic Companion Diagnostic Devices. The FDA has described *in vitro* diagnostics ("IVD") companion diagnostic devices as in vitro diagnostic devices that provide information that is essential for the safe and effective use of a corresponding therapeutic product. The use of an IVD companion diagnostic device with a particular therapeutic product is stipulated in the instructions for use in the labeling of both the diagnostic device and the corresponding therapeutic product, as well as in the labeling of any generic equivalents of the therapeutic product. An IVD companion diagnostic device could be used to (i) identify patients who are most likely to benefit from a particular therapeutic product; (ii) identify patients likely to be at increased risk for serious adverse reactions as a result of treatment with a particular therapeutic product; or (iii) monitor response to treatment for the purpose of adjusting treatment (e.g., schedule, dose, discontinuation) to achieve improved safety or effectiveness. Although FDA's regulation of IVD companion diagnostic devices is evolving and implemented on a case-by-case basis, FDA's stated policy for a novel therapeutic product is that an IVD companion diagnostic device should be developed and approved or cleared contemporaneously to support the therapeutic product's safe and effective use. The clinical performance and clinical significance of the IVD companion diagnostic device is to be established using data from the clinical development program of the corresponding therapeutic product. FDA recognizes, however, that there may be cases where contemporaneous development may not be possible. With respect to the Gencaro Test, there is no assurance that ARCA will be able to develop and obtain approval or clearance contemporaneously with Gencaro. Failure to develop the Gencaro Test or obtain clearance or approval could delay approval of Gencaro, if FDA regards the Gencaro Test as an IVD companion diagnostic test that is essential to the safe and effective use of Gencaro.

Continuing Regulation. After a device is placed on the market, numerous regulatory requirements apply to the manufacturer, or holder of a PMA approval. Unless subject to an exemption, medical devices distributed in the United States must be manufactured in compliance with the FDA's QSRs and current good manufacturing practices. These regulations govern the manufacturing process, including design, manufacture, testing, release, packaging, distribution, documentation and purchasing, as well as complaint handling, corrective and preventative actions and internal auditing. In complying with the QSRs, manufacturers must expend significant time, money and effort. Companies are also subject to other post-market and general requirements, including but not limited to product listing and establishment registration, post-market surveillance requirements, limitations on promotion, and requirements for recordkeeping and reporting of certain adverse events, malfunctions, corrections and removals. As discussed above, FDA regularly inspects companies to assess compliance with the QSRs and other post-market requirements. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, and potential civil and criminal penalties. As part of such arrangement, ARCA will seek to have the diagnostic company take responsibility for compliance with the FDA's device approval and on-going regulatory requirements.

International Marketing Approvals. International sales of medical devices are subject to foreign government regulations, which vary substantially from country to country and are subject to change. The time required to obtain approval by a foreign country may be longer or shorter than that required for FDA clearance or approval, and the requirements may differ.

Other Regulatory Requirements. ARCA is also subject to various federal, state and local laws, regulations and recommendations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use and disposal of hazardous or potentially hazardous substances, including radioactive compounds and infectious disease agents, used in connection with its work. The extent and character of governmental regulation that might result from future legislation or administrative action cannot be accurately predicted.

Medical Device Tax

In March 2010, the U.S. Congress adopted and President Obama signed into law comprehensive health care reform legislation. Among other initiatives, these laws impose significant new taxes on medical device makers in the form of a 2.3% excise tax on U.S. medical device sales, with certain exemptions, beginning on January 1, 2013. On January 22, 2018, legislation was enacted suspending the medical device tax in 2018 and 2019. In December 2019, a permanent repeal of the medical device tax was enacted. The Gencaro Test is likely to be subject to this tax if this tax is reinstated in the future.

Intellectual Property

The future success of ARCA's business will partly depend on its ability to maintain market exclusivity for its product candidates, if approved, in the United States and important international markets, and for other products or product candidates that ARCA may acquire or develop. ARCA will rely on statutory protection, patent protection, trade secrets, know-how, and in-licensing of technology rights to maintain protection for ARCA's products.

Gencaro

ARCA believes that Gencaro, if approved, will have market exclusivity in the United States and in major international markets. ARCA recently obtained a patent in the United States for the use of Gencaro for the patient population ARCA plans to study in the Phase 3 pivotal trial. ARCA has filed similar patent applications in international jurisdictions. If Gencaro is approved by the FDA or international regulatory agencies based on this planned clinical development, ARCA believes that the commercialization of Gencaro will have patent protection extending into 2039.

ARCA has an existing patent portfolio of United States and international patents covering the use of Gencaro for various cardiovascular indications in the genetic population it plans to study in Phase 3, that ARCA believes will provide additional patent protection.

In addition to patent protection, Gencaro will qualify as a new chemical entity and if approved will have data protection in the United States and other jurisdictions in which it is approved.

ARCA also has other patent rights in additional drug candidates having possible indications in cardiovascular disease, oncology, and other therapeutic areas; these are in both early and later stages of development. ARCA may seek collaborators to assist it in the development of these candidates or it may seek to raise funds to advance the development of the compounds on its own.

Information about ARCA's Executive Officers

Information relating to ARCA's executive officers is included under "*ARCA's Directors, Executive Officers and Corporate Governance*" in the proxy statement/prospectus and such information is incorporated herein by reference.

Human Capital Management

As of March 31, 2024, ARCA had 5 employees, 4 of which are full-time. None of ARCA's employees are represented by any collective bargaining unit. ARCA believes that it maintains good relations with its employees.

Information relating to compensation of ARCA executive officers is included in "*ARCA's Executive Compensation*" of this proxy statement/prospectus and such information is incorporated herein by reference. The structure of ARCA's compensation programs balances incentive earnings for both short-term and long-term performance. ARCA is committed to providing comprehensive benefit options and offering benefits that will allow ARCA's employees and their families to live healthier and more secure lives. Some examples are employees are eligible for health insurance, prescription drug benefits, dental insurance, vision insurance, life insurance, disability insurance, health savings accounts, flexible spending accounts, paid and unpaid leaves, a retirement plan and life and disability/accident coverage. ARCA also offers a variety of voluntary benefits that allow employees to select the options that meet their needs, including hospital indemnity insurance, accident insurance and critical illness insurance.

ARCA continually monitors employee turnover rates as its success depends upon retaining its highly trained personnel. ARCA believes the combination of competitive compensation and career growth and development opportunities have helped increase employee tenure and reduce voluntary turnover. The average tenure of ARCA's employees, as of March 31, 2024, was approximately eleven years and approximately 40% of ARCA's employees, as of March 31, 2024, have been employed by ARCA for more than ten years.

ARCA's Corporate Information

On January 27, 2009, ARCA completed a business combination between Nuvelo, Inc., a corporation originally incorporated in 1992, and its subsidiary, ARCA biopharma, Inc. Immediately following the business combinations, ARCA changed its name from Nuvelo, Inc. to ARCA biopharma, Inc. ARCA's principal offices are located in Westminster, Colorado.

ARCA files its annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13(a) or 15(d) of the Exchange Act electronically with the SEC. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is *http://www.sec.gov*.

You may obtain a free copy of ARCA's annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports on ARCA's website at *http://www.arcabiopharma.com* on the earliest practicable date following the filing with the SEC or by contacting the Investor Relations Department at ARCA's corporate office by calling (720) 940-2100. Information found on ARCA's website is not incorporated by reference into this report.

Properties and Facilities

ARCA's headquarters facility consists of approximately 5,200 square feet of office space in Westminster, Colorado, of which approximately 5,200 square feet is leased until September 2024, after which ARCA can continue to lease on a month-to-month basis. ARCA believes that this facility is adequate to meet its current needs.

Legal Proceedings

From time to time, ARCA may become involved in legal proceedings. Except for as disclosed herein, ARCA is not currently a party to or aware of any proceedings that it believes will have, individually or in the aggregate, a material adverse effect on its business, financial condition or results of operations. Regardless of outcome, litigation can have an adverse impact on ARCA because of defense and settlement costs, diversion of management resources and other factors.

As of July 8, 2024, one complaint has been filed by a purported ARCA stockholder against ARCA and ARCA's board of directors in connection with the proposed Merger. On May 20, 2024, a purported stockholder filed a complaint, captioned Wynter v. ARCA biopharma, Inc., et al., No.: 1:24-cv-1418-STV (D. Colo.) (the "Complaint"), against ARCA and ARCA's board of directors. The Complaint alleges that the defendants filed or caused to be filed a materially incomplete and misleading preliminary registration statement with the SEC and asserts claims under Sections 14(a) and 20(a) of the Exchange Act. The Complaint seeks an order enjoining the proposed Merger, or in the event that the proposed Merger is consummated, an order rescinding the Merger or awarding rescissory damages, as well as costs, including attorneys' and experts' fees. ARCA cannot predict the outcome of the Complaint. ARCA believes that the allegations and claims asserted in the Complaint are without merit and intends to defend against them vigorously. Additional lawsuits arising out of the Merger may be filed.

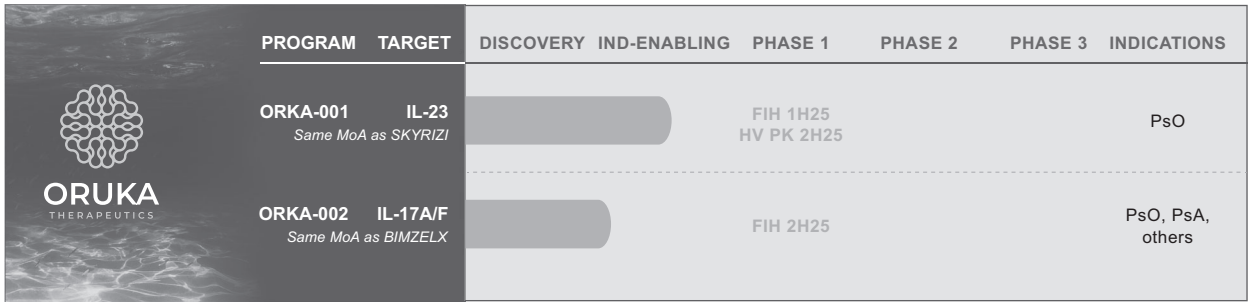
ORUKA'S BUSINESS

All references to Oruka's "product candidates," "programs," "portfolio" and "pipeline" in this proxy statement/prospectus refer to the research programs with respect to which Oruka has the option to acquire intellectual property license rights to pursuant to the Paragon Option Agreements.

Overview

Oruka is a biotechnology company focused on developing novel monoclonal antibody therapeutics for PsO and other I&I indications. Oruka's name is derived from *or*, for "skin," and *arukah*, for "restoration" and reflects the company's mission to deliver therapies for chronic skin diseases that provide patients the most possible freedom from their condition. Oruka's strategy is to apply antibody engineering and format innovations to validated modes of action, which Oruka believes will enable it to improve meaningfully upon the efficacy and dosing regimens of standard-of-care medicines while significantly reducing technical and biological risk. Oruka's programs aim to treat and potentially modify disease by targeting mechanisms with proven efficacy and safety involved in disease pathology and the activity of pathogenic tissue-resident memory T cells ("TRMs"). Oruka's lead program, ORKA-001, is designed to target the p19 subunit of interleukin-23 (IL-23p19) for the treatment of PsO. Oruka's co-lead program, ORKA-002, is designed to target interleukin-17A and interleukin-17F ("IL-17A/F") for the treatment of PsO, PsA, and other conditions. These programs each bind their respective targets at high affinity and incorporate half-life extension technology with the aim to increase exposure and decrease dosing frequency. Oruka believes that its focused strategy, differentiated portfolio, and deep expertise position it to set a new treatment standard in large I&I markets with continued unmet need.

Oruka's Pipeline



Notes: Oruka has an option to acquire exclusive worldwide rights from Paragon Therapeutics, Inc., for all programs, with IL-23 rights for all therapeutic indications outside of IBD.
Abbreviations: FIH, first-in-human; HV, healthy volunteer; IBD, inflammatory bowel disease; MoA, mechanism of action; PK, pharmacokinetics

ORKA-001

ORKA-001 is a high affinity, extended half-life monoclonal antibody ("mAb") designed to target IL-23p19. IL-23 is a pro-inflammatory cytokine that plays a critical role in the proliferation and development of T helper 17 ("Th17") cells, which are the primary drivers of several autoimmune and inflammatory disorders, including PsO. IL-23 is composed of two subunits: a p40 subunit that is shared with IL-12 and a p19 subunit that is specific to IL-23. First-generation IL-23 antibodies bound p40 and inhibited both IL-12 and IL-23 signaling, while more recent IL-23 antibodies targeting the p19 subunit have shown improved efficacy and safety. Based on preclinical evidence, Oruka believes that ORKA-001 could achieve higher response rates than established therapies in PsO while requiring less frequent dosing and maintaining the favorable safety profile of therapies targeting IL-23p19. ORKA-001 is engineered with YTE half-life extension technology, a specific three amino acid change in the fragment crystallizable ("Fc") domain to modify the pH-dependent binding to the neonatal Fc receptor ("FcRn"). As a result, it has a pharmacokinetic profile designed to support a subcutaneous ("SQ") injection as infrequently as once or twice a year. In addition, emerging evidence suggests that IL-23 blockade can modify the disease biology of PsO, possibly leading to durable remissions and preventing the development of PsA. Oruka believes that the expected characteristics of ORKA-001 increase its potential to deliver these disease-modifying benefits. Oruka plans to initiate a Phase 1 trial of ORKA-001 in the first half of 2025 that will have the potential not only to generate important pharmacokinetic and safety data but also to demonstrate its efficacy in PsO patients.

PsO is a chronic autoimmune skin disorder that affects an estimated 125 million people worldwide with steadily increasing prevalence. It is the largest pharmaceutical market within dermatology, with annual sales of approximately $25 billion in 2022, which is estimated to grow to $32 billion by 2028. Around half of PsO patients have moderate or severe disease that cannot be adequately addressed by topical corticosteroids or oral therapies. The American Academy of Dermatology-National Psoriasis Foundation recommends biologics as first-line therapy for moderate-to-severe PsO.

Several classes of biologic therapies have been approved for PsO over the past 20 years, resulting in progressively more complete symptom relief. Efficacy in PsO is typically measured via the psoriasis area and severity index ("PASI") scoring system. The first biologics approved for PsO were tumor necrosis alpha ("TNF-α") inhibitors such as Enbrel (etanercept), Humira (adalimumab), and Remicade (infliximab), which achieved a 90% improvement in PASI score ("PASI 90") at 16 weeks in around 25 – 50% of patients and a 100% improvement in PASI score ("PASI 100") in around 5 – 20% of patients. Stelara (ustekinumab), which targets the p40 subunit of IL-23 that is shared with IL-12, was approved next and achieved efficacy on par with Humira. IL-17A inhibitors Cosentyx (secukinumab), Taltz (ixekizumab), and Siliq (brodalumab) followed and achieved responses of PASI 90 in around 70% of patients and PASI 100 in around 40% of patients with some risk of certain side effects such as oral candidiasis. Most recently, IL-23p19 inhibitors such as Ilumya (tildrakizumab), Tremfya (guselkumab), and Skyrizi (risankizumab) have achieved responses of PASI 90 in around 70 – 80% of patients and PASI 100 in around 30 – 50% of patients with highly tolerable profiles. Finally, IL-17A/F inhibitors such as Bimzelx (bimekizumab) have recently shown even higher response rates than IL-23 inhibitors, but with slightly less tolerable profiles.

Treatment expectations in PsO have evolved progressively with this continued innovation. A 75% improvement in PASI score was previously thought to be an adequate depth of response, and weekly SQ dosing was viewed as acceptable. With each subsequent generation of innovation, patient and caregiver expectations have advanced. Today, Skyrizi, is widely viewed as the leader in PsO biologic therapy and achieves PASI 100 in 40 – 50% of patients at the 16-week primary endpoint with maintenance dosing every three months. While this is a remarkable advancement, there is still significant unmet need. Approximately half of moderate-to-severe PsO patients do not achieve full skin clarity, and a continued desire for more convenient dosing options has driven significant interest in orally delivered medicines targeting these same pathways. However, oral therapies have yet to match the efficacy and safety profile of biologics. Oruka believes that a long-acting biologic with higher efficacy and potential for disease modification represents the next step in advancing the standard of care in PsO.

ORKA-001 is expected to enter Phase 1 clinical trials in the first half of 2025. Oruka plans to carry out a Phase 1 program that could provide validation of half-life extension in 2025. In addition, Oruka plans to include PsO patients in its Phase 1 program, which would give Oruka the opportunity to demonstrate 16-week PASI response rates by the end of 2026. Oruka then plans to proceed into Phase 2/3 development. Based on recent precedent for PsO, Oruka anticipates that the entire development program from first-in-human to biologics license application ("BLA") filing could take as little as six to seven years based on the averages for recently approved medicines. However, Oruka has no control over the length of time needed for FDA review, and this timeline could vary.

ORKA-002

ORKA-002 is a high affinity, extended half-life mAb designed to target IL-17A and IL-17F (IL-17A/F). IL-17 inhibition has become central to the treatment of psoriatic diseases, including PsO and PsA, and has also shown efficacy in other I&I indications, such as hidradenitis suppurativa ("HS") and axial spondyloarthritis ("axSpA"). More recently, the importance of inhibiting the IL-17F isoform along with IL-17A has become appreciated, and dual blockade with the recently approved therapy Bimzelx (bimekizumab) has led to higher response rates in patients than blockade of IL-17A alone. ORKA-002 is designed to bind IL-17A/F at similar epitopes, or binding sites, and affinity ranges as bimekizumab, but incorporates half-life extension technology that could enable more convenient dosing intervals. Oruka plans to initiate Phase 1 trials of ORKA-002 in the second half of 2025.

Oruka views ORKA-002 and ORKA-001 as highly complementary. Patients with moderate-to-severe PsO that have purely skin manifestations are most often treated with IL-23 inhibitors due to the high efficacy and tolerability of this mechanism. However, for patients who also have joint involvement, or signs and symptoms of

PsA, an IL-17 inhibitor is typically used due to its efficacy in addressing both skin and joint symptoms. In addition, IL-17 inhibitors are often used in patients with highly resistant skin symptoms that do not adequately resolve through treatment with an IL-23 inhibitor. Together, ORKA-001 and ORKA-002 provide the potential to offer a highly compelling product profile for most patients with PsO and/or PsA, as well as the opportunity to address additional I&I indications.

Additional Pipeline Programs

Oruka has a third mAb program, ORKA-003, designed to target an undisclosed pathway. Oruka's strategy as a company is to remain highly focused on I&I diseases, and specifically on inflammatory dermatology conditions. Oruka's third program provides the potential for indication expansion beyond PsO and creates combination opportunities with Oruka's more advanced programs.

Oruka's Team, Investors, and Paragon Collaboration

Oruka was founded in February 2024 by leading healthcare investor Fairmount Funds Management and hold options to acquire intellectual property rights with respect to certain research programs, including ORKA-001 and ORKA-002, from Paragon. Fairmount Funds Management has launched other successful biotechnology companies leveraging antibody technologies generated by Paragon, including Apogee Therapeutics and Spyre Therapeutics. Oruka is led by a management team with significant experience in developing novel treatments for patients at biopharmaceutical companies such as CRISPR Therapeutics, Celgene, Novartis, and Protagonist Therapeutics. Together, Oruka's team has a proven track record of building successful biotech organizations in high-growth environments.

Since its inception, Oruka has raised $3.0 million in gross proceeds from the issuance of Series A convertible preferred stock and $25.0 million in gross proceeds from the issuance of the Convertible Note. On April 3, 2024, Oruka entered into a definitive merger agreement with ARCA to create a new public company focused on advancing Oruka's pipeline of antibody therapies. In support of the Merger, Oruka has secured commitments for a $275.0 million private investment (which includes $25.0 million of proceeds previously received from the issuance of the Convertible Note and accrued interest on such note) in Oruka common stock and pre-funded warrants to purchase Oruka common stock from a syndicate of premier healthcare investors led by Fairmount Funds Management and Venrock Healthcare Capital Partners, with participation from RTW Investments, Access Biotechnology, Commodore Capital, Deep Track Capital, Perceptive Advisors, Blackstone Multi-Asset Investing, Avidity Partners, Great Point Partners LLC, Paradigm BioCapital, Braidwell LP, and Redmile Group, as well as other investors, including multiple large investment management firms, that is expected to close immediately prior to completion of the Merger.

Following the exercise of its Options (defined below) under the Paragon Option Agreements and execution of the respective license agreements, Oruka will have exclusive worldwide development and commercialization rights to Oruka's programs, with IL-23 rights for all indications outside of inflammatory bowel disease ("IBD"), pursuant to such agreements, as applicable. Fairmount Funds Management founded Paragon in 2021 as the firm's discovery engine for biologics that potentially overcome limitations of existing therapies. Paragon leverages a dedicated in-house team of scientific experts in antibody development, as well as its partnership with FairJourney Biologics, to generate unique therapeutic concepts and enable its rapid proof-of-concept validation. Oruka considers Paragon to be a related party. See the section titled "*Certain Relationships and Related Party Transactions — Oruka Transactions — Oruka's Relationship with Paragon and Paruka*" for additional information.

Oruka's Strategy

To achieve its goal of developing leading therapeutic antibodies for patients with inflammatory skin diseases, Oruka is applying antibody engineering to validated modes of action. Oruka believes this approach will enable it to improve meaningfully upon the efficacy and convenience of standard-of-care medicines while significantly reducing technical and biological risk. The key elements of Oruka's strategy include:

- ***Employ advanced antibody engineering to build biologics that could significantly improve upon existing therapies:*** Oruka and its collaborators at Paragon have optimized a variety of parameters using a suite of antibody technologies to develop candidates with the potential to improve upon existing therapies. These parameters include extending half-life to increase exposure and reduce dosing frequency, enhancing affinity and specificity to maximize potency and safety, and optimizing developability to ensure consistency and enable convenient, high-dose formulations. Together, Oruka believes these features have the potential to translate into more efficacious and convenient medicines for patients.

- ***Target validated mechanisms of action:*** Oruka's initial targets, IL-23p19 and IL-17A/F, have established efficacy and safety for the treatment of PsO, PsA, and other indications. The FDA has approved four biologics in the IL-23 class, including three targeting IL-23p19, and four biologics in the IL-17 class, including one targeting IL-17A/F. While these therapies have advanced the standard of care in PsO and PsA, they have not addressed these diseases completely, and a significant fraction of patients do not achieve complete skin clearance. By applying Oruka's advanced antibody engineering to these validated targets, Oruka believes it can maximize its chances of developing superior medicines for patients. In addition, the reduced technical and biological risk of these validated mechanisms may allow Oruka to progress its programs more efficiently and rapidly.

- ***Leverage insights from earlier entrants to optimize Oruka's approach:*** Oruka benefits from a large body of clinical evidence generated by prior therapies targeting IL-23 and IL-17. Oruka continues to extract and apply learnings from this precedent to its programs, including in development candidate selection, clinical trial design, dosing regimens, formulations and presentations, regulatory pathway, and indication prioritization. For instance, based on correlations between affinity and efficacy, Oruka has designed ORKA-001 and ORKA-002 to bind to similar epitopes and at similar or greater affinities as the leading antibodies in each class: risankizumab and bimekizumab, respectively, with the aim of maximizing efficacy. Also, by understanding the exposure-response relationships for efficacy and safety for other therapies, Oruka plans to select dose levels and regimens that could maximize efficacy and maintenance of response while maintaining safety.

- ***Pursue opportunities with strong prospects of yielding meaningful new medicines as a "base case" and the potential to shift the treatment paradigm entirely as an "upside case":*** Oruka's strategy seeks to maximize the potential for Oruka's programs to reach a base case product profile that could meaningfully advance the standard of care — for instance, for ORKA-001, SQ dosing one or twice a year with equal or greater efficacy compared to today's standard of care. At the same time, Oruka aims to deliver an upside case that dramatically improves outcomes for patients — for instance, significantly increasing rates of complete skin clearance via higher antibody exposures or offering patients durable remissions free from therapy by introducing patient-specific dosing intervals.

- ***Build a preeminent biotechnology company focused on chronic skin disease and other I&I indications:*** Oruka is assembling a team of exceptional people and helping them reach their full potential and flourish so that together it can bring forward meaningful new medicines for patients.

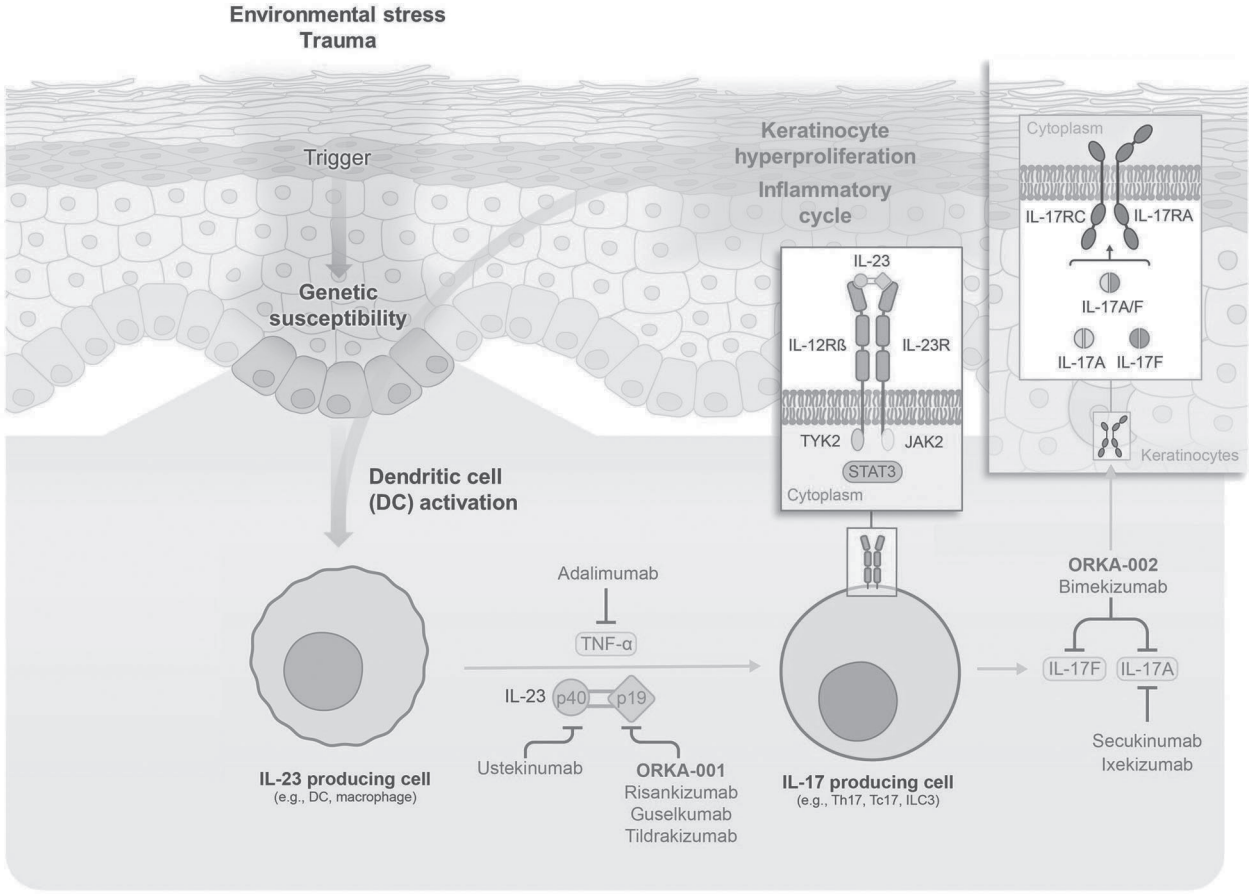
Oruka believes that pursuing the focused strategy outlined above will help it to succeed in its mission of offering patients living with PsO, PsA, and other dermatologic and inflammatory diseases the greatest possible freedom from their condition.

Targeting IL-23 and IL-17 to Treat Multiple I&I Indications

Oruka's programs benefit from significant advances in the understanding of the biology of I&I diseases over the past four decades. ORKA-001 and ORKA-002 are designed to target two key cytokines that play a related role in multiple indications. IL-23 is an upstream regulator of Th17 cells, a pro-inflammatory subset of T helper cells

characterized by their production of IL-17. IL-23 has a critical role in maintaining Th17 cells in the tissue as well as activating these cells to secrete IL-17, which acts downstream to trigger inflammation and other disease symptoms. Th17 cells are involved in PsO, PsA, HS, axSpA, and many other diseases. They play a particularly central role in PsO and PsA. The diagram below depicting the immunopathogenesis of PsO provides an example of how Th17 cells can mediate disease and how blocking IL-23 or IL-17 can break the inflammatory cycle that drives disease.

Immunopathogenesis of PsO and the role of IL-23 and IL-17



Adapted from 2022 Song (Immune Network) & 2014 Bartlett (Nature Reviews Drug Discovery)

PsO develops when environmental triggers and a genetic predisposition combine to cause activation of an inflammatory cycle in the skin that leads to the formation of plaques and other disease manifestations. This process begins with the aberrant activation of the dendritic cells ("DCs"), specifically those producing IL-23 and other cytokines like IL-1β, IL-21, TNF-α, and IL-12. These cytokines induce the differentiation of Th17 cells, as well as other cell types, such as T helper type 1 ("Th1") cells that produce IFNγ and TNF-α and T helper type 22 ("Th22") cells that produce IL-22. IL-23 plays a key role in the differentiation and activation of Th17 cells to secrete IL-17, as well as Th22 cells to produce IL-22. IL-17 and these other cytokines induce keratinocyte hyperproliferation leading to plaque formation and a feedforward inflammatory response, with changes in gene expression in keratinocytes, the production of antimicrobial peptides, and neutrophil recruitment driving further inflammation. While many cytokines and cell types contribute to the pathogenesis of PsO, the IL-23/IL-17 axis plays an important role, as supported by the success of therapies targeting this axis.

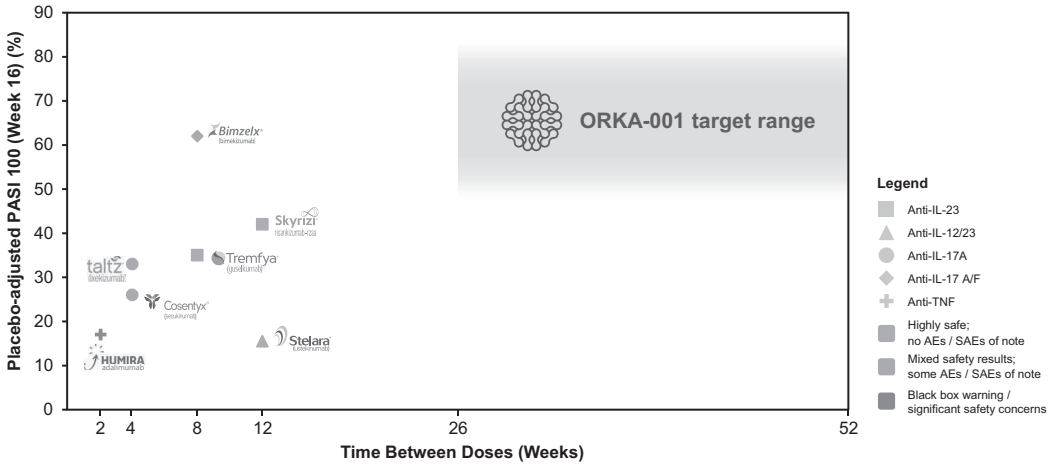
While the successful treatment of PsO — for instance, with mAbs targeting IL-23 or IL-17 — can result in lesional skin returning to an apparently normal state, disease tends to recur at previously affected sites following cessation of therapy, suggesting a mechanism of "immunological memory" that predisposes individuals to recurrence in the same locations. Evidence suggests that pathogenic TRMs play a critical role in this memory. TRMs may arise from the Th17 cells and other cells that drove disease in the first place and remain in their resident tissue, in this case the epidermis and dermis, for long periods of time. Upon a disease trigger, these TRMs can actively produce proinflammatory cytokines, causing disease recurrence. IL-23 appears to play an important role in maintaining and

potentiating TRMs, as indicated by the depletion of TRMs following treatment with an IL-23 inhibitor but not an IL-17 inhibitor, which may explain the longer remissions observed with IL-23 inhibitors following withdrawal of therapy. This type of data has raised the prospect that efficient IL-23 blockade could modify the disease biology of PsO, possibly leading to durable remissions.

The scientific discoveries that refined our understanding of the immunopathogenesis of PsO have led to waves of therapeutic advances, ultimately leading to today's standard of care. Before the 1980s, PsO was not even thought of as an immunologic disease, but rather a disease of keratinocyte dysfunction, leading to treatments such as phototherapy, methotrexate, and retinoids. The discovery in the 1980s that PsO results from immune dysfunction led to the use of broad immunosuppressants like cyclosporine. From 1990 to 2008, it was believed that Th1 cells, a subpopulation of T helper cells that produce pro-inflammatory cytokines such as IFNγ and TNF-α, were the predominant mediators of the disease, which led to the use of biologics targeting TNF-α such as Enbrel (etanercept) and Humira (adalimumab). Finally, the revelation that PsO is driven principally by Th17 cells resulted in the development of the primary therapies used today, which target IL-23 and IL-17. This increasingly refined understanding of the disease has narrowed the standard of care from broad immunosuppressive agents (such as cyclosporine) to more specific immunomodulators (TNF-α inhibitors) to precise biologic therapies targeting the key cytokines involved in disease pathology (IL-23 and IL-17 inhibitors), with each new therapeutic class raising the bar on both safety and efficacy.

Biologic therapies, especially mAbs, are now mainstays in the treatment of a wide variety of I&I diseases, including PsO and PsA. Each biologic approved in PsO has raised the bar on standard of care, with therapies that have improved upon efficacy and/or reduced dosing frequency achieving the most commercial success, even when launching many years after other biologics. Enbrel was first approved for PsO in 2004 with a weekly maintenance dosing schedule. Four years later, Humira was approved for PsO with an every-other-week (Q2W) dosing schedule. Stelara (ustekinumab) was approved a year later with similar Phase 3 data to Humira, but with a significantly improved dosing schedule of every twelve weeks (Q12W). Several drugs for PsO have been approved since 2009 that demonstrated higher efficacy in their pivotal studies compared to Stelara, but with more burdensome dosing schedules, including Tremfya (guselkumab), which has a dosing schedule of every eight weeks (Q8W), and Cosentyx (secukinumab) and Taltz (ixekizumab), which have dosing schedules of every four weeks (Q4W). While these therapies have all become generally successful products, the most commercially successful drug in the PsO market today is Skyrizi (risankizumab), which combines Stelara's Q12W dosing schedule with improvements in efficacy, as evidenced by higher PASI 90 and PASI 100 rates in clinical trials. In addition, Bimzelx (bimekizumab), approved by the FDA in 2023, has shown evidence of efficacy that exceeds even Skyrizi, though with a less convenient Q8W dosing schedule. Although many biologics have entered the PsO market over the past two decades, new entrants have had significant commercial success when they have improved upon efficacy and/or dosing frequency, and room remains to improve in both areas to set a new standard for the treatment of PsO.

Biologics have raised the bar on the standard of care in PsO, but leave room for improvement



The biology driving PsO and PsA is well understood today, and the standard of care has progressed dramatically. Oruka believes that it is unlikely that a novel mechanism will emerge that is as safe and efficacious as targeting the IL-23/IL-17 axis. Therefore, Oruka believes that innovation now should be focused on optimizing the product profile that can be offered to patients. While much effort is being directed toward daily oral formats to inhibit this axis, oral medicines have yet to match the efficacy of biologics. Oruka believes that a better biologic with a longer dosing interval and the potential for improved efficacy will present a more attractive product profile for most patients.

Overview of Psoriasis (PsO)

PsO is a chronic autoimmune skin disorder that affects an estimated 125 million people worldwide with steadily increasing prevalence, estimated to be around 2 – 3% of the population currently, according to the World Psoriasis Day consortium. The most common form of PsO is plaque psoriasis. Patients with chronic plaque psoriasis have well-demarcated, erythematous plaques with overlying, coarse, silvery-scaled patches. These plaques can occur anywhere on the body, though are typically found on the scalp, extensor areas of the knees and elbows, and gluteal cleft. Involvement of the palms, soles, or nails, and intertriginous areas, including the genitals, can also occur and can be particularly difficult to treat. Around half of PsO patients have moderate disease, defined as having 3% to 10% of the body surface area ("BSA") involved, or severe disease, defined as having more than 10% BSA involvement. The chronic inflammation in PsO is associated with multiple comorbidities, including PsA, obesity, metabolic syndrome, hypertension, diabetes, and atherosclerotic cardiovascular disease.

As discussed earlier, PsO is a complex immune-mediated disease driven primarily by Th17 cells and the cytokines IL-23 and IL-17. The interplay of environmental and behavioral risk factors and genetics is believed to trigger PsO. Multiple lines of evidence support a genetic component to the disease, including the observation that approximately 40% of patients with PsO and PsA have a family history of the disease and the identification of multiple susceptibility loci, many containing genes related to the regulation of the immune system, in genome-wide association studies.

Current PsO Treatments and Limitations

While patients with mild PsO typically rely on topical corticosteroids or oral therapies like Otezla (apremilast), these agents often do not provide an adequate response for patients with moderate-to-severe PsO. As a result, the American Academy of Dermatology-National Psoriasis Foundation recommends biologics as first-line therapy for moderate-to-severe PsO. Today, Skyrizi (risankizumab) is widely viewed as the leader in PsO biologic therapy. In Phase 3 clinical trials, 43% and 58% of patients achieved PASI 100 at 16 and 52 weeks, respectively, with SQ maintenance dosing every three months. Most recently, Bimzelx (bimekizumab) has shown evidence of efficacy that exceeds even Skyrizi, achieving a 64% PASI 100 rate at 16 weeks in Phase 3 trials. However, the increased efficacy comes with a less convenient Q8W dosing schedule and an increased risk of certain side effects, most notably oral candidiasis. While agents like Skyrizi and Bimzelx reflect the remarkable advancement in PsO treatment, there remains significant unmet need. Approximately half of moderate-to-severe PsO patients do not achieve full skin clarity, and while early signs are present, the promise of disease modifying therapy remains unrealized. Oruka believes that ORKA-001 and ORKA-002 could represent the next step in biologic innovation in PsO, with the potential for higher rates of complete skin clearance, more durable remissions, and markedly more convenient dosing regimens.

Overview of Psoriatic Arthritis (PsA)

PsA is a chronic inflammatory condition that affects both the skin and joints, and often coexists with PsO. Around a quarter to a third of patients with moderate-to-severe PsO also have PsA. Most individuals develop PsO before being diagnosed with PsA, with a median gap of seven to eight years between the diagnosis of skin and joint disease, though in up to 30% of patients with PsA, joint symptoms appear before or simultaneously with skin manifestations. Patients with PsA present with joint pain, stiffness, and swelling affecting the peripheral joints, axial skeleton, or both. Entheses, dactylitis, nail lesions, fatigue, and ocular inflammation all occur commonly. PsA can lead to irreversible joint damage, including bony fusion across a joint (ankylosis). The pathogenesis of PsA is likely to be closely related to the mechanisms that underlie PsO. Like PsO, the exact cause of PsA remains unknown, but environmental triggers, including infection and trauma, and genetic factors play a role.

Current PsA Treatments and Limitations

Effective treatment of PsA requires a coordinated approach to address the unique combination of disease manifestations each patient has, which can include peripheral and axial arthritis, enthesitis, dactylitis, and skin and nail involvement. Many patients with milder disease symptoms will start with nonsteroidal anti-inflammatory drugs ("NSAIDs") and/or local treatments to address specific disease manifestations. However, those with more moderate or severe disease and/or multidomain involvement will typically receive a biologic therapy targeting TNF-α or IL-17, or less commonly an oral Janus kinase ("JAK") inhibitor. Comorbid conditions can also influence treatment selection. For example, an IL-17 inhibitor would be preferred for a patient with significant skin involvement, but not for patients with IBD or ocular symptoms, where a TNF-α inhibitor would be preferred. The most common endpoint used to measure the efficacy of TNF-α or IL-17 inhibitors in PsA is ACR response, or the proportion of patients achieving a specified percent improvement in American College of Rheumatology ("ACR") score, which measures peripheral joint disease. Approved TNF-α inhibitors, including Humira (adalimumab) and Cimzia (certolizumab), achieved a placebo-adjusted ACR50 response of around 30 – 35% at 24 weeks with Q2W dosing. Approved IL-17 inhibitors, including Cosentyx (secukinumab) and Taltz (ixekizumab), achieved a slightly lower placebo-adjusted ACR50 response of around 25 – 30% at 24 weeks, but with more convenient Q4W dosing. Bimzelx (bimekizumab) has not yet received approval in the United States for PsA; however, in two Phase 3 clinical trials, bimekizumab achieved a placebo-adjusted ACR50 response of 34% and 37% at 16 weeks with Q4W dosing. A significant fraction of patients with PsA still do not achieve a satisfactory response with available therapies, and even the most convenient regimens require monthly SQ dosing.

Overview of additional opportunities

In addition to PsO and PsA, inhibition of IL-23 or IL-17 has demonstrated efficacy in a number of additional I&I indications, including HS and axSpA.

HS is a chronic inflammatory skin disease characterized by lesions that include deep-seated nodules and abscesses, draining tracts, and fibrotic scars that occur most commonly in intertriginous areas, such as the armpits and groin. Due to the associated pain, sensitive locations, drainage, odor, and scarring, this condition can have a particularly negative psychosocial impact on affected individuals. HS is believed to be underdiagnosed and could have a prevalence well above 1% worldwide. Treatment varies depending on severity and can include topical and systemic antibiotics, hormone therapy, immune modulators, and surgery. Humira (adalimumab) was the only FDA-approved medication for the treatment of moderate-to-severe HS from its approval in 2015 until the approval of Cosentyx (secukinumab) in October 2023. However, now multiple other biologics, including Bimzelx (bimekizumab), are advancing through development and have demonstrated encouraging data in clinical trials, though a significant fraction of patients still do not achieve adequate responses.

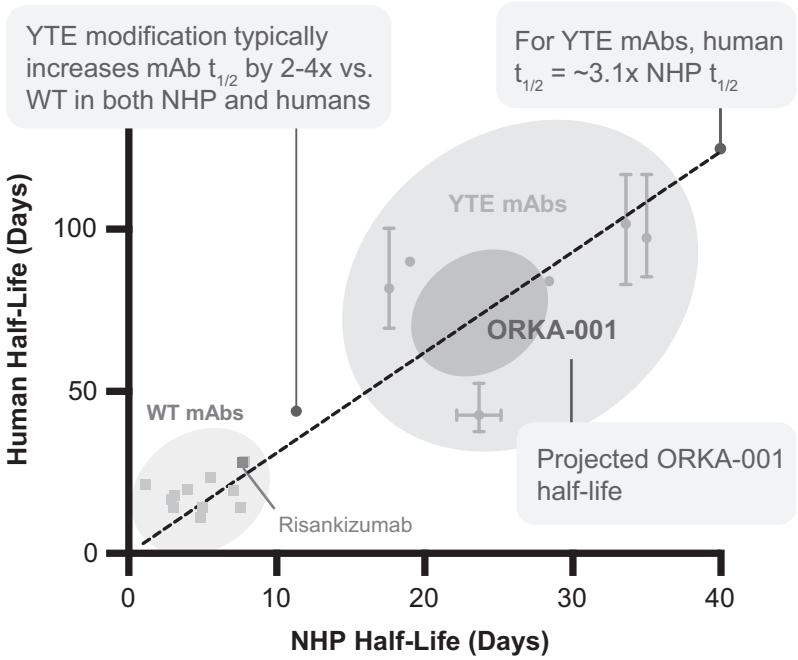
axSpA is a chronic inflammatory disease that primarily affects the spine and sacroiliac joints that comprise the axial skeleton. The disease causes severe pain, stiffness, and fatigue, and can have additional clinical manifestations like uveitis, enthesitis, peripheral arthritis, and PsO. Patients with axSpA may develop further structural damage in their spine, which can lead to the fusion of vertebra (spinal ankylosis), which has a massive negative impact on mobility, physical function, and quality of life. The overall prevalence of axSpA is estimated to be around 1% in the United States. Treatment of axSpA starts with physical therapy and NSAIDs. If patients do not have an adequate response to NSAIDs, a TNF-α inhibitor is typically used, followed by an IL-17 inhibitor, such as Cosentyx (secukinumab), Taltz (ixekizumab), or Bimzelx (bimekizumab), or less frequently a JAK inhibitor. Patients often need to cycle through therapies over time due to inadequate responses or loss of response.

Oruka's Solution: Half-Life Extension and Antibody Engineering Technologies

Oruka's antibody engineering campaigns are designed to optimize multiple attributes in parallel: binding affinity, potency in a variety of assays, developability, and consistently extended serum half-life in non-human primates ("NHPs"). Half-life extension is possible by modifying the pH-dependent binding affinity of the antibody Fc domain for FcRn. A primary mechanism of elimination of antibodies from the serum is through pinocytosis and degradation in the lysosomes of cells. Throughout this process, antibodies can be recycled back into the serum by binding to FcRn while they are in endosomes. The interior of the endosome is acidic, and therefore the efficiency of this recycling process depends on the ability of the antibody Fc domain to bind to FcRn at low pH. If this low pH binding is efficient enough, antibody recycling can be favored over degradation, potentially resulting in a much longer serum half-life.

Antibody engineers have discovered methods of modifying the Fc domain to optimize the efficiency of recycling via FcRn binding. Several engineering strategies have been identified over the past two decades, with the so-called "YTE" mutations (M252Y/S254T/T256E) and "LS" mutations (M428L/N434S) being the most frequently used. Importantly, while these strategies have been known for some time, it was only relatively recently that enough clinical precedent was established to provide confidence in how these mutations perform in humans. Two products incorporating YTE modification were approved in 2023 by the FDA, Beyfortus (nirsevimab) and Evusheld (tixagevimab and cilgavimab), and several more candidates are in clinical trials. Two products using LS mutations were approved in 2021 and 2022, Xevudy (sotrovima) and Ultomiris (ravulizumab), respectively, and several more candidates are in clinical trials. Based on clinical data in humans, antibodies with YTE mutations typically have a half-life that is two to four times longer than wildtype antibodies. In addition, preclinical data in NHPs can be used to predict the approximate half-life in humans, with the human half-life equaling around 3.1 times the NHP half-life.

Clinical experience with YTE-modified mAbs predicts significant half-life extension over wildtype mAbs



While this increasing body of clinical precedent serves to validate half-life extension, Oruka does not yet have clinical data showing that the introduction of these amino acid substitutions in its programs leads to a longer serum half-life. However, Oruka aims to establish this favorable pharmacokinetic profile early in the clinical development of its product candidates.

ORKA-001

Summary

ORKA-001 is a high affinity, extended half-life mAb designed to target the p19 subunit of IL-23. Based on preclinical data generated to date, Oruka believes ORKA-001 has the potential to become the leading IL-23 inhibitor and achieve an optimal product profile in PsO consisting of the following:

- ***One to two maintenance doses per year.*** Standard-of-care therapies targeting IL-23 require maintenance dosing every eight to twelve weeks. Oruka engineered the Fc portion of ORKA-001 to include YTE mutations to increase the half-life of ORKA-001 in circulation, which may enable dosing every six to twelve months — a dosing interval made feasible by half-life extension technology. In

preclinical studies, serum levels from NHPs indicated an elimination half-life of 24 days following SQ administration of a precursor antibody to ORKA-001. Based on published scientific literature on other antibodies incorporating YTE mutations and pharmacokinetic modeling, Oruka anticipates this half-life in NHPs to translate to a half-life in humans that could allow subcutaneous dosing every six to twelve months while maintaining high antibody exposures.

- ***Higher PASI 100.*** ORKA-001 benefits from the robust validation of IL-23 inhibition in PsO by multiple approved therapies, such as Skyrizi (risankizumab) and Tremfya (guselkumab), while leveraging insights from these therapies to improve upon their clinical profile. ORKA-001 is designed to bind a similar epitope to the market-leading anti-IL-23 antibody, Skyrizi, with similar or greater affinity and could achieve much higher exposures in patients due to half-life extension. Skyrizi and Tremfya both have a robust exposure-response relationship, with higher drug exposures leading to higher response rates. Published data indicates that these therapies have not saturated this exposure-response relationship, and ORKA-001 could lead to higher response rates, including higher rates of complete skin clearance, or PASI 100, through increased exposure, even while having more convenient dosing with as few as one or two maintenance doses per year.

- ***Validated IL-23p19 safety profile.*** Existing commercially approved antibodies targeting IL-23 provide a robust precedent for the safety of IL-23 inhibition. Across thousands of patients dosed in dermatology and IBD indications, no correlations have been observed at the patient level between exposure and safety. While Oruka is not pursuing IBD, the approved Skyrizi regimen for Crohn's disease supports the safety of high peak exposures. Peak Skyrizi exposures during the IV induction phase in Crohn's disease are over 2.5 times higher than the peak ORKA-001 exposures at dose levels Oruka currently plans to evaluate in PsO. In addition, an exposure-response analysis for Skyrizi in ulcerative colitis showed no relationship between exposures and evaluated safety endpoints in the 12-week induction or 52-week maintenance periods. In this assessment, the top quartile of average exposures spanned 176 to 342 μg/mL in the induction period and 25 to 62 μg/mL in the maintenance period, which are approximately 7 and 5 times higher, respectively, than the highest anticipated exposures with ORKA-001 in the same periods.

- ***Potential to offer longer term remission to some patients.*** Emerging evidence suggests that IL-23 blockade can modify the disease biology of PsO, possibly leading to durable remissions and preventing the development of PsA. Dr. Andrew Blauvelt, chair of Oruka's Scientific Advisory Board, pioneered some of this work by using two- and four-times the approved dose levels of risankizumab to achieve best-in-indication response rates. This study, called KNOCKOUT, showed a robust depletion of TRMs following high dose IL-23 inhibition, which could lead to longer-lasting remissions in some patients. Additional evidence from a study of guselkumab, called GUIDE, showed that intervention early in the disease course can lead to longer treatment-free remissions. In addition, retrospective claims data suggests that treatment with an IL-23 inhibitor could help prevent progression to PsA, though this finding has yet to be confirmed by a prospective clinical trial. Given the high antibody exposures expected with ORKA-001, Oruka believes that ORKA-001 could lead to durable remissions for some patients, especially those with short disease duration. Oruka plans to pursue patient-specific dosing intervals to provide each patient the greatest possible freedom from their disease.

Oruka believes that this target profile for ORKA-001 could offer improved freedom from disease to many patients affected by PsO and represent a step forward in the standard of care.

Preclinical Data

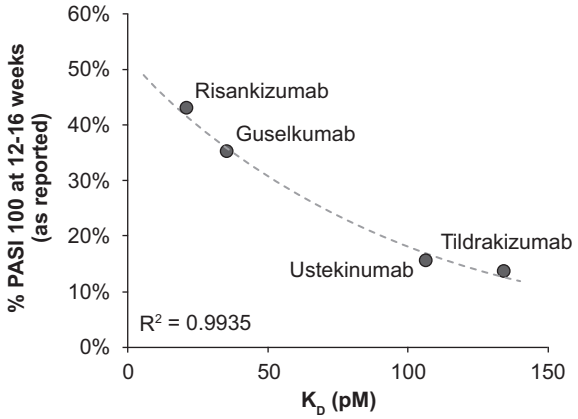
Oruka evaluated ORKA-001 in numerous preclinical studies for several key features:

Potency that matches or exceeds Skyrizi (risankizumab) in vitro

Oruka has tested the potency of ORKA-001 *in vitro* in multiple assays, including assays evaluating the inhibition of IL-17 release from human peripheral mononuclear blood cells, in comparison to risankizumab generated recombinantly based on amino acid sequences from patent filings. Based on the results of these

experiments, Oruka believes ORKA-001 has the potential for greater potency than risankizumab. Data from the existing commercially approved therapies targeting IL-23 indicate that the potency of IL-23 inhibition, in this case, measured by affinity, correlates tightly with efficacy.

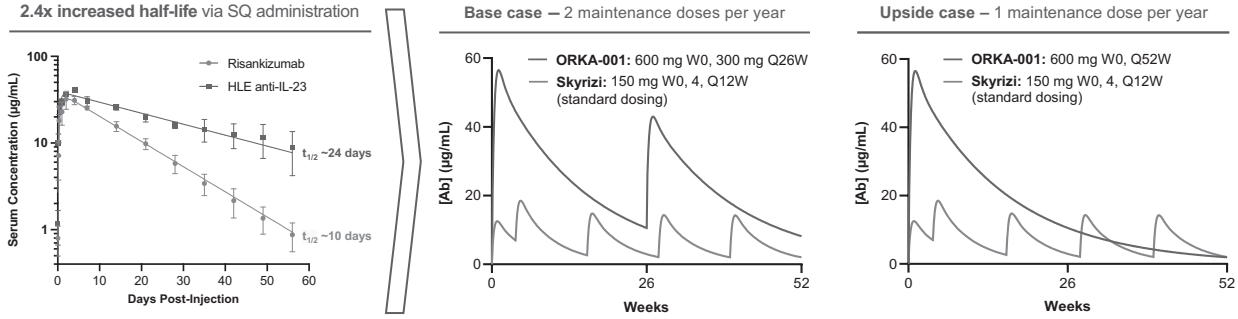
The affinity of approved mAbs targeting IL-23 correlates tightly with efficacy



Significant half-life extension in NHPs that could enable a maintenance dosing interval of once or twice a year in humans

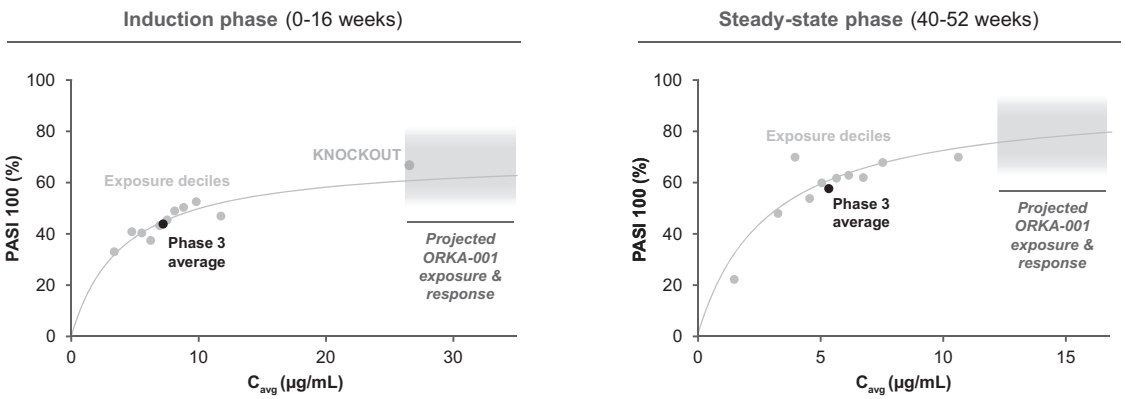
Oruka assessed the impact of incorporating YTE modifications into a precursor antibody to ORKA-001 in NHPs in comparison to risankizumab generated recombinantly based on amino acid sequences from patent filings. The mAb with YTE modifications had a significantly longer half-life, reaching approximately 24 days with SQ administration. Based on clinical experience with YTE-modified mAbs and pharmacokinetic modeling, Oruka believes that this half-life extension could enable dosing once or twice per year, as shown in the figure below.

The incorporation of YTE mutations significantly extends half-life in NHPs, which could enable once or twice yearly dosing



In addition to enabling less frequent dosing, an extended half-life would increase the exposure of ORKA-001, which has the potential to increase efficacy. Based on published literature, Skyrizi (risankizumab) demonstrates a clear relationship between antibody exposure and efficacy, with higher average serum antibody concentration correlating with higher PASI 90 and PASI 100 rates short-term (at 16 weeks) and long-term (at 52 weeks), as shown for PASI 100 in the figure below. In addition, the KNOCKOUT study, which evaluated two- and four-times higher doses of Skyrizi than the approved regimen, yielded some of the highest PASI 100 rates observed to date, reaching 67% at 16 weeks. Based on Oruka's pharmacokinetic modeling, ORKA-001 could achieve four-fold higher average exposures than the approved Skyrizi regimen over the first 16 weeks and over two-fold higher average exposures at steady-state, exceeding even the exposures in KNOCKOUT. Based on the exposure-response relationship observed with other IL-23 inhibiting antibodies, Oruka believes that these increased exposures could result in higher efficacy.

ORKA-001 is projected to extend the exposure-response relationship established by studies of Skyrizi



Notes: Adapted from 2019 Khatri (Clin Pharmacol Ther) and Skyrizi BLA Multi-disciplinary Review (Fig. 20); KNOCKOUT pooled PASI 100 from 2023 Blauvelt (WCD presentation); gray dots represent observed PASI 100 rates within each C_{avg} decile for Skyrizi; gray lines represent model-estimated probabilities for PASI 100 for Skyrizi derived from Khatri, for induction phase (0-16 weeks), model-estimated probabilities reflect all patients, and do not exclude Asian ethnicity

Safety in vitro and in vivo

Oruka has evaluated ORKA-001 in several *in vitro* and *in vivo* preclinical studies to assess safety. In addition, Oruka has initiated a robust nonclinical program to characterize the toxicology, toxicokinetics, and anti-drug antibody profile of ORKA-001 in NHPs, including a single-dose non-GLP dose-range finding study and one-month and six-month GLP toxicology studies. Collectively, this nonclinical program is designed to support the initiation of clinical trials. In addition, ORKA-001 benefits from the favorable safety precedent for IL-23 inhibition provided by the existing commercially approved IL-23-targeted antibodies across several indications.

Characteristics that support ease of manufacturing and potentially enable high-concentration formulations

Finally, Oruka has assessed a variety of attributes essential for manufacturability and high-concentration formulation, including viscosity, solubility, and stability, among others. ORKA-001 shows evidence of desirable properties across these characteristics, which Oruka believes will enhance its ability to manufacture ORKA-001 successfully and consistently and to deliver high doses of ORKA-001 subcutaneously using convenient, low-volume presentations.

Clinical Development Plans

Based on these potential advantages and preclinical data, Oruka is advancing ORKA-001 towards a Phase 1 clinical trial in the first half of 2025. This trial will encompass a Phase 1a single-ascending dose portion in healthy volunteers, followed by a Phase 1b, multiple-dose portion in patients with moderate-to-severe PsO. Following completion of Phase 1b, patients will become eligible for an open-label extension study. Initial data from the Phase 1a cohort has the potential to provide key validation of both early safety and pharmacokinetics, including half-life, to support extended dosing intervals. Initial data from the Phase 1b cohort has the potential to provide preliminary efficacy data in patients with PsO. Pending the results from the Phase 1 clinical trial, Oruka plans to initiate a Phase 2 clinical trial in PsO in 2026. Several aspects of PsO facilitate clinical development, including well-established, reproducible endpoints based on PASI scores, low placebo rates, particularly with PASI 90 and PASI 100, a rapid efficacy readout at 16 weeks, and potentially rapid enrollment due to the large patient population. Oruka has not yet submitted an IND with the FDA for its Phase 1 clinical trials for ORKA-001.

ORKA-002

Summary

ORKA-002 is a high affinity, extended half-life mAb designed to target IL-17A/F. Dual inhibition of both IL-17A and IL-17F has shown superior efficacy compared to IL-17A inhibition alone in PsO and other indications, as shown by the performance of Bimzelx (bimekizumab) compared to Cosentyx (secukinumab) and Taltz (ixekizumab) in Phase 3 trials. These therapies all utilize Q8W dosing in PsO and Q4W dosing in PsA. By binding

IL-17A/F at similar epitopes and affinity ranges as Bimzelx while incorporating half-life extension technology to potentially enable dosing two to three times a year in PsO and PsA, Oruka believes that ORKA-002 could become the leading therapy in the IL-17 class.

Preclinical Data

The preclinical program Oruka is conducting to inform development candidate selection and support clinical trial initiation for ORKA-002 mirrors that for ORKA-001 and spans potency, pharmacokinetics, safety, and manufacturing characteristics. Based on the results of these experiments, Oruka believes ORKA-002 has the potential for comparable potency to bimekizumab, but with a significantly longer half-life, which Oruka believes could support dosing two or three times per year based on extrapolation from clinical precedent and pharmacokinetic modeling.

Clinical Development Plans

Oruka plans to initiate Phase 1 trials of ORKA-002 in the second half of 2025 following ORKA-001. As with ORKA-001, initial data on ORKA-002 in healthy volunteers has the potential to provide key validation of both early safety and pharmacokinetics to support extended dosing intervals. Though clinical development of ORKA-002 will initially focus on one lead indication, Oruka plans to evaluate ORKA-002 in a range of indications over time. Oruka sees ORKA-002 as highly complementary to ORKA-001, with the potential to provide an optimal therapy for the approximately one-quarter to one-third of moderate-to-severe PsO patients who have PsA, as well as for PsO patients with highly resistant skin symptoms that do not respond adequately to an IL-23 inhibitor. Furthermore, ORKA-002 could address indications beyond PsO, including PsA with limited skin involvement, HS, axSpA, and additional I&I diseases. Oruka has not yet submitted an IND with the FDA for its Phase 1 clinical trials for ORKA-002.

Additional Pipeline Programs

Oruka has a third mAb program, ORKA-003, that targets an undisclosed pathway. A core tenet of Oruka's strategy is to remain highly focused on I&I diseases, and specifically on inflammatory dermatology conditions. ORKA-003 provides the potential for indication expansion beyond PsO as well as combination opportunities with Oruka's more advanced programs. In the future, Oruka may add additional programs to its portfolio beyond ORKA-001, ORKA-002, and ORKA-003 that fit its strategic focus.

Intellectual Property

Oruka strives to protect the proprietary programs and technologies that it believes are important to its business, including seeking and maintaining patent protection intended to cover the composition of matter of its programs, their methods of use and manufacture, related technologies, diagnostics, and other inventions.

Paragon has filed provisional patent applications, and intends to file one or more additional provisional patent applications directed to antibodies that target IL-23, including applications covering composition of matter, pharmaceutical formulations, and methods of using such antibodies, including ORKA-001. In addition, Paragon has filed provisional patent applications, and intends to file one or more additional provisional patent applications directed to antibodies that target IL-17, including applications covering composition of matter, pharmaceutical formulations, and methods of using such antibodies, including ORKA-002. Oruka has not yet exercised its option to acquire exclusive rights to any IL-23 or IL-17 patent applications, but retains the right to do so. If the provisional patent applications are pursued non-provisionally and mature into one or more issued patents covering ORKA-001 or ORKA-002, Oruka would expect those patents to expire in 2045, absent any applicable patent term adjustments or extensions.

Commercial

Should any of its product candidates be approved for commercialization, Oruka intends to develop a plan to commercialize them in the United States and other key markets, through internal infrastructure and/or external partnerships in a manner that will enable Oruka to realize the full commercial value of its programs. Given its stage of development, Oruka has not yet established a commercial organization or distribution capabilities. Oruka currently holds exclusive Options (as defined below) to acquire worldwide development and commercialization rights to all of its programs.

Manufacturing

Oruka does not currently own or operate facilities for product manufacturing, testing, storage, and distribution. Oruka has contracted and expect to continue to contract with third parties for the manufacture and distribution of its product candidates. Because Oruka relies on contract manufacturers, it employs personnel with extensive technical, manufacturing, analytical and quality experience. Oruka's team has deep knowledge and understanding of the regulations that govern manufacturing, documentation, quality assurance, and quality control of drug supply that are required to support Oruka's regulatory filings.

Competition

The biotechnology and biopharmaceutical industries are characterized by continuing technological advancement and significant competition. While Oruka believes that its programs, technology, development experience and scientific knowledge provide it with competitive advantages, Oruka faces competition from major pharmaceutical and biotechnology companies, academic institutions, governmental agencies, and public and private research institutions, among others. Any product candidates that Oruka successfully develops and commercialize will compete with existing therapies and new therapies that may become available in the future. Many of the companies with which Oruka is currently competing or will compete against in the future have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals, and marketing approved products than Oruka does. Mergers and acquisitions in the pharmaceutical and biotechnology industry may result in even more resources being concentrated among a smaller number of Oruka's competitors. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These competitors also compete with Oruka in recruiting and retaining qualified scientific and management personnel, establishing clinical trial sites, patient enrollment for clinical trials as well as in acquiring technologies complementary to, or necessary for, Oruka's programs.

Key competitive factors affecting the success of all of Oruka's product candidates that it develops, if approved, are likely to be efficacy, safety, convenience, presentation, price, the level of generic competition, and the availability of reimbursement from government and other third-party payors. Oruka's competitors may also obtain FDA or other regulatory approval for their products more rapidly than Oruka may obtain approval for its products, which could result in Oruka's competitors establishing a strong market position before Oruka is able to enter the market.

Specifically, there are several companies developing or marketing treatments that may be approved for the same indications and/or diseases as Oruka's two most advanced programs, ORKA-001 and ORKA-002, including major pharmaceutical companies. Oruka does not yet have clinical data for any of its programs and there can be no assurance that its programs will have similar or comparable results.

There are several approved biologic therapies for the treatment of moderate-to-severe PsO. These include mAbs targeting IL-23, such as Skyrizi (risankizumab) from AbbVie, Tremfya (guselkumab) from Janssen, and Ilumya (tildrakizumab) from Sun Pharma, also marketed as Ilumetri by Almirall in Europe, which all target the p19 subunit, and Stelara (ustekinumab) from Janssen, which targets the p40 subunit; mAbs targeting IL-17, such as Bimzelx (bimekizumab) from UCB, which targets IL-17A/F, Cosentyx (secukinumab) from Novartis and Taltz (ixekizumab) from Eli Lilly, which both target IL-17A, and Siliq (brodalumab) from Ortho Dermatologics, also marketed as Kyntheum by LEO Pharma in Europe, which targets IL-17 receptor A; and biologics targeting TNF-α, such as Humira (adalimumab) from AbbVie, Enbrel (etanercept) from Amgen, and Remicade (infliximab) from Janssen, and various biosimilar versions of each. In addition, there are several approved oral medicines in these indications, including the phosphodiesterase-4 (PDE4) inhibitor Otezla (apremilast) from Amgen and the tyrosine kinase 2 (TYK2) inhibitor Sotyktu (deucravacitinib) from Bristol-Myers Squibb. Many of these therapies also are approved or in development for PsA, HS, axSpA, and other I&I indications.

In addition, Oruka is aware of several product candidates in clinical development for moderate-to-severe PsO, along with PsA, HS, axSpA, and other indications. These include the biologics picankibart from Innovent Biologics targeting IL-23p19, sonelokimab from MoonLake Immunotherapeutics targeting IL-17A/F, and izokibep from ACELYRIN targeting IL-17A. Also, there are several oral agents in development, including JNJ-2113 from Janssen targeting the IL-23 receptor, DC-806 and DC-853 from Eli Lilly targeting IL-17A, and TAK-279 from Takeda and ESK-001 from Alumis, both targeting TYK2.

License Agreements

Paragon Therapeutics

On March 6, 2024, Oruka entered into the Paragon Option Agreements. Under the terms of each agreement, Paragon identifies, evaluates, and develops antibodies directed against certain mutually agreed therapeutic targets of interest to us. Each Paragon Option Agreement initially included one of two selected targets: IL-23 and IL-17A/F. Under the Paragon Option Agreements, Oruka has the exclusive option to, on a research program-by-research program basis, be granted an exclusive, worldwide license to all of Paragon's right, title, and interest in and to the intellectual property resulting from the applicable research program to develop, manufacture, and commercialize the antibodies and products directed to the selected target(s) (each, an "Option"). In the case of IL-23, Oruka's Option excludes the therapeutic area of IBD. From time to time, Oruka can choose to add additional targets to the collaboration by mutual agreement with Paragon and Paruka. As of the date hereof, Oruka has not exercised any Options.

Pursuant to the terms of the Paragon Option Agreements, Oruka initiated certain research programs with Paragon that generally focus on a particular target (each, a "Research Program"). Each Research Program is aimed at discovering, generating, identifying, and/or characterizing antibodies directed to the respective target. For each Research Program, Oruka established or may establish in the future a research plan with Paragon that sets forth the activities that will be conducted, and the associated research budget (each, a "Research Plan"). Oruka's exclusive option with respect to each Research Program is exercisable at Oruka's sole discretion at any time during the period beginning on the initiation of activities under the associated Research Program and ending a specified number of days following (i) with respect to any Research Program other than ORKA-001, the delivery of the data package from Paragon related to the results of the Research Plan activities or (ii) with respect to ORKA-001, the completion of the IL-23 antibody selection process described in the agreement (the "Option Period"). There is no payment due upon exercise of an Option pursuant to the Paragon Option Agreements.

Unless terminated earlier, each Paragon Option Agreement shall continue in force on a Research Program-by-Research Program basis until the earlier of: (i) the end of the Option Period for such Research Program, as applicable, if such Option is not exercised by us; (ii) the expiration of the 30-day period after Oruka exercises its Option with respect to a Research Program, subject to mutually agreed extension, during the Option Period and the parties are unable to finalize and execute a license agreement, and (iii) the expiration of the applicable Research Term (as defined under each Paragon Option Agreement) (the "Term"). Oruka may terminate any Paragon Option Agreement or any Research Program at any time for any or no reason upon 30 days' prior written notice to Paragon, provided that Oruka must pay certain unpaid fees due to Paragon upon such termination, as well as any non-cancellable obligations reasonably incurred by Paragon in connection with its activities under any terminated Research Program. Paragon may terminate any Paragon Option Agreement or a Research Program immediately upon written notice to Oruka if, as a result of any action or failure to act by Oruka or its affiliates, such Research Program or all material activities under the applicable Research Plan are suspended, discontinued or otherwise delayed for a certain consecutive number of months. Each party has the right to terminate the Paragon Option Agreements or any Research Program upon (i) 30 days' prior written notice of the other party's material breach that remains uncured for the 30-day period and (ii) the other party's bankruptcy.

Upon signing of the Paragon Option Agreement for ORKA-001, a one-time, non-refundable research initiation fee of $0.8 million became payable by Oruka to Paragon. This amount was recognized by Oruka as a research and development expense during the period ended March 31, 2024, and paid to Paragon in April 2024. Oruka is also responsible for 50% of the development costs incurred by Paragon prior to March 31, 2024, provided that Oruka receives rights to at least one selected IL-23 antibody. Oruka's share of development costs incurred by Paragon prior to March 31, 2024 is $5.9 million. As of the date of filing of this proxy statement/prospectus, Oruka has not received rights to a selected IL-23 antibody and has not paid or accrued the $5.9 million of development costs incurred by Paragon prior to March 31, 2024. Oruka will be responsible for 50% of the ORKA-001 development costs incurred by Paragon from and after March 31, 2024, through the completion of the IL-23 selection process.

Under the Paragon Option Agreement for ORKA-002, Oruka was required to reimburse Paragon $3.3 million for development costs related to ORKA-002 incurred by Paragon through December 31, 2023 and certain other development costs incurred by Paragon between January 1, 2024 and March 6, 2024 (the "pre-effective date development costs"). This amount was recognized as a research and development expense during the period from

February 6 (inception) to March 31, 2024, and accounts payable as of March 31, 2024. Oruka paid $3.3 million to Paragon in April 2024. Oruka is also responsible for the development costs incurred by Paragon from January 1, 2024 to March 31, 2024 of $0.9 million, which was recognized as a research and development expense in the period ended March 31, 2024. Oruka will be required to pay Paragon $0.8 million for the research initiation fee related to ORKA-002 within 30 days following finalization of the ORKA-002 research plan as well as for subsequent development costs related to ORKA-002. Oruka will be responsible for ORKA-002 development costs incurred from and after March 31, 2024, through the completion of the IL-17 selection process.

As of the filing date of this proxy statement/prospectus, Oruka has not exercised its options with respect to ORKA-001 or ORKA-002. For each of these agreements, if Oruka exercises its options, it will be required to make non-refundable milestone payments to Paragon of up to $12.0 million upon the achievement of certain clinical development milestones, up to $10.0 million upon the achievement of certain regulatory milestones, as well as tiered royalty payments in the low-to-mid single-digits beginning on the first commercial sale.

Additionally, as part of the Paragon Option Agreements, on each of December 31, 2024 and December 31, 2025, Oruka will grant Paruka warrants to purchase a number of shares equal to 1.00% of outstanding shares as of the date of the grant on a fully-diluted basis, with an exercise price equal to the fair market value of the underlying shares on the grant date.

Government Regulation

The FDA and other regulatory authorities at federal, state and local levels, as well as in foreign countries, extensively regulate, among other things, the research, development, testing, manufacture, quality control, import, export, safety, effectiveness, labeling, packaging, storage, distribution, record keeping, approval, advertising, promotion, marketing, post-approval monitoring and post-approval reporting of biologics such as those Oruka is developing. Oruka, along with its third-party contractors, will be required to navigate the various preclinical, clinical and commercial approval requirements of the governing regulatory agencies of the countries in which Oruka wishes to conduct studies or seek approval or licensure of its product candidates.

United States Biologics Regulation

In the United States, biological products are subject to regulation under the FDCA, the Public Health Service Act ("PHSA") and other federal, state, local, and foreign statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, and local statutes and regulations requires the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or following approval may subject an applicant to administrative action and judicial sanctions. The process required by the FDA before biologic product candidates may be marketed in the United States generally involves the following:

- completion of preclinical laboratory tests and animal studies performed in accordance with the FDA's current Good Laboratory Practices ("GLP") regulation;
- submission to the FDA of an IND, which must become effective before clinical trials may begin and must be updated annually or when significant changes are made;
- approval by an independent IRB, or ethics committee at each clinical site before the trial is commenced;
- manufacture of the proposed biologic candidate in accordance with current Good Manufacturing Practices ("cGMPs");
- performance of adequate and well-controlled human clinical trials in accordance with GCP requirements to establish the safety, purity and potency of the proposed biologic product candidate for its intended purpose;
- preparation of and submission to the FDA of a BLA, after completion of all pivotal clinical trials;
- satisfactory completion of an FDA Advisory Committee review, if applicable;
- a determination by the FDA within 60 days of its receipt of a BLA to file the application for review;

- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the proposed product is produced to assess compliance with cGMPs, and to assure that the facilities, methods and controls are adequate to preserve the biological product's continued safety, purity and potency, and of selected clinical investigation sites to assess compliance with GCPs; and
- FDA review and approval of a BLA to permit commercial marketing of the product for particular indications for use in the United States.

Preclinical and Clinical Development

Prior to beginning any clinical trial with a product candidate, in the United States, Oruka must submit an IND to the FDA. An IND is a request for authorization from the FDA to administer an investigational new drug product to humans. The central focus of an IND submission is on the general investigational plan and the protocol or protocols for preclinical studies and clinical trials. The IND also includes results of animal and *in vitro* studies assessing the toxicology, pharmacokinetics, pharmacology and pharmacodynamic characteristics of the product, chemistry, manufacturing and controls information, and any available human data or literature to support the use of the investigational product. An IND must become effective before human clinical trials may begin. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day period, raises safety concerns or questions about the proposed clinical trial. In such a case, the IND may be placed on clinical hold and the IND sponsor and the FDA must resolve any outstanding concerns or questions before the clinical trial can begin. Submission of an IND therefore may or may not result in FDA authorization to begin a clinical trial.

In addition to the IND submission process, supervision of human gene transfer trials includes evaluation and assessment by an institutional biosafety committee ("IBC"), a local institutional committee that reviews and oversees research utilizing recombinant or synthetic nucleic acid molecules at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment and such review may result in some delay before initiation of a clinical trial.

Clinical trials involve the administration of the investigational product to human subjects under the supervision of qualified investigators in accordance with GCPs, which include the requirement that all research subjects provide their informed consent for their participation in any clinical study. Clinical trials are conducted under protocols detailing, among other things, the objectives of the study, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development and for any subsequent protocol amendments. Furthermore, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial begins at that site, and must monitor the study until completed.

Regulatory authorities, the IRB or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk or that the trial is unlikely to meet its stated objectives. Some studies also include oversight by an independent group of qualified experts organized by the clinical study sponsor, known as a data safety monitoring board, which provides authorization for whether or not a study may move forward at designated check points based on access to certain data from the study and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. There are also requirements governing the reporting of ongoing preclinical studies and clinical trials and clinical study results to public registries.

For purposes of BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1. The investigational product is initially introduced into healthy human subjects or patients with the target disease or condition. These studies are designed to test the safety, dosage tolerance, absorption, metabolism and distribution of the investigational product in humans, the side effects associated with increasing doses, and, if possible, to gain early evidence on effectiveness.

- Phase 2. The investigational product is administered to a limited patient population with a specified disease or condition to evaluate the preliminary efficacy, optimal dosages and dosing schedule and to identify possible adverse side effects and safety risks. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- Phase 3. The investigational product is administered to an expanded patient population to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety, generally at multiple geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the investigational product and to provide an adequate basis for product approval.

In some cases, the FDA may require, or companies may voluntarily pursue, additional clinical trials after a product is approved to gain more information about the product. These so-called Phase 4 studies may be made a condition to approval of the BLA. Concurrent with clinical trials, companies may complete additional animal studies and develop additional information about the biological characteristics of the product candidate and must finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other things, must develop methods for testing the identity, strength, quality and purity of the final product, or for biologics, the safety, purity and potency. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the product candidate does not undergo unacceptable deterioration over its shelf life.

A sponsor may choose, but is not required, to conduct a foreign clinical study under an IND. When a foreign clinical study is conducted under an IND, all IND requirements must be met unless waived. When the foreign clinical study is not conducted under an IND, the sponsor must ensure that the study complies with certain FDA regulatory requirements in order to use the study as support for an IND or application for marketing approval or licensure, including that the study was conducted in accordance with GCP, including review and approval by an independent ethics committee and use of proper procedures for obtaining informed consent from subjects, and the FDA is able to validate the data from the study through an onsite inspection if the FDA deems such inspection necessary. The GCP requirements encompass both ethical and data integrity standards for clinical studies.

BLA Submission and Review

Assuming successful completion of all required testing in accordance with all applicable regulatory requirements, the results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of a BLA requesting approval to market the product for one or more indications. The BLA must include all relevant data available from pertinent preclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls, and proposed labeling, among other things. Data can come from company-sponsored clinical studies intended to test the safety and effectiveness of the product, or from a number of alternative sources, including studies initiated and sponsored by investigators. The submission of a BLA requires payment of a substantial application user fee to the FDA, unless a waiver or exemption applies.

In addition, under the Pediatric Research Equity Act ("PREA"), a BLA or supplement to a BLA must contain data to assess the safety and effectiveness of the biological product candidate for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The Food and Drug Administration Safety and Innovation Act requires that a sponsor who is planning to submit a marketing application for a biological product that includes a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration submit an initial pediatric study plan within sixty days after an end-of-Phase 2 meeting or as may be agreed between the sponsor and FDA. Unless otherwise required by regulation, PREA does not apply to any biological product for an indication for which orphan designation has been granted.

Within 60 days following submission of the application, the FDA reviews a BLA submitted to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission and may request additional information. In this event, the BLA must be resubmitted with the additional information. Once a BLA has been accepted for filing, the FDA's goal is to review standard applications within ten months after the filing date, or, if the application qualifies

for priority review, six months after the FDA accepts the application for filing. In both standard and priority reviews, the review process may also be extended by FDA requests for additional information or clarification. The FDA reviews a BLA to determine, among other things, whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may convene an advisory committee to provide clinical insight on application review questions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Before approving a BLA, the FDA will typically inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes and facilities are in compliance with GMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving a BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCPs. If the FDA determines that the application, manufacturing process or manufacturing facilities are not acceptable, it will outline the deficiencies in the submission and often will request additional testing or information. Notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

After the FDA evaluates a BLA and conducts inspections of manufacturing facilities where the investigational product and/or its drug substance will be produced, the FDA may issue an approval letter or a Complete Response letter. An approval letter authorizes commercial marketing of the product with specific prescribing information for specific indications. A Complete Response letter will describe all of the deficiencies that the FDA has identified in the BLA, except that where the FDA determines that the data supporting the application are inadequate to support approval, the FDA may issue the Complete Response letter without first conducting required inspections, testing submitted product lots and/or reviewing proposed labeling. In issuing the Complete Response letter, the FDA may recommend actions that the applicant might take to place the BLA in condition for approval, including requests for additional information or clarification. The FDA may delay or refuse approval of a BLA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product.

If regulatory approval of a product is granted, such approval will be granted for particular indications and may entail limitations on the indicated uses for which such product may be marketed. For example, the FDA may approve the BLA with a REMS to ensure the benefits of the product outweigh its risks. A REMS is a safety strategy to manage a known or potential serious risk associated with a product and to enable patients to have continued access to such medicines by managing their safe use, and could include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution methods, patient registries and other risk minimization tools. The FDA also may condition approval on, among other things, changes to proposed labeling or the development of adequate controls and specifications. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing requirements is not maintained or if problems occur after the product reaches the marketplace. The FDA may require one or more Phase 4 post-market studies and surveillance to further assess and monitor the product's safety and effectiveness after commercialization, and may limit further marketing of the product based on the results of these post-marketing studies.

Expedited Development and Review Programs

The FDA offers a number of expedited development and review programs for qualifying product candidates. The fast track program is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for fast track designation if they are intended to treat a serious or life-threatening disease or condition and data demonstrate the potential to address unmet medical needs for the disease or condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. The sponsor of a fast track product has opportunities for more frequent interactions with the review team during product development and, once a BLA is submitted, the product may be eligible for priority review. A fast track product may also be eligible for rolling review, where the FDA may consider for review sections of the BLA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA, the FDA agrees to accept sections of the BLA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA.

A product intended to treat a serious or life-threatening disease or condition may also be eligible for breakthrough therapy designation to expedite its development and review. A product can receive breakthrough therapy designation if preliminary clinical evidence indicates that the product, alone or in combination with one or more other drugs or biologics, may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the fast track program features, as well as more intensive FDA interaction and guidance beginning as early as Phase 1 and an organizational commitment to expedite the development and review of the product, including involvement of senior managers.

Any marketing application for a biologic submitted to the FDA for approval, including a product with a fast track designation and/or breakthrough therapy designation, may be eligible for other types of FDA programs intended to expedite the FDA review and approval process, such as priority review and accelerated approval. A product is eligible for priority review if there is evidence it has the potential to provide a significant improvement in the treatment, diagnosis or prevention of a serious disease or condition. For original BLAs, priority review designation means the FDA's goal is to take action on the marketing application within six months of the 60-day filing date (as compared to ten months under standard review).

Additionally, products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of accelerated approval, the FDA will generally require the sponsor to perform adequate and well-controlled post-marketing clinical studies to verify and describe the anticipated effect on irreversible morbidity or mortality or other clinical benefit. Under the Food and Drug Omnibus Reform Act of 2022 the FDA may require, as appropriate, that such studies be underway prior to approval or within a specific time period after the date of approval for a product granted accelerated approval. Products receiving accelerated approval may be subject to expedited withdrawal procedures if the sponsor fails to conduct the required post-marketing studies or if such studies fail to verify the predicted clinical benefit. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

Fast track designation, breakthrough therapy designation and priority review do not change the standards for approval but may expedite the development or approval process. Even if a product qualifies for one or more of these programs, the FDA may later decide that the product no longer meets the conditions for qualification or decide that the time period for FDA review or approval will not be shortened.

Post-Approval Requirements

Any products manufactured or distributed by Oruka pursuant to FDA approvals are subject to pervasive and continuing regulation by the FDA, including, among other things, requirements relating to record-keeping, reporting of adverse experiences, periodic reporting, product sampling and distribution, and advertising and promotion of the product. After approval, most changes to the approved product, such as adding new indications or other labeling claims, are subject to prior FDA review and approval. There also are continuing user fee requirements, under which the FDA assesses an annual program fee for each product identified in an approved BLA. Biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMPs, which impose certain procedural and documentation requirements upon Oruka and its third-party manufacturers. Changes to the manufacturing process are strictly regulated, and, depending on the significance of the change, may require prior FDA approval before being implemented. FDA regulations also require investigation and correction of any deviations from cGMPs and impose reporting requirements upon Oruka and any third-party manufacturers that Oruka may decide to use. Accordingly, manufacturers must continue to expend time, money and effort in the area of production and quality control to maintain compliance with cGMPs and other aspects of regulatory compliance.

The FDA may withdraw approval if compliance with regulatory requirements and standards is not maintained or if problems occur after the product reaches the market. Later discovery of previously unknown problems with a product, including adverse events of unanticipated severity or frequency, or with manufacturing processes, or

failure to comply with regulatory requirements, may result in revisions to the approved labeling to add new safety information; imposition of post-market studies or clinical studies to assess new safety risks; or imposition of distribution restrictions or other restrictions under a REMS program. Other potential consequences include, among other things:

- restrictions on the marketing or manufacturing of a product, complete withdrawal of the product from the market or product recalls;
- fines, warning letters or holds on post-approval clinical studies;
- refusal of the FDA to approve pending applications or supplements to approved applications, or suspension or revocation of existing product approvals;
- product seizure or detention, or refusal of the FDA to permit the import or export of products;
- consent decrees, corporate integrity agreements, debarment or exclusion from federal healthcare programs;
- mandated modification of promotional materials and labeling and the issuance of corrective information;
- the issuance of safety alerts, Dear Healthcare Provider letters, press releases and other communications containing warnings or other safety information about the product; or
- injunctions or the imposition of civil or criminal penalties.

The FDA closely regulates the marketing, labeling, advertising and promotion of biologics. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA and in accordance with the provisions of the approved label. The FDA and other agencies actively enforce the laws and regulations prohibiting the promotion of off-label uses. Failure to comply with these requirements can result in, among other things, adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by Oruka and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use of their products.

Biosimilars and Reference Product Exclusivity

The ACA includes a subtitle called the BPCIA, which created an abbreviated approval pathway for biological products that are highly similar, or "biosimilar," to or interchangeable with an FDA-approved reference biological product. The FDA has issued several guidance documents outlining an approach to review and approval of biosimilars.

Biosimilarity, which requires that there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, is generally shown through analytical studies, animal studies, and a clinical study or studies. Interchangeability requires that a product is biosimilar to the reference product and the product must demonstrate that it can be expected to produce the same clinical results as the reference product in any given patient and, for products that are administered multiple times to an individual, the biologic and the reference biologic may be alternated or switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. A product shown to be biosimilar or interchangeable with an FDA-approved reference biological product may rely in part on the FDA's previous determination of safety and effectiveness for the reference product for approval, which can potentially reduce the cost and time required to obtain approval to market the product. Complexities associated with the larger, and often more complex, structures of biological products, as well as the processes by which such products are manufactured, pose significant hurdles to implementation of the abbreviated approval pathway that are still being worked out by the FDA. In September 2021, the FDA issued two guidance documents intended to inform prospective applicants and facilitate the development of proposed biosimilars and interchangeable biosimilars, as well as to describe the FDA's interpretation of certain statutory requirements added by the BPCIA.

Under the BPCIA, an application for a biosimilar product may not be submitted to the FDA until four years following the date that the reference product was first licensed by the FDA. In addition, the approval of a biosimilar product may not be made effective by the FDA until 12 years from the date on which the reference product was first licensed. During this 12-year period of exclusivity, another company may still market a competing version of the reference product if the FDA approves a full BLA for the competing product containing that applicant's own preclinical data and data from adequate and well-controlled clinical trials to demonstrate the safety, purity and potency of its product. The BPCIA also created certain exclusivity periods for biosimilars approved as interchangeable products. At this juncture, it is unclear whether products deemed "interchangeable" by the FDA will, in fact, be readily substituted by pharmacies, which are governed by state pharmacy law.

A reference biologic is granted twelve years of exclusivity from the time of first licensure of the reference product. The first biologic product submitted under the abbreviated approval pathway that is determined to be interchangeable with the reference product has exclusivity against other biologics submitted under the abbreviated approval pathway for the lesser of (i) one year after the first commercial marketing, (ii) 18 months after approval if there is no legal challenge, (iii) 18 months after the resolution in the applicant's favor of a lawsuit challenging the biologics' patents if an application has been submitted, or (iv) 42 months after the application has been approved if a lawsuit is ongoing within the 42-month period.

A biological product can also obtain pediatric market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric study in accordance with an FDA-issued "Written Request" for such a study. The BPCIA is complex and continues to be interpreted and implemented by the FDA. In July 2018, the FDA announced an action plan to encourage the development and efficient review of biosimilars, including the establishment of a new office within the agency that will focus on therapeutic biologics and biosimilars. On December 20, 2020, Congress amended the PHSA as part of the COVID-19 relief bill to further simplify the biosimilar review process by making it optional to show that conditions of use proposed in labeling have been previously approved for the reference product, which used to be a requirement of the application. In addition, government proposals have sought to reduce the 12-year reference product exclusivity period. Other aspects of the BPCIA, some of which may impact the BPCIA exclusivity provisions, have also been the subject of recent litigation. As a result, the ultimate impact, implementation, and impact of the BPCIA is subject to significant uncertainty.

As discussed below, the Inflation Reduction Act of 2022 ("IRA") is a significant new law that intends to foster generic and biosimilar competition and to lower drug and biologic costs.

Other Healthcare Laws and Compliance Requirements

Pharmaceutical companies are subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which they conduct their business. Such laws include, without limitation: the federal Anti-Kickback Statute ("AKS"); the federal False Claims Act ("FCA"); the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") and similar foreign, federal and state fraud, abuse and transparency laws.

The AKS prohibits, among other things, persons and entities from knowingly and willfully soliciting, receiving, offering or paying remuneration, to induce, or in return for, either the referral of an individual, or the purchase or recommendation of an item or service for which payment may be made under any federal healthcare program. The term remuneration has been interpreted broadly to include anything of value.

The AKS has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand, and prescribers and purchasers on the other. The government often takes the position that to violate the AKS, only one purpose of the remuneration need be to induce referrals, even if there are other legitimate purposes for the remuneration. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from AKS prosecution, but they are drawn narrowly and practices that involve remuneration, such as consulting agreements, that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Oruka's practices may not in all cases meet all of the criteria for protection under a statutory exception or regulatory safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory safe harbor does not make the conduct per

se illegal under the AKS. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances. A person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Civil and criminal false claims laws, including the FCA, and civil monetary penalty laws, which can be enforced through civil whistleblower or qui tam actions, prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment of federal government funds, including in federal healthcare programs, that are false or fraudulent. Pharmaceutical and other healthcare companies have been prosecuted under these laws for engaging in a variety of different types of conduct that "caused" the submission of false claims to federal healthcare programs. Under the AKS, for example, a claim resulting from a violation of the AKS is deemed to be a false or fraudulent claim for purposes of the FCA.

HIPAA created additional federal criminal statutes that prohibit, among other things, executing a scheme to defraud any healthcare benefit program, including private third-party payors, and making false statements relating to healthcare matters. A person or entity does not need to have actual knowledge of the healthcare fraud statute implemented under HIPAA or specific intent to violate the statute in order to have committed a violation.

The FDCA addresses, among other things, the design, production, labeling, promotion, manufacturing, and testing of drugs, biologics and medical devices, and prohibits such acts as the introduction into interstate commerce of adulterated or misbranded drugs or devices. The PHSA also prohibits the introduction into interstate commerce of unlicensed or mislabeled biological products.

The U.S. federal Physician Payments Sunshine Act requires certain manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to annually report to the Centers for Medicaid & Medicare Services ("CMS") information related to payments or other transfers of value to various healthcare professionals including physicians, physician assistants, nurse practitioners, clinical nurse specialists, certified nurse anesthetists, certified nurse-midwives, and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members. Beginning on January 1, 2023, California Assembly Bill 1278 requires California physicians and surgeons to notify patients of the Open Payments database established under the federal Physician Payments Sunshine Act.

We are also subject to additional similar U.S. state and foreign law equivalents of each of the above federal laws, which, in some cases, differ from each other in significant ways, and may not have the same effect, thus complicating compliance efforts. If Oruka's operations are found to be in violation of any of such laws or any other governmental regulations that apply, Oruka may be subject to penalties, including, without limitation, civil, criminal and administrative penalties, damages, fines, exclusion from government-funded healthcare programs, such as Medicare and Medicaid or similar programs in other countries or jurisdictions, integrity oversight and reporting obligations to resolve allegations of non-compliance, disgorgement, individual imprisonment, contractual damages, reputational harm, diminished profits and the curtailment or restructuring of Oruka's operations.

Data Privacy and Security

Numerous state, federal, and foreign laws govern the collection, dissemination, use, access to, confidentiality, and security of personal information, including health-related information. In the United States, numerous federal and state laws and regulations, including state data breach notification laws, state health information privacy laws, and federal and state consumer protection laws and regulations, govern the collection, use, disclosure, and protection of health-related and other personal information could apply to Oruka's operations or the operations of Oruka's partners. For example, HIPAA, as amended by the Health Information Technology for Economic and Clinical Health ("HITECH"), and their respective implementing regulations imposes data privacy, security, and breach notification obligations on certain health care providers, health plans, and health care clearinghouses, known as covered entities, as well as their business associates and their covered subcontractors that perform certain services that involve using, disclosing, creating, receiving, maintaining, or transmitting individually identifiable protected health information ("PHI") for or on behalf of such covered entities. These requirements imposed by HIPAA and the HITECH Act on covered entities and business associates include entering into agreements that require business associates protect PHI provided by the covered entity against improper use or disclosure, among other things; following certain standards for the privacy of PHI, which limit the disclosure of a patient's past, present, or future physical or mental health or condition or information about a

patient's receipt of health care if the information identifies, or could reasonably be used to identify, the individual; ensuring the confidentiality, integrity, and availability of all PHI created, received, maintained, or transmitted in electronic form, to identify and protect against reasonably anticipated threats or impermissible uses or disclosures to the security and integrity of such PHI; and reporting of breaches of PHI to individuals and regulators. Entities that are found to be in violation of HIPAA may be subject to significant civil, criminal, and administrative fines and penalties and/or additional reporting and oversight obligations if required to enter into a resolution agreement and corrective action plan with the U.S. Department of Health and Human Services ("HHS") to settle allegations of HIPAA non-compliance. A covered entity or business associate is also liable for civil money penalties for a violation that is based on an act or omission of any of its agents, which may include a downstream business associate, as determined according to the federal common law of agency. HITECH also increased the civil and criminal penalties applicable to covered entities and business associates and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorneys' fees and costs associated with pursuing federal civil actions. To the extent that Oruka submit electronic healthcare claims and payment transactions that do not comply with the electronic data transmission standards established under HIPAA and HITECH, payments to Oruka may be delayed or denied.

Even when HIPAA does not apply, according to the FTC, violating consumers' privacy rights or failing to take appropriate steps to keep consumers' personal information secure may constitute unfair acts or practices in or affecting commerce in violation of Section 5(a) of the Federal Trade Commission Act.

In addition, certain state laws, such as the California Consumer Privacy Act of 2018 ("CCPA"), as amended by the California Privacy Rights Act of 2020 ("CPRA"), govern the privacy and security of personal information, including health-related information in certain circumstances, some of which are more stringent than HIPAA and many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. The CCPA/CPRA applies to personal data of consumers, business representatives, and employees, and imposes obligations on certain businesses that do business in California, including to provide specific disclosures in privacy notices, rights to California residents in relation to their personal information. Health information falls under the CCPA/CPRA's definition of personal information where it identifies, relates to, describes, or is reasonably capable of being associated with or could reasonably be linked with a particular consumer or household — unless it is subject to HIPAA — and is included under a new category of personal information, "sensitive personal information," which is offered greater protection. Failure to comply with these laws, where applicable, can result in the imposition of significant civil and/or criminal penalties and private litigation. Privacy and security laws, regulations, and other obligations are constantly evolving, may conflict with each other to complicate compliance efforts, and can result in investigations, proceedings, or actions that lead to significant civil and/or criminal penalties and restrictions on data processing. Additionally, Oruka's use of artificial intelligence and machine learning may be subject to laws and evolving regulations regarding the use of artificial intelligence/machine learning, controlling for data bias, and antidiscrimination.

In addition, the CPRA expands the CCPA's requirements, including by adding a new right for individuals to correct their personal information and establishing a new regulatory agency to implement and enforce the law. Other states, such as Virginia, Colorado, Connecticut and Utah, have also passed comprehensive privacy laws, and similar laws are being considered in several other states, as well as at the federal and local levels. While the laws in these states, like the CCPA, also exempt some data processed in the context of clinical trials, such developments further complicate compliance efforts, and increase legal risk and compliance costs for Oruka and the third parties upon whom Oruka relies.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any pharmaceutical or biological product for which Oruka obtains regulatory approval. Sales of any product, if approved, depend, in part, on the extent to which such product will be covered by third-party payors, such as federal, state, and foreign government healthcare programs, commercial insurance and managed healthcare organizations, and the level of reimbursement, if any, for such product by third-party payors. Decisions regarding whether to cover any of Oruka's product candidates, if approved, the extent of coverage and amount of reimbursement to be provided are made on a plan-by-plan basis. Further, no uniform policy for coverage and reimbursement exists in the United States, and coverage and reimbursement can differ significantly from payor to payor. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement rates, but also have their own

methods and approval process apart from Medicare determinations. As a result, the coverage determination process is often a time-consuming and costly process that will require Oruka to provide scientific and clinical support for the use of Oruka's product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

Third-party payors are increasingly challenging the prices charged for medical products and services, examining the medical necessity and reviewing the cost effectiveness of pharmaceutical or biological products, medical devices and medical services, in addition to questioning safety and efficacy. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit sales of any product that receives approval. Decreases in third-party reimbursement for any product or a decision by a third-party not to cover a product could reduce physician usage and patient demand for the product.

For products administered under the supervision of a physician, obtaining coverage and adequate reimbursement may be particularly difficult because of the higher prices often associated with such drugs. Additionally, separate reimbursement for the product itself or the treatment or procedure in which the product is used may not be available, which may impact physician utilization. In addition, companion diagnostic tests require coverage and reimbursement separate and apart from the coverage and reimbursement for their companion pharmaceutical or biological products. Similar challenges to obtaining coverage and reimbursement, applicable to pharmaceutical or biological products, will apply to companion diagnostics.

In addition, the U.S. government, state legislatures and foreign governments have continued implementing cost-containment programs, including price controls, restrictions on coverage and reimbursement and requirements for substitution of generic products. The IRA provides CMS with significant new authorities intended to curb drug costs and to encourage market competition. For the first time, CMS will be able to directly negotiate prescription drug prices and to cap out-of-pocket costs. Each year, CMS will select and negotiate a preset number of high-spend drugs and biologics that are covered under Medicare Part B and Part D that do not have generic or biosimilar competition. On August 29, 2023, HHS announced the list of the first ten drugs that will be subject to price negotiations. These price negotiations will begin in 2023, although the Medicare drug price negotiation program is currently subject to legal challenges. The IRA also provides a new "inflation rebate" covering Medicare patients that took effect in 2023 and is intended to counter certain price increases in prescriptions drugs. The inflation rebate provision will require drug manufacturers to pay a rebate to the federal government if the price for a drug or biologic under Medicare Part B and Part D increases faster than the rate of inflation. To support biosimilar competition, beginning in October 2022, qualifying biosimilars may receive a Medicare Part B payment increase for a period of five years. Separately, if a biologic drug for which no biosimilar exists delays a biosimilar's market entry beyond two years, CMS will be authorized to subject the biologics manufacturer to price negotiations intended to ensure fair competition. Notwithstanding these provisions, the IRA's impact on commercialization and competition remains largely uncertain.

Healthcare Reform

The United States and some foreign jurisdictions are considering or have enacted a number of reform proposals to change the healthcare system. There is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality or expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by federal and state legislative initiatives, including those designed to limit the pricing, coverage, and reimbursement of pharmaceutical and biopharmaceutical products, especially under government-funded health care programs, and increased governmental control of drug pricing.

The ACA, which was enacted in March 2010, substantially changed the way healthcare is financed by both governmental and private insurers in the United States, and significantly affected the pharmaceutical industry. The ACA contains a number of provisions of particular import to the pharmaceutical and biotechnology industries, including, but not limited to, those governing enrollment in federal healthcare programs, a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, and annual fees based on pharmaceutical companies' share of sales to federal health care programs. Since its enactment, there have been judicial and Congressional challenges to certain aspects of the ACA, and Oruka expects there will be additional challenges and amendments to the ACA in

the future. For example, the IRA, among other things, extends enhanced subsidies for individuals purchasing health insurance coverage in ACA marketplaces through plan year 2025. The IRA also eliminates the "donut hole" under the Medicare Part D program beginning in 2025 by significantly lowering the beneficiary maximum out-of-pocket cost and creating a new manufacturer discount program.

Other legislative changes have been proposed and adopted since the ACA was enacted, including automatic aggregate reductions of Medicare payments to providers of on average 2% per fiscal year as part of the federal budget sequestration under the Budget Control Act of 2011. These reductions went into effect in April 2013 and, due to subsequent legislative amendments, will remain in effect until 2032 unless additional action is taken by Congress.

In addition, the Bipartisan Budget Act of 2018, among other things, amended the Medicare Act (as amended by the ACA) to increase the point-of-sale discounts that manufacturers must agree to offer under the Medicare Part D coverage discount program from 50% to 70% off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs being covered under Medicare Part D.

Moreover, there has recently been heightened governmental scrutiny over the manner in which manufacturers set prices for their marketed products, which has resulted in several Congressional inquiries and proposed and enacted federal and state measures designed to, among other things, reduce the cost of prescription drugs, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for drug products. For example, in May 2019, CMS adopted a final rule allowing Medicare Advantage Plans the option to use step therapy for Part B drugs, permitting Medicare Part D plans to apply certain utilization controls to new starts of five of the six protected class drugs, and requiring the Explanation of Benefits for Part D beneficiaries to disclose drug price increases and lower cost therapeutic alternatives, which went into effect on January 1, 2021. In response to the Biden administration's October 2022 executive order, on February 14, 2023, HHS released a report outlining three new models for testing by the CMS Innovation Center which will be evaluated on their ability to lower the cost of drugs, promote accessibility, and improve quality of care. It is unclear whether the models will be utilized in any health reform measures in the future. Further, on December 7, 2023, the Biden administration announced an initiative to control the price of prescription drugs through the use of march-in rights under the Bayh-Dole Act. On December 8, 2023, the National Institute of Standards and Technology published for comment a Draft Interagency Guidance Framework for Considering the Exercise of March-In Rights which for the first time includes the price of a product as one factor an agency can use when deciding to exercise march-in rights. While march-in rights have not previously been exercised, it is uncertain if that will continue under the new framework.

Notwithstanding the IRA, continued legislative and enforcement interest exists in the United States with respect to specialty drug pricing practices. Specifically, Oruka expects regulators to continue pushing for transparency to drug pricing, reducing the cost of prescription drugs under Medicare, reviewing the relationship between pricing and manufacturer patient programs, and reforming government program reimbursement methodologies for drugs.

Other Government Regulation Outside of the United States

In addition to regulations in the United States, Oruka is subject to a variety of regulations in other jurisdictions governing, among other things, research and development, clinical trials, testing, manufacturing, safety, efficacy, quality control, labeling, packaging, storage, record keeping, distribution, reporting, export and import, advertising, marketing and other promotional practices involving biological products as well as authorization, approval as well as post-approval monitoring and reporting of Oruka's products. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

Whether or not Oruka obtains FDA approval for a product, Oruka must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials.

The requirements and process governing the conduct of clinical trials, including requirements to conduct additional clinical trials, product licensing, safety reporting, post-authorization requirements, marketing and promotion, interactions with healthcare professionals, pricing and reimbursement may vary widely from country

to country. No action can be taken to market any product in a country until an appropriate approval application has been approved by the regulatory authorities in that country. The current approval process varies from country to country, and the time spent in gaining approval varies from that required for FDA approval. In certain countries, the sales price of a product must also be approved. The pricing review period often begins after market approval is granted. Even if a product is approved by a regulatory authority, satisfactory prices may not be approved for such product, which would make launch of such products commercially unfeasible in such countries.

Regulation in the European Union

European Data Laws

The collection and use of personal health data and other personal data in the EU is governed by the provisions of the European General Data Protection Regulation (EU) 2016/679 ("GDPR"), which came into force in May 2018, and related data protection laws in individual EU Member States. The GDPR imposes a number of strict obligations and restrictions on the ability to process, including collecting, analyzing and transferring, personal data of individuals, in particular with respect to health data from clinical trials and adverse event reporting. The GDPR includes requirements relating to the legal basis of the processing (such as consent of the individuals to whom the personal data relates), the information provided to the individuals prior to processing their personal data, the notification obligations to the national data protection authorities, and the security and confidentiality of the personal data. EU Member States may also impose additional requirements in relation to health, genetic and biometric data through their national legislation.

In addition, the GDPR imposes specific restrictions on the transfer of personal data to countries outside of the European Economic Area ("EEA") that are not considered by the European Commission ("EC") to provide an adequate level of data protection. Appropriate safeguards are required to enable such transfers. Among the appropriate safeguards that can be used, the data exporter may use the standard contractual clauses ("SCCs"). With regard to the transfer of data from the EEA to the United States, on July 10, 2023, the EC adopted its adequacy decision for the EU-US Data Privacy Framework. On the basis of the new adequacy decision, personal data can flow from the EEA to U.S. companies participating in the framework.

Failure to comply with the requirements of the GDPR and the related national data protection laws of the EU Member States may result in significant monetary fines for noncompliance of up to €20 million or 4% of the annual global revenues of the noncompliant company, whichever is greater, other administrative penalties and a number of criminal offenses (punishable by uncapped fines) for organizations and, in certain cases, their directors and officers, as well as civil liability claims from individuals whose personal data was processed. Data protection authorities from the different EU Member States may still implement certain variations, enforce the GDPR and national data protection laws differently, and introduce additional national regulations and guidelines, which adds to the complexity of processing personal data in the EU. Guidance developed at both the EU level and at the national level in individual EU Member States concerning implementation and compliance practices are often updated or otherwise revised.

Furthermore, there is a growing trend towards the required public disclosure of clinical trial data in the EU, which adds to the complexity of obligations relating to processing health data from clinical trials. Such public disclosure obligations are provided in the new EU Clinical Trials Regulation No. 536/2014 ("CTR"), European Medical Agency ("EMA") disclosure initiatives and voluntary commitments by industry. Failure to comply with these obligations could lead to government enforcement actions and significant penalties against Oruka, harm to Oruka's reputation, and adversely impact Oruka's business and operating results. The uncertainty regarding the interplay between different regulatory frameworks, such as the CTR and the GDPR, further adds to the complexity that Oruka faces with regard to data protection regulation. With regard to the transfer of personal data from the EEA to the UK, personal data may now freely flow from the EEA to the UK since the UK is deemed to have an adequate data protection level.

However, the adequacy decisions include a 'sunset clause' which entails that the decisions will automatically expire four years after their entry into force. Additionally, following the UK's withdrawal from the EU and the EEA, companies also have to comply with the UK's data protection laws (including the UK GDPR (as defined

in section 3(10) (as supplemented by section 205(4)) of the Data Protection Act 2018 (the "DPA 2018")), the DPA 2018, and related data protection laws in the UK). Separate from the fines that can be imposed by the GDPR, the UK regime has the ability to fine up to the greater of £17.5 million or 4% of global turnover.

Following the UK's withdrawal from the EU and the EEA, companies are subject to specific transfer rules under the UK regime; personal data may flow freely from the UK to the EEA, since the EEA is deemed to have an adequate data protection level for purposes of the UK regime. These UK international transfer rules broadly mirror the GDPR rules. On February 2, 2022, the UK Secretary of State laid before the UK Parliament the international data transfer agreement ("IDTA") and the international data transfer addendum to the EC's standard contractual clauses for international data transfers (Addendum) and a document setting out transitional provisions. The IDTA and Addendum came into force on March 21, 2022 and replaced the old SCCs for the purposes of the UK regime. However, the transitional provisions, adopted with the IDTA and the Addendum, provide that contracts concluded on or before September 21, 2022 on the basis of any old SCCs continue to provide appropriate safeguards for the purpose of the UK regime until March 21, 2024, provided that the processing operations that are the subject matter of the contract remain unchanged and reliance on those clauses ensures that the transfer of personal data is subject to appropriate safeguards.

With regard to the transfer of personal data from the UK to the United States, the UK government has adopted an adequacy decision for the United States, the UK-US Data Bridge, which came into force on October 12, 2023. The UK-US Data Bridge recognizes the United States as offering an adequate level of data protection where the transfer is to a U.S. company participating in the EU-US Data Privacy Framework and the UK Extension.

Drug and Biologic Development Process

Regardless of where they are conducted, all clinical trials included in applications for marketing authorization ("MA") for human medicines in the EU/EEA must have been carried out in accordance with EU regulations. This means that clinical trials conducted in the EU/EEA have to comply with EU clinical trial legislation but also that clinical trials conducted outside the EU/EEA have to comply with ethical principles equivalent to those set out in the EEA, including adhering to international good clinical practice and the Declaration of Helsinki. The conduct of clinical trials in the EU is governed by the CTR, which entered into force on January 31, 2022. The CTR replaced the Clinical Trials Directive 2001/20/EC, ("Clinical Trials Directive") and introduced a complete overhaul of the existing regulation of clinical trials for medicinal products in the EU.

Under the former regime, which will expire after a transition period of three years as outlined below in more detail, before a clinical trial can be initiated it must be approved in each EU member state where there is a site at which the clinical trial is to be conducted. The approval must be obtained from two separate entities: the National Competent Authority ("NCA") and one or more Ethics Committees. NCA of the EU Member States in which the clinical trial will be conducted must authorize the conduct of the trial, and the independent Ethics Committee must grant a positive opinion in relation to the conduct of the clinical trial in the relevant EU member state before the commencement of the trial. Any substantial changes to the trial protocol or other information submitted with the clinical trial applications must be submitted to or approved by the relevant NCA and Ethics Committees. Under the current regime all suspected unexpected serious adverse reactions to the investigated drug that occur during the clinical trial must be reported to the NCA and to the Ethics Committees of the EU member state where they occur.

A more unified procedure will apply under the new CTR. A sponsor will be able to submit a single application for approval of a clinical trial through a centralized EU clinical trials portal (the "CTIS"). One national regulatory authority (the reporting EU member state proposed by the applicant) will take the lead in validating and evaluating the application and consult and coordinate with the other concerned EU Member States. If an application is rejected, it may be amended and resubmitted through the EU clinical trials portal. If an approval is issued, the sponsor may start the clinical trial in all concerned EU Member States. However, a concerned EU member state may in limited circumstances declare an "opt-out" from an approval and prevent the clinical trial from being conducted in such member state. The CTR also aims to streamline and simplify the rules on safety reporting, and introduces enhanced transparency requirements such as mandatory submission of a summary of the clinical trial results to the EU Database. The CTR foresees a three-year transition period. EU Member States will work in CTIS immediately after the system has gone live. Since January 31, 2023, submission of initial clinical trial applications via CTIS is mandatory, and by January 31, 2025, all ongoing trials approved under the former Clinical Trials Directive will need to comply with the CTR and have to be transitioned to CTIS. On July 19, 2023, the EC

published guidance concerning the steps to be taken in this transition. This guidance provides, among other things, that (i) documentation which was previously assessed will not be reassessed, (ii) templates that were developed and endorsed by the EU Clinical Trials Expert Group to provide compliance with the CTR do not need to be updated and (iii) there is no need to retrospectively create a site suitability form, which are only necessary for new trial sites.

Under both the former regime and the new CTR, national laws, regulations, and the applicable GCP and GLP standards must also be respected during the conduct of the trials, including the International Council for Harmonization of Technical Requirements for Pharmaceuticals for Human Use guidelines on Good Clinical Practice and the ethical principles that have their origin in the Declaration of Helsinki.

During the development of a medicinal product, the EMA and national regulators within the EU provide the opportunity for dialogue and guidance on the development program. At the EMA level, this is usually done in the form of scientific advice, which is given by the Committee for Medicinal Products for Human Use ("CHMP") on the recommendation of the Scientific Advice Working Party. A fee is incurred with each scientific advice procedure, but is significantly reduced for designated orphan medicines. Advice from the EMA is typically provided based on questions concerning, for example, quality (chemistry, manufacturing and controls testing), nonclinical testing and clinical studies, and pharmacovigilance plans and risk-management programs. Advice is not legally binding with regard to any future Marketing Authorization Application ("MAA") of the product concerned.

Drug Marketing Authorization

In the EEA, after completion of all required clinical testing, pharmaceutical products may only be placed on the market after obtaining a MA. To obtain a MA of a drug under European Union regulatory systems, an applicant can submit an MAA through, amongst others, a centralized or decentralized procedure.

To be used or sold in the UK, a drug must have an effective MA obtained by a centralized application through EMA or a national application. National applications are governed by the Human Medicines Regulations (SI 2012/1916). Applications are made electronically through the Medicines and Healthcare products Regulatory Agency ("MHRA") Submissions Portal. The process from application to authorizations generally takes up to 210 days, excluding time taken to provide any additional information or data required by the MHRA.

On August 30, 2023, the MHRA published detailed guidance on its recently announced new International Reliance Procedure ("IRP") for MAAs. The IRP applies since January 1, 2024 and replaces existing EU reliance procedures to apply for authorizations from seven international regulators (e.g., Health Canada, Swiss Medic, FDA, EMA, among others). The IRP allows medicinal products approved in other jurisdictions that meet certain criteria to undergo a fast-tracked MHRA review to obtain and/or update a MA in the UK or Great Britain.

Applicants can submit initial MAAs to the IRP but the procedure can also be used throughout the lifecycle of a product for post-authorization procedures including line extensions, variations and renewals.

Centralized Authorization Procedure

The centralized procedure provides for the grant of a single MA that is issued by the EC following the scientific assessment of the application by the EMA that is valid for all EU Member States as well as in the three additional member states of the EEA. The centralized procedure is compulsory for certain types of medicinal products, including for medicines developed by means of certain biotechnological processes, products designated as orphan medicinal products, advanced therapy medicinal products ("ATMP") and medicinal products with a new active substance indicated for the treatment of certain diseases (AIDS, cancer, neurodegenerative disorders, diabetes, auto-immune and viral diseases). For medicinal products containing a new active substance not yet authorized in the EEA before May 20, 2004 and indicated for the treatment of other diseases, medicinal products that constitute significant therapeutic, scientific or technical innovations or for which the grant of a MA through the centralized procedure would be in the interest of public health at EU level, an applicant may voluntarily submit an application for a MA through the centralized procedure.

Under the centralized procedure, the CHMP established at the EMA, is responsible for conducting the initial assessment of a drug. The CHMP is also responsible for several post-authorization and maintenance activities, such as the assessment of modifications or extensions to an existing MA. Under the centralized procedure, the timeframe for the evaluation of an MAA by the EMA's CHMP is, in principle, 210 days from receipt of a valid MAA. However,

this timeline excludes clock stops, when additional written or oral information is to be provided by the applicant in response to questions asked by the CHMP, so the overall process typically takes a year or more, unless the application is eligible for an accelerated assessment. Accelerated evaluation might be granted by the CHMP in exceptional cases, when a medicinal product is expected to be of a major public health interest, particularly from the point of view of therapeutic innovation. Upon request, the CHMP can reduce the time frame to 150 days if the applicant provides sufficient justification for an accelerated assessment. The CHMP will provide a positive opinion regarding the application only if it meets certain quality, safety and efficacy requirements. This opinion is then transmitted to the EC, which has the ultimate authority for granting MA within 67 days after receipt of the CHMP opinion.

Decentralized Authorization Procedure

Medicines that fall outside the mandatory scope of the centralized procedure have three routes to authorization: (i) they can be authorized under the centralized procedure if they concern a significant therapeutic, scientific or technical innovation, or if their authorization would be in the interest of public health; (ii) they can be authorized under a decentralized procedure where an applicant applies for simultaneous authorization in more than one EU member state; or (iii) they can be authorized in an EU member state in accordance with that state's national procedures and then be authorized in other EU countries by a procedure whereby the countries concerned agree to recognize the validity of the original, national MA (mutual recognition procedure).

The decentralized procedure permits companies to file identical MA applications for a medicinal product to the competent authorities in various EU Member States simultaneously if such medicinal product has not received marketing approval in any EU Member State before. This procedure is available for pharmaceutical products not falling within the mandatory scope of the centralized procedure. The competent authority of a single EU Member State, the reference member state, is appointed to review the application and provide an assessment report. The competent authorities of the other EU Member States, the concerned member states, are subsequently required to grant a MA for their territories on the basis of this assessment. The only exception to this is where the competent authority of an EU Member State considers that there are concerns of potential serious risk to public health, the disputed points are subject to a dispute resolution mechanism and may eventually be referred to the EC, whose decision is binding for all EU Member States.

Risk Management Plan

All new MAAs must include a Risk Management Plan ("RMP") describing the risk management system that the company will put in place and documenting measures to prevent or minimize the risks associated with the product. RMPs are continually modified and updated throughout the lifetime of the medicine as new information becomes available. An updated RMP must be submitted: (i) at the request of EMA or a national competent authority, or (ii) whenever the risk-management system is modified, especially as the result of new information being received that may lead to a significant change to the benefit-risk profile or as a result of an important pharmacovigilance or risk-minimization milestone being reached. The regulatory authorities may also impose specific obligations as a condition of the MA. Since October 20, 2023, all RMPs for centrally authorized products are published by the EMA, subject only to limited redactions.

MA Validity Period

MAs have an initial duration of five years. After these five years, the authorization may subsequently be renewed on the basis of a reevaluation of the risk-benefit balance. Once renewed, the MA is valid for an unlimited period unless the EC or the national competent authority decides, on justified grounds relating to pharmacovigilance, to proceed with only one additional five-year renewal. Applications for renewal must be made to the EMA at least nine months before the five-year period expires.

Additionally, the holder of a MA for an ATMP must put in place and maintain a system to ensure that each individual product and its starting and raw materials, including all substances coming into contact with the cells or tissues it may contain, can be traced through the sourcing, manufacturing, packaging, storage, transport and delivery to the relevant healthcare institution where the product is used.

Any authorization which is not followed by the actual placing of the drug on the EU market (in case of centralized procedure) or on the market of the authorizing member state within three years after authorization ceases to be valid.

For the UK, the period of three years during which the drug has not been marketed in Great Britain will be restarted from the date of conversion to a Great Britain MA. Conversion refers to the procedure by which, as of January 1, 2021, MAs granted on the basis of a centralized procedure in the EU are only valid in Northern Ireland but not in Great Britain, whereas, prior EU authorizations have all been automatically converted into UK MAs effective in Great Britain only.

On the other hand, for the EU, in the case the drug has been marketed in the UK, the placing on the UK market before the end of the period starting when the UK left the EU on January 31, 2020 and ending on December 31, 2020 (the "Brexit Transition Period") will be taken into account. If, after the end of the Brexit Transition Period, the drug is not placed on any other market of the remaining EU Member States, the three-year period will start running from the last date the drug was placed on the UK market before the end of the Brexit Transition Period.

Advanced Therapy Medicinal Products

In the EU, medicinal products, including ATMPs are subject to extensive pre- and post-market regulation by regulatory authorities at both the EU and national levels. ATMPs comprise gene therapy products, somatic cell therapy products and tissue engineered products, which are genes, cells or tissues that have undergone substantial manipulation and that are administered to human beings in order to cure, diagnose or prevent diseases or regenerate, repair or replace a human tissue. Pursuant to the ATMP Regulation, the Committee on Advanced Therapies ("CAT") is responsible in conjunction with the CHMP for the evaluation of ATMPs. The CHMP and CAT are also responsible for providing guidelines on ATMPs. These guidelines provide additional guidance on the factors that the EMA will consider in relation to the development and evaluation of ATMPs and include, among other things, the preclinical studies required to characterize ATMPs. Although such guidelines are not legally binding, compliance with them is often necessary to gain and maintain approval for product candidates.

In addition to the mandatory RMP, the holder of a MA for an ATMP must put in place and maintain a system to ensure that each individual product and its starting and raw materials, including all substances coming into contact with the cells or tissues it may contain, can be traced through the sourcing, manufacturing, packaging, storage, transport and delivery to the relevant healthcare institution where the product is used.

Exceptional Circumstances/Conditional Approval

Similar to accelerated approval regulations in the United States, conditional MAs can be granted in the EU in exceptional circumstances. A conditional MA can be granted for medicinal products where, although comprehensive clinical data referring to the safety and efficacy of the medicinal product have not been supplied, a number of criteria are fulfilled: (i) the benefit/risk balance of the product is positive, (ii) it is likely that the applicant will be in a position to provide the comprehensive clinical data, (iii) unmet medical needs will be fulfilled by the grant of the MA and (iv) the benefit to public health of the immediate availability on the market of the medicinal product concerned outweighs the risk inherent in the fact that additional data are still required. A conditional MA must be renewed annually.

Data and Market Exclusivity

As in the United States, it may be possible to obtain a period of market and / or data exclusivity in the EU that would have the effect of postponing the entry into the marketplace of a competitor's generic, hybrid or biosimilar product (even if the pharmaceutical product has already received a MA) and prohibiting another applicant from relying on the MA holder's pharmacological, toxicological and clinical data in support of another MA for the purposes of submitting an application, obtaining MA or placing the product on the market. New Chemical Entities ("NCEs") approved in the EU qualify for eight years of data exclusivity and 10 years of marketing exclusivity.

An additional non-cumulative one-year period of marketing exclusivity is possible if during the data exclusivity period (the first eight years of the 10-year marketing exclusivity period), the MA holder obtains an authorization for one or more new therapeutic indications that are deemed to bring a significant clinical benefit compared to existing therapies.

The data exclusivity period begins on the date of the product's first MA in the EU. After eight years, a generic product application may be submitted and generic companies may rely on the MA holder's data. However, a generic product cannot launch until two years later (or a total of 10 years after the first MA in the EU of the innovator product), or three years later (or a total of 11 years after the first MA in the EU of the innovator product) if the MA holder obtains MA for a new indication with significant clinical benefit within the eight-year data exclusivity period. Additionally, another non-cumulative one-year period of data exclusivity can be added to the eight years of data exclusivity where an application is made for a new indication for a well-established substance, provided that significant preclinical or clinical studies were carried out in relation to the new indication.

Another year of data exclusivity may be added to the eight years, where a change of classification of a pharmaceutical product has been authorized on the basis of significant pre-trial tests or clinical trials (when examining an application by another applicant for or holder of MA for a change of classification of the same substance the competent authority will not refer to the results of those tests or trials for one year after the initial change was authorized).

Products may not be granted data exclusivity since there is no guarantee that a product will be considered by the EU's regulatory authorities to include an NCE. Even if a compound is considered to be an NCE and the MA applicant is able to gain the prescribed period of data exclusivity, another company nevertheless could also market another version of the medicinal product if such company can complete a full MAA with their own complete database of pharmaceutical tests, preclinical studies and clinical trials and obtain MA of its product.

On April 26, 2023, the EC submitted a proposal for the reform of the European pharmaceutical legislation. The current draft envisages e.g., a shortening of the periods of data exclusivity, however, there is currently neither a final version of this draft nor a date for its entry into force.

Orphan Designation and Exclusivity

The criteria for designating an orphan medicinal product in the EU are similar in principle to those in the U.S. The EMA grants orphan drug designation if the medicinal product is intended for the diagnosis, prevention or treatment of a life-threatening or chronically debilitating condition affecting no more than five in 10,000 persons in the EU (prevalence criterion). In addition, orphan drug designation can be granted if, for economic reasons, the medicinal product would be unlikely to be developed without incentives and if there is no other satisfactory method approved in the EU of diagnosing, preventing, or treating the condition, or if such a method exists, the proposed medicinal product is a significant benefit to patients affected by the condition. An application for orphan drug designation (which is not a MA, as not all orphan-designated medicines reach the authorization application stage) must be submitted first before an application for MA of the medicinal product is submitted. The applicant will receive a fee reduction for the MAA if the orphan drug designation has been granted, but not if the designation is still pending at the time the MA is submitted, and sponsors must submit an annual report to EMA summarizing the status of development of the medicine. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and approval process. Designated orphan medicines are eligible for conditional MA.

The EMA's Committee for Orphan Medicinal Products reassesses the orphan drug designation of a product in parallel with the review for a MA; for a product to benefit from market exclusivity it must maintain its orphan drug designation at the time of MA review by the EMA and approval by the EC. Additionally, any MA granted for an orphan medicinal product must only cover the therapeutic indication(s) that are covered by the orphan drug designation. Upon the grant of a MA, orphan drug designation provides up to ten years of market exclusivity in the orphan indication.

During the 10-year period of market exclusivity, with a limited number of exceptions, the regulatory authorities of the EU Member States and the EMA may not accept applications for MA, accept an application to extend an existing MA or grant a MA for other similar medicinal products for the same therapeutic indication. A similar medicinal product is defined as a medicinal product containing a similar active substance or substances as contained in a currently authorized orphan medicinal product, and which is intended for the same therapeutic indication. An orphan medicinal product can also obtain an additional two years of market exclusivity for an orphan-designated condition when the results of specific studies are reflected in the Summary of Product

Characteristics ("SmPC") addressing the pediatric population and completed in accordance with a fully compliant Pediatric Investigation Plan ("PIP"). No extension to any supplementary protection certificate can be granted on the basis of pediatric studies for orphan indications.

The 10-year market exclusivity may be reduced to six years if, at the end of the fifth year, it is established that the product no longer meets the criteria for orphan designation, i.e., the condition prevalence or financial returns criteria under Article 3 of Regulation (EC) No. 141/2000 on orphan medicinal products. When the period of orphan market exclusivity for an indication ends, the orphan drug designation for that indication expires as well. Orphan exclusivity runs in parallel with normal rules on data exclusivity and market protection. Additionally, a MA may be granted to a similar medicinal product (orphan or not) for the same or overlapping indication subject to certain requirements.

In the UK, following the post-Brexit transition period, a system for incentivizing the development of orphan medicines was introduced. Overall, the requirements for orphan designation largely replicate the requirements in the EU and the benefit of market exclusivity has been retained. Products with an orphan designation in the EU can be considered for an orphan MA in Great Britain, but a UK-wide orphan MA can only be considered in the absence of an active EU orphan designation. The MHRA will review applications for orphan designation at the time of a MA, and will offer incentives, such as market exclusivity and full or partial refunds for MA fees to encourage the development of medicines in rare diseases.

Pediatric Development

In the EU, companies developing a new medicinal product are obligated to study their product in children and must therefore submit a PIP together with a request for agreement to the EMA. The EMA issues a decision on the PIP based on an opinion of the EMA's Pediatric Committee. Companies must conduct pediatric clinical trials in accordance with the PIP approved by the EMA, unless a deferral (e.g., until enough information to demonstrate its effectiveness and safety in adults is available) or waiver (e.g., because the relevant disease or condition occurs only in adults) has been granted by the EMA. The MAA for the medicinal product must include the results of all pediatric clinical trials performed and details of all information collected in compliance with the approved PIP, unless a waiver or a deferral has been granted, in which case the pediatric clinical trials may be completed at a later date. Medicinal products that are granted an MA on the basis of the pediatric clinical trials conducted in accordance with the approved PIP are eligible for a six-month extension of the protection under a supplementary protection certificate (if any is in effect at the time of approval), or, in the case of orphan medicinal products, a two year extension of the orphan market exclusivity. This pediatric reward is subject to specific conditions and is not automatically available when data in compliance with the approved PIP are developed and submitted. An approved PIP is also required when a MA holder wants to add a new indication, medicinal form or route of administration for a medicine that is already authorized and covered by intellectual property rights.

In the UK, the MHRA has published guidance on the procedures for UK PIPs which, where possible, mirror the submission format and requirements of the EU system. EU PIPs remain applicable for Northern Ireland and EU PIPs agreed by the EMA prior to January 1, 2021 have been adopted as UK PIPs.

PRIME Designation

In March 2016, the EMA launched an initiative to facilitate development of product candidates in indications, often rare, for which few or no therapies currently exist. The Priority Medicines ("PRIME") scheme is intended to encourage drug development in areas of unmet medical need and provides accelerated assessment of products representing substantial innovation reviewed under the centralized procedure. Products from small-and medium-sized enterprises may qualify for earlier entry into the PRIME scheme than larger companies on the basis of compelling non-clinical data and tolerability data from initial clinical trials. Many benefits accrue to sponsors of product candidates with PRIME designation, including but not limited to, early and proactive regulatory dialogue with the EMA, frequent discussions on clinical trial designs and other development program elements, and potentially accelerated MAA assessment once a dossier has been submitted. Importantly, once a candidate medicine has been selected for the PRIME scheme, a dedicated contact point and rapporteur from the CHMP or CAT are appointed facilitating increased understanding of the product at EMA's Committee level. A kick-off meeting with the CHMP/CAT rapporteur initiates these relationships and includes a team of multidisciplinary experts to provide

guidance on the overall development plan and regulatory strategy. PRIME eligibility does not change the standards for product approval, and there is no assurance that any such designation or eligibility will result in expedited review or approval.

Post-Approval Regulation

Similar to the United States, both MA holders and manufacturers of medicinal products are subject to comprehensive regulatory oversight by the EMA, the EC and/or the competent regulatory authorities of the EU Member States. This oversight applies both before and after grant of manufacturing licenses and MAs. It includes control of compliance with EU good manufacturing practices rules, manufacturing authorizations, pharmacovigilance rules and requirements governing advertising, promotion, sale, and distribution, recordkeeping, importing and exporting of medicinal products.

Failure by Oruka or by any of its third-party partners, including suppliers, manufacturers and distributors to comply with EU laws and the related national laws of individual EU Member States governing the conduct of clinical trials, manufacturing approval, MA of medicinal products and marketing of such products, both before and after grant of MA, statutory health insurance, bribery and anti-corruption or other applicable regulatory requirements may result in administrative, civil or criminal penalties. These penalties could include delays or refusal to authorize the conduct of clinical trials or to grant MA, product withdrawals and recalls, product seizures, suspension, withdrawal or variation of the MA, total or partial suspension of production, distribution, manufacturing or clinical trials, operating restrictions, injunctions, suspension of licenses, fines and criminal penalties.

The holder of MA for a medicinal product must also comply with EU pharmacovigilance legislation and its related regulations and guidelines, which entail many requirements for conducting pharmacovigilance, or the assessment and monitoring of the safety of medicinal products.

These pharmacovigilance rules can impose on holders of MAs the obligation to conduct a labor intensive collection of data regarding the risks and benefits of marketed medicinal products and to engage in ongoing assessments of those risks and benefits, including the possible requirement to conduct additional clinical studies or post-authorization safety studies to obtain further information on a medicine's safety, or to measure the effectiveness of risk-management measures, which may be time consuming and expensive and could impact Oruka's profitability. MA holders must establish and maintain a pharmacovigilance system and appoint an individual qualified person for pharmacovigilance, who is responsible for oversight of that system. Key obligations include expedited reporting of suspected serious adverse reactions and submission of Periodic Safety Update Reports ("PSURs") in relation to medicinal products for which they hold MAs. The EMA reviews PSURs for medicinal products authorized through the centralized procedure. If the EMA has concerns that the risk benefit profile of a product has varied, it can adopt an opinion advising that the existing MA for the product be suspended, withdrawn or varied. The agency can advise that the MA holder be obliged to conduct post-authorization Phase 4 safety studies. If the EC agrees with the opinion, it can adopt a decision varying the existing MA. Failure by the MA holder to fulfill the obligations for which the EC's decision provides can undermine the ongoing validity of the MA.

More generally, non-compliance with pharmacovigilance obligations can lead to the variation, suspension or withdrawal of the MA for the product or imposition of financial penalties or other enforcement measures.

The manufacturing process for pharmaceutical products in the EU is highly regulated and regulators may shut down manufacturing facilities that they believe do not comply with regulations. Manufacturing requires a manufacturing authorization, and the manufacturing authorization holder must comply with various requirements set out in the applicable EU laws, regulations and guidance, including Directive 2001/83/EC, Directive 2003/94/EC, Regulation (EC) No 726/2004 and the European Commission Guidelines for Good Manufacturing Practice ("GMP"). These requirements include compliance with EU GMP standards when manufacturing pharmaceutical products and active pharmaceutical ingredients, including the manufacture of active pharmaceutical ingredients outside of the EU with the intention to import the active pharmaceutical ingredients into the EU. Similarly, the distribution of pharmaceutical products into and within the EU is subject to compliance with the applicable EU laws, regulations and guidelines, including the requirement to hold appropriate authorizations for distribution granted by the competent authorities of the EU Member States. The manufacturer or importer must have a qualified person who is responsible for certifying that each batch of product has been manufactured in accordance with GMP, before releasing the product for commercial distribution in the EU or for use in a clinical trial. Manufacturing facilities are subject to periodic inspections by the competent authorities for compliance with GMP.

Sales and Marketing Regulations

The advertising and promotion of Oruka's products is also subject to EU laws concerning promotion of medicinal products, interactions with physicians, misleading and comparative advertising and unfair commercial practices. In addition, other national legislation of individual EU Member States may apply to the advertising and promotion of medicinal products and may differ from one country to another. These laws require that promotional materials and advertising in relation to medicinal products comply with the product's SmPC as approved by the competent regulatory authorities. The SmPC is the document that provides information to physicians concerning the safe and effective use of the medicinal product. It forms an intrinsic and integral part of the MA granted for the medicinal product. Promotion of a medicinal product that does not comply with the SmPC is considered to constitute off-label promotion. All advertising and promotional activities for the product must be consistent with the approved SmPC and therefore all off-label promotion is prohibited. Direct-to-consumer advertising of prescription-only medicines is also prohibited in the EU. Violations of the rules governing the promotion of medicinal products in the EU could be penalized by administrative measures, fines and imprisonment. These laws may further limit or restrict the advertising and promotion of Oruka's products to the general public and may also impose limitations on its promotional activities with healthcare professionals.

EU regulation with regards to dispensing, sale and purchase of medicines has generally been preserved in the UK following Brexit, through the Human Medicines Regulations 2012. However, organizations wishing to sell medicines online need to register with the MHRA. Following Brexit, the requirements to display the common logo no longer apply to UK-based online sellers, except for those established in Northern Ireland.

Anti-Corruption Legislation

In the EU, interactions between pharmaceutical companies and physicians are also governed by strict laws, regulations, industry self-regulation codes of conduct and physicians' codes of professional conduct both at EU level and in the individual EU Member States. The provision of benefits or advantages to physicians to induce or encourage the prescription, recommendation, endorsement, purchase, supply, order or use of medicinal products is prohibited in the EU. The provision of benefits or advantages to physicians is also governed by the national anti-bribery laws of the EU Member States. Violation of these laws could result in substantial fines and imprisonment.

Payments made to physicians in certain EU Member States also must be publicly disclosed. Moreover, agreements with physicians must often be the subject of prior notification and approval by the physician's employer, his/her regulatory professional organization, and/or the competent authorities of the individual EU Member States. These requirements are provided in the national laws, industry codes, or professional codes of conduct, applicable in the individual EU Member States. Failure to comply with these requirements could result in reputational risk, public reprimands, administrative penalties, fines or imprisonment.

In the UK, the pharmaceutical sector is recognized as being particularly vulnerable to corrupt practices, some of which fall within the scope of the Bribery Act 2010. Due to the Bribery Act 2010's far-reaching territorial application, the potential penalized act does not have to occur in the UK to become within its scope. If the act or omission does not take place in the UK, but the person's act or omission would constitute an offense if carried out there and the person has a close connection with the UK, an offense will still have been committed.

The Bribery Act 2010 is comprised of four offenses that cover (i) individuals, companies and partnerships that give, promise or offer bribes, (ii) individuals, companies and partnerships that request, agree to receive or accept bribes, (iii) individuals, companies and partnerships that bribe foreign public officials, and (iv) companies and partnerships that fail to prevent persons acting on their behalf from paying bribes. The penalties imposed under the Bribery Act 2010 depend on the offence committed, harm and culpability and penalties range from unlimited fines to imprisonment for a maximum term of ten years and in some cases both.

Regulations in the UK and Other Markets

The UK formally left the EU on January 31, 2020 and EU laws now only apply to the UK in respect of Northern Ireland as laid out in the Protocol on Ireland and Northern Ireland and as amended by the Windsor Framework sets out a long-term set of arrangements for the supply of medicines into Northern Ireland. The EU and the UK agreed on a trade and cooperation agreement ("TCA"), which includes provisions affecting the life

sciences sector (including on customs and tariffs). There are some specific provisions concerning pharmaceuticals, including the mutual recognition of GMP, inspections of manufacturing facilities for medicinal products and GMP issued documents. The TCA does not, however, contain wholesale mutual recognition of UK and EU pharmaceutical regulations and product standards.

The UK government has adopted the Medicines and Medical Devices Act 2021 (the "MMDA") to enable the UK's regulatory frameworks to be updated following the UK's departure from the EU. The MMDA introduces regulation-making, delegated powers covering the fields of human medicines, clinical trials of human medicines, veterinary medicines and medical devices. The MHRA has since been consulting on future regulations for medicines and medical devices in the UK.

For other countries outside of the EU, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials must be conducted in accordance with GCPs and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If Oruka fails to comply with applicable foreign regulatory requirements, it may be subject to, among other things, fines, suspension of clinical trials, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Employees and Human Capital Resources

As of May 3, 2024, Oruka had ten full-time employees. Oruka also engages temporary employees and consultants to augment its existing workforce. None of Oruka's employees are represented by a labor union or covered under a collective bargaining agreement. Oruka considers its relationship with its employees to be good.

Oruka recognizes that attracting, motivating, and retaining talent at all levels is vital to continuing its success. Oruka invests in its employees through high-quality benefits, professional development opportunities, and various health and wellness initiatives and offers competitive compensation packages (base salary and incentive plans), ensuring fairness in internal compensation practices. The principal purposes of Oruka's incentive plans (bonus and equity) are to align with the long-term interests of its stakeholders and stockholders.

Properties and Facilities

Oruka currently operates as a virtual company and does not maintain physical corporate offices. Oruka's employees currently work remotely. Oruka believe these arrangements support its current needs. Oruka maintains a mailing address at 221 Crescent St., Building 23, Suite 105, Waltham, MA. In April 2024, Oruka entered into a lease agreement with Oak Grove LP for office space located in Menlo Park, California. The lease began on June 15, 2024 with an initial term of 39.5 months.

Legal Proceedings

From time to time, Oruka may become involved in legal proceedings. Oruka is not currently a party to or aware of any proceedings that it believes will have, individually or in the aggregate, a material adverse effect on its business, financial condition or results of operations. Regardless of outcome, litigation can have an adverse impact on Oruka because of defense and settlement costs, diversion of management resources and other factors.

ARCA'S MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of ARCA's financial condition and results of operations should be read in conjunction with ARCA's consolidated financial statements and notes thereto appearing elsewhere in this proxy statement/prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this proxy statement/prospectus, including information with respect to ARCA's plans and strategy for ARCA's business, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, ARCA's actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

ARCA is dedicated to applying a precision medicine approach to the development and commercialization of targeted therapies for cardiovascular diseases. Precision medicine refers to the tailoring of medical treatment to the individual characteristics of patients, using genomic, non-genomic biomarker and other information that extends beyond routine diagnostic categorization. ARCA believes that when implemented correctly precision medicine can enhance therapeutic response, improve patient outcomes, and reduce healthcare costs.

ARCA's lead product candidate is Gencaro™ (bucindolol hydrochloride) for the treatment of atrial fibrillation ("AF") in patients with chronic heart failure ("HF"). Gencaro is being developed for patients who have a genotype that identifies a drug target associated with heightened efficacy.

Merger Agreement

On April 3, 2024, ARCA, First Merger Sub, Second Merger Sub and Oruka entered into the Merger Agreement, pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, First Merger Sub will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA's and the surviving corporation of the First Merger and as part of the same overall transaction, the surviving corporation in the First Merger will merge with and into Second Merger Sub with Second Merger Sub continuing as a wholly owned subsidiary of ARCA's and the surviving entity of the Second Merger. The Merger is intended to qualify for federal income tax purposes as a tax-free reorganization under the provisions of Section 368(a) of the Internal Revenue Code of 1986, as amended.

Subject to the terms and conditions of the Merger Agreement, at the closing of the First Merger, (a) each then-outstanding share of Oruka common stock (including shares of Oruka common stock issued in the financing transaction described below) will be converted solely into the right to receive a number of shares of ARCA's common stock calculated in accordance with the Merger Agreement (the "Exchange Ratio"), (b) each then-outstanding share of Oruka preferred stock will be converted into the right to receive a number of shares of ARCA Series B Preferred Stock calculated in accordance with the Merger Agreement, (c) each then-outstanding option to purchase Oruka common stock will be assumed by ARCA, subject to adjustment as set forth in the Merger Agreement and (d) each then-outstanding warrant to purchase shares of Oruka common stock will be converted into a warrant to purchase shares of ARCA's common stock, subject to adjustment as set forth in the Merger Agreement and form of warrant. Under the terms of the Merger Agreement, prior to the closing of the transaction, ARCA's board of directors will accelerate the vesting of all equity awards of ARCA's then outstanding but not then vested or exercisable, and cancel each Out of the Money Options to acquire shares of ARCA's common stock with an exercise price per share greater than the Parent Closing Price, in each case, in accordance with the terms of the Merger Agreement. At the closing of the First Merger, each option to acquire shares of ARCA's common stock with an exercise price less than or equal to the Parent Closing Price will be cancelled and converted into the right to receive an amount in cash, without interest, equal to the Parent Closing Price less the exercise price of such option.

Under the Exchange Ratio formula in the Merger Agreement, upon the closing of the First Merger, on a pro forma basis and based upon the number of shares of ARCA's common stock expected to be issued in the First Merger, pre-First Merger Oruka stockholders (including Oruka stockholders issued shares of Oruka common stock and pre-funded warrants in the Oruka pre-closing financing) will own approximately 97.61% of the combined

company and pre-First Merger ARCA stockholders will own approximately 2.39% of the combined company. For purposes of calculating the Exchange Ratio, (i) shares of ARCA's common stock underlying warrants and other rights to receive shares (other than Options to acquire shares of ARCA's common stock, to the extent cancelled at or prior to closing of the First Merger in accordance with the Merger Agreement) outstanding as of immediately prior to the closing of the First Merger will be deemed to be outstanding, and (ii) all shares of Oruka common stock underlying outstanding Oruka stock options and warrants will be deemed to be outstanding. The Exchange Ratio will be adjusted to the extent that ARCA's net cash at closing is less than $5.0 million and will be based on the amount of proceeds actually received by Oruka in the financing transaction described below, as further described in the Merger Agreement.

In addition, prior to the First Effective Time, ARCA expects to declare a cash dividend to the pre-First Merger ARCA stockholders equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash (as determined pursuant to the Merger Agreement) will exceed $5.0 million. ARCA management currently anticipates that ARCA's net cash as of closing to be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million.

In connection with the Merger, ARCA is required to seek the approval of its stockholders to, among other things, (a) issue shares of ARCA's common stock issuable in connection with the First Merger (including the shares of ARCA common stock issuable under the ARCA Series B Preferred Stock) under the rules of Nasdaq, and (b) amend its amended and restated certificate of incorporation, to (i) effect a reverse stock split of ARCA's common stock (if deemed necessary by ARCA and Oruka), (ii) increase the number of shares of ARCA's common stock that it is authorized to issue, and (iii) such other changes as are mutually agreeable to ARCA and Oruka (the "ARCA Voting Proposals").

Each of ARCA and Oruka has agreed to customary representations, warranties and covenants in the Merger Agreement, including, among others, covenants relating to (1) using commercially reasonable efforts to obtain the requisite approval of its stockholders, (2) non-solicitation of alternative acquisition proposals, (3) the conduct of their respective businesses during the period between the date of signing the Merger Agreement and the closing of the Merger, (4) ARCA using commercially reasonable efforts to maintain the existing listing of ARCA's common stock on Nasdaq and cause the shares of ARCA's common stock to be issued in connection with the First Merger to be approved for listing on Nasdaq prior to the closing of the First Merger, and (5) ARCA filing with the SEC and causing to become effective a registration statement to register shares of ARCA's common stock to be issued in connection with the First Merger, except as set forth in the Merger Agreement (the "Registration Statement").

Consummation of the Merger is subject to certain closing conditions, including, among other things, (1) approval by ARCA's stockholders of the ARCA Voting Proposals, (2) approval by the requisite Oruka stockholders of the adoption and approval of the Merger Agreement and the transactions contemplated thereby, (3) Nasdaq's approval of the initial listing application to be submitted in connection with the First Merger, (4) the effectiveness of the Registration Statement, (5) the expiration of any applicable waiting periods (or extensions thereof) under the Hart Scott-Rodino Antitrust Improvements Act of 1976, as amended, (6) the Subscription Agreement (described below) being in full force and effect providing for the receipt of proceeds of not less than $175,000,000 (including in the proceeds any notes contributed as consideration in the Oruka pre-closing financing described below) and (7) to the extent ARCA has declared the cash dividend described above, ARCA delivering the aggregate amount distributable to the pre-First Merger ARCA stockholders to its' transfer agent for further distribution to the pre-First Merger ARCA stockholders. Each party's obligation to consummate the Merger is also subject to other specified customary conditions, including regarding the accuracy of the representations and warranties of the other party, subject to the applicable materiality standard, and the performance in all material respects by the other party of its obligations under the Merger Agreement required to be performed on or prior to the date of the closing of the Merger.

The Merger Agreement contains certain termination rights of each of ARCA and Oruka. Upon termination of the Merger Agreement under specified circumstances, ARCA and Oruka may each be required to pay the other party a termination fee of $440,000.

Pursuant to a Certificate of Designation of Preferences, Rights and Limitations of the Series B Non-Voting Convertible Preferred Stock to be filed by ARCA with the Secretary of State of the State of Delaware (the "Certificate of Designation") in connection with the Merger Agreement and the transactions thereunder, ARCA will establish the terms of a new series of preferred stock of ARCA designated as Series B Non-Voting Convertible

Preferred Stock, par value $0.001 per share (the "ARCA Series B Preferred Stock"). Holders of the ARCA Series B Preferred Stock will be entitled to receive dividends on shares of ARCA Series B Preferred Stock equal to, on an as-if-converted-to-ARCA common stock basis, and in the same form as dividends actually paid on shares of ARCA's common stock. Except as otherwise required by the Certificate of Designation or law, the ARCA Series B Preferred Stock will not have voting rights. However, as long as any shares of ARCA Series B Preferred Stock are outstanding, ARCA will not, without the affirmative vote of the holders of a majority of the then outstanding shares of the ARCA Series B Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the ARCA Series B Preferred Stock, (b) alter or amend the Certificate of Designation, (c) amend ARCA's certificate of incorporation, bylaws or other charter documents in any manner that adversely affects any rights of the holders of the ARCA Series B Preferred Stock, (d) file any articles of amendment, certificate of designations, preferences, limitations and relative rights of any series of Preferred Stock (as defined in the Certificate of Designation), if such action would adversely alter or change the preferences, rights, privileges or powers of, or restrictions provided for the benefit of the ARCA Series B Preferred Stock, (e) issue further shares of the ARCA Series B Preferred Stock or increase or decrease (other than by conversion) the number of authorized shares of the ARCA Series B Preferred Stock, (f) at any time while at least 30% of the originally issued ARCA Series B Preferred Stock remains issued and outstanding, consummate either (A) a Fundamental Transaction (as defined in the Certificate of Designation) or (B) any merger or consolidation of ARCA or other business combination in which ARCA's stockholders immediately before such transaction do not hold at least a majority of the capital stock of ARCA immediately after such transaction, or (f) enter into any agreement with respect to any of the foregoing. The ARCA Series B Preferred Stock does not have a preference upon any liquidation, dissolution or winding-up of ARCA.

Following the closing of the First Merger, each share of ARCA Series B Preferred Stock then outstanding shall be convertible, at any time and from time to time, at the option of the holder of the ARCA Series B Preferred Stock, into a number of shares equal to 1,000 shares of ARCA's common stock, subject to certain limitations, including that a holder of ARCA Series B Preferred Stock is prohibited from converting shares of ARCA Series B Preferred Stock into shares of ARCA's common stock if, as a result of such conversion, such holder, together with its affiliates, would beneficially own more than a specified percentage (initially set at 9.99%) of the total number of shares of ARCA's common stock issued and outstanding immediately after giving effect to such conversion.

At the First Merger Effective Time (the "Effective Time"), the combined company's board of directors is expected to consist of six (6) members, all of whom will be designated by Oruka. Upon the closing of the transaction, the combined company will be led by Oruka's chief executive officer.

Financing Transaction

Concurrently with the execution and delivery of the Merger Agreement, certain parties have entered into the Subscription Agreement with Oruka, pursuant to which they have agreed, subject to the terms and conditions of such agreement, to purchase immediately prior to the consummation of the First Merger, shares of Oruka common stock and pre-funded warrants to purchase shares of Oruka common stock for an aggregate purchase price of approximately $275.0 million (which includes $25.0 million of proceeds previously received from the issuance of the Convertible Note and accrued interest on such note). The consummation of the transactions contemplated by such agreements is conditioned on the satisfaction or waiver of the conditions set forth in the Merger Agreement and in the Subscription Agreement. Shares of Oruka common stock and pre-funded warrants to purchase shares of Oruka common stock issued pursuant to this financing transaction will be converted into shares of ARCA common stock and pre-funded warrants to acquire shares ARCA common stock, in accordance with the exchange ratio and the Merger Agreement.

ARCA's future operations are highly dependent on the success of the Merger and there can be no assurances that the Merger will be successfully consummated. There can be no assurance that the strategic review process or any transaction relating to a specific asset, including the Merger or any asset sale, will result in ARCA pursuing such a transaction(s), or that any transaction(s), if pursued, will be completed on terms favorable to ARCA and its stockholders in the existing entity or any possible entity that results from a combination of entities. If the strategic review process is unsuccessful, ARCA's board of directors may decide to pursue a dissolution and liquidation.

Gencaro™ (bucindolol hydrochloride) for Atrial Fibrillation

Gencaro™ (bucindolol hydrochloride) is a pharmacogenetically-targeted beta-adrenergic receptor antagonist with mild vasodilator properties that ARCA is developing for the treatment of atrial fibrillation in patients with heart failure. ARCA believes the pharmacology of Gencaro is unique and its efficacy can be enhanced by prescribing it to patients with a common genotypic variant that is present in approximately 50% of the North American and European general populations. This gene can be detected with a simple genetic test.

ARCA is developing Gencaro to treat AF in patients with chronic HF. AF is the most common form of cardiac arrhythmia, a disruption of the heart's normal rhythm or rate. HF is a chronic condition in which the heart is unable to pump enough blood to meet the body's needs. AF and HF commonly occur together. In HF patients, the development of AF leads to worsening symptoms, and increased risk of hospitalization and death. Current treatment options for AF in HF patients are limited, and can be invasive, costly and dangerous.

ARCA's development plan for Gencaro focuses on the treatment of AF in patients with higher ejection fraction HF, those who have an ejection fraction, or EF, of 40% and higher who also have the genotype ARCA believes is optimal for Gencaro efficacy. This population of HF encompasses more than half of all HF patients in the United States and Europe. There are currently few approved or effective drug therapies to treat AF or HF in this patient population.

ARCA's development plan for Gencaro is based on ARCA's published analysis of the Phase 2b clinical trial of Gencaro for the prevention of AF in HF patients, known as GENETIC-AF. This analysis showed novel results for Gencaro in patients in the clinical trial with EF's of 40% and higher. ARCA currently has an agreement with the FDA, known as a Special Protocol Assessment ("SPA"), for the requirements of a Gencaro Phase 3 clinical trial, PRECISION-AF, that would support approval of Gencaro if successful. The Phase 3 pivotal clinical trial of Gencaro conducted under a SPA will include secondary endpoints that are intended to capture some of this information, such as a reduction in the need to deploy rhythm control interventions including electrical cardioversion, catheter ablation and use of anti-arrhythmic drugs and avoidance of drug-related complications such as bradycardia. ARCA was issued a United States patent in February 2021 for the use of Gencaro in a patient population identified as part of the clinical trial. ARCA believes this patent will substantially extend the patent protection for its planned development of Gencaro into 2039. ARCA has sought or is seeking similar patent protection in other countries.

ARCA believes that patients with HF and AF represent a major unmet medical need, and this need is most pronounced in patients with EF values of 40% and above. This EF range constitutes more than half of all chronic HF in the United States and Europe, as well as in Japan and China, and there are currently few approved, effective or guideline-recommended therapies for these patients to treat either their AF or HF. AF is a very common complication in these patients, with estimates of AF incidence ranging from 40% to 60%. Beta-blockers approved for HF are commonly used off-label to control heart rate in these patients, but they are not considered effective in preventing AF and none are approved for patients with EF ≥ 40%. Other anti-arrhythmic drugs approved for the treatment of AF have adverse side effects and in HF patients are either contraindicated or have label warnings for use due to an increased risk of mortality. Interventional procedures for AF, such as catheter ablation and electrical cardioversion, are invasive, expensive, and often temporary; these interventions also typically require the continued use of beta blockers and other anti-arrhythmic drugs post-intervention.

ARCA believes that Gencaro, if approved, may be a safe and more effective therapy for the treatment of higher ejection fraction HF patients with AF. ARCA believes there are several potentially important attributes that would differentiate Gencaro from existing therapies, including:

- More effective rhythm control compared to the current standard of care;
- Reduction in the need for catheter ablation, electrical cardioversion, or toxic anti-arrhythmic drugs;
- Maintenance of rhythm control after a successful AF catheter ablation;
- Effective rate control with lower risk of treatment-limiting, adverse event producing bradycardia;
- Reduction in symptoms and improvement in quality of life;
- Reduced health care burden;

- Foundational beta-blocker benefits for HF and unique evidence of efficacy in HF patients with AF;
- One of the only drug therapies approved and shown effective for AF in HF patients with EF ≥ 40%, and the only one in its drug class.

ARCA has an international patent portfolio for Gencaro in the United States, the EU, and other major markets, as well as new chemical entity status, including a new patent that ARCA believes will give it a strong intellectual property position to at least approximately 2039 in the United States; ARCA has filed applications similar to this new patent in international territories. ARCA has developed a laboratory platform for the diagnostic test that would be used to prescribe Gencaro; this platform was approved by FDA for use in the Phase 2B clinical trial. ARCA retains all rights to this test platform; ARCA expects to use it in future clinical trials, and ARCA believes it could be one of multiple diagnostic platforms used for commercialization.

rNAPc2 (AB201) for treatment of COVID-19

Recombinant Nematode Anticoagulant Protein c2 ("rNAPc2") (AB201) is a protein therapeutic in clinical development as a potential treatment for patients with COVID-19. Based on its unique mechanism of action, development history and the clinical evidence from the SARS-CoV-2 pandemic, ARCA believes rNAPc2 has potential to be a beneficial therapy for patients with this serious viral disease. ARCA initiated a Phase 2b clinical trial of rNAPc2 as a potential treatment for patients hospitalized with COVID-19 in the fourth quarter of 2020 and completed patient enrollment in the fourth quarter 2021. In the clinical trial, both doses of rNAPc2 demonstrated a treatment benefit for patients based on the coagulation biomarker D-dimer, however, neither dose achieved statistical significance for the primary efficacy endpoint of change in D-dimer level from Baseline to Day 8 compared to standard of care heparin.

On the secondary endpoints measuring thrombotic events and time-to-recovery, there was a numerical imbalance in favor of rNAPc2 that was non-significant. rNAPc2 was well-tolerated at both doses. There were no serious treatment-related adverse events and no dose dependent increase in adverse events was observed. There was no difference between rNAPc2 and standard-of-care heparin in major or non-major clinically relevant bleeding. ARCA currently does not plan additional clinical development of rNAPc2 unless ARCA is able to find a commercial or government partner to pay for development and commercialization or expansion into clinical trials for other disease indications.

To support the continued development of Gencaro and rNAPc2, ARCA will need additional financing to fully fund any clinical trials, and ARCA's general and administrative costs through the clinical trials' projected completion and potential commercialization. Considering the substantial time and costs associated with the development of Gencaro and rNAPc2 and the risk that ARCA may be unable to raise a significant amount of capital on acceptable terms, ARCA is also pursuing co-development and commercialization partnering opportunities with large pharmaceutical and/or specialty pharmaceutical companies and may pursue a strategic combination or other strategic transactions. If ARCA is unable to obtain sufficient financing or is unable to complete a strategic transaction, ARCA may discontinue its development activities on Gencaro or rNAPc2 or discontinue operations.

ARCA believes its cash and cash equivalents as of March 31, 2024 will be sufficient to fund ARCA's operations through the middle of fiscal year 2025. ARCA's future viability beyond that point is dependent on the results of the strategic review process and ARCA's ability to raise additional capital to fund its operations. ARCA expects to continue to incur costs and expenditures in connection with the process of evaluating strategic alternatives. There can be no assurance, however, that ARCA will be able to successfully consummate any particular strategic transaction, including the Merger. The process of continuing to evaluate these strategic options may be very costly, time-consuming and complex and ARCA has incurred, and may in the future incur, significant costs related to this continued evaluation, such as legal, accounting and advisory fees and expenses and other related charges, see the section titled "*The Merger Agreement*" in this proxy statement/prospectus. Should ARCA pursue additional clinical trials for its product candidates, ARCA will have to raise additional capital for clinical trials of Gencaro. ARCA may not be able to raise sufficient capital on acceptable terms, or at all, to continue development of Gencaro or rNAPc2 or to otherwise continue operations and may not be able to execute any strategic transaction. The Merger discussed above may impact this projection. Conducting a Phase 3 PRECISION-AF trial would likely require additional financing, subject to ARCA's pursuit of a potential strategic transaction and the consummation of such potential transaction. However, changing circumstances may cause ARCA to consume capital significantly faster or slower than currently anticipated. ARCA has based these estimates on assumptions that may prove to be wrong, and ARCA could exhaust its available financial resources sooner than it currently anticipates; therefore, ARCA may have to raise additional capital for other clinical trials. Initiating any Phase 3 clinical trial of Gencaro will require additional financing.

In 2020, ARCA entered into a new sales agreement with a placement agent to sell, from time to time, in an "at the market offering."

In 2021, ARCA amended the new sales agreement and the amount available for the offering under ARCA's prospectus to ARCA's registration statement on Form S-3 (No. 333-254585), which expired in March 2024. In April 2024, ARCA terminated such sales agreement in accordance with its terms. No sales were made under this sales agreement in 2024 or 2023.

Results of Operations

General and Administrative Expenses

General and administrative ("G&A") expenses primarily consist of personnel costs, consulting and professional fees, insurance, facilities and depreciation expenses, and various other administrative costs.

G&A expenses were $2.3 million for the three months ended March 31, 2024 compared to $1.4 million for the corresponding period of 2023, an increase of $0.9 million. During the three months ended March 31, 2023, ARCA recorded $159,000 for one-time termination benefits related to the mutually agreed to conclusion of Christopher D. Ozeroff's employment, the former Secretary, Senior Vice President and General Counsel of ARCA, effective March 31, 2023. The increase for the three-month period was primarily a result of a $1.1 million increase in professional fees primarily related to the Merger Agreement discussed above, offset by $0.2 million lower one-time termination benefits and lower personnel costs from the reduction discussed above.

G&A expenses were $6.3 million for the year ended December 31, 2023, compared to $5.8 million for 2022, an increase of approximately $0.4 million. During the year ended December 31, 2023, ARCA recorded $159,000 for one-time termination benefits related to the mutually-agreed to conclusion of Christopher D. Ozeroff's employment, the former Secretary, Senior Vice President and General Counsel of ARCA, effective March 31, 2023. During the year ended December 31, 2022, ARCA recorded total restructuring charges of approximately $755,000, of which $470,000 and $285,000 were recognized in research and development and general and administrative expenses, respectively, in connection with the restructuring, all in the form of one-time termination benefits. The increase in expenses during 2023 was primarily a result of increases in professional fees and fees to the Special Committee in connection with the Strategic Review, offset by lower one-time termination benefits and lower personnel costs from the reductions discussed above.

G&A expenses in 2024 are expected to be higher than those in 2023 as ARCA incurs professional fees related to the Merger Agreement discussed above and maintains administrative activities to support its ongoing operations. ARCA does expect to incur significant costs related to ARCA's exploration of strategic alternatives and the Merger, including legal, accounting and advisory expenses and other related charges.

While ARCA does not believe that inflation had a material effect on its financial condition and results of operations during the periods presented, it may result in increased costs in the foreseeable future.

Research and Development Expenses

Research and development ("R&D") expense is comprised primarily of personnel costs, clinical development, manufacturing process development, and regulatory activities and costs.

R&D expense for the three months ended March 31, 2024 was $0.2 million compared to $0.4 million for the corresponding period of 2023, a decrease of $0.2 million.

R&D personnel costs decreased approximately $0.2 million for the three months ended March 31, 2024, as compared to the corresponding period of 2023, due to decreased headcount.

Manufacturing process development costs for the three months ended March 31, 2024 and 2023 were consistent.

R&D expense decreased $0.1 million related to the unrestricted research grants with ARCA's former President and Chief Executive Officer's academic research laboratory at the University of Colorado. There was no expense under these arrangements for the three months ended March 31, 2024. Total expense under these arrangements

for the three months ended March 31, 2023 was $108,000. In December 2023, the Company made a payment of $125,000 for the grant period July 2022 through December 2023 under these arrangements. In April 2024, the former President and Chief Executive Officer resigned.

ARCA's research and development expenses were $1.0 million for the year ended December 31, 2023 as compared to $4.7 million for 2022, a decrease of $3.7 million.

R&D personnel costs decreased approximately $1.2 million for the year ended December 31, 2023, as compared to the corresponding periods of 2022, due to one-time termination benefits incurred in 2022 and decreased headcount from the July 2022 personnel reduction.

Clinical expense decreased approximately $1.0 million for the year ended December 31, 2023, as compared to the corresponding period of 2022. Manufacturing process development costs decreased approximately $1.1 million for the year ended December 31, 2023, as compared to the corresponding period of 2022. The majority of clinical and manufacturing close out costs related to ARCA's rNAPc2 (AB201) international Phase 2b clinical trial were incurred in the first half of 2022, with no comparable costs for the corresponding periods of 2023.

R&D expense in 2024 is expected to be lower than 2023, as ARCA completed its rNAPc2 (AB201) international Phase 2b clinical trial. Should ARCA resume clinical trials of product candidates, it expects research and development costs to increase significantly for the foreseeable future as ARCA's product candidate development programs progress.

Interest and Other Income

Interest and other income was $473,000 and $450,000 in the three months ended March 31, 2024 and 2023, respectively. Interest income was higher due to higher interest rates in 2024 compared to the corresponding periods of 2023.

Interest and other income was $2.0 million of interest income for the year ended December 31, 2023 as compared to $0.7 million for 2022, resulting in an increase of $1.3 million. Interest income was higher due to higher interest rates in 2023 compared to the corresponding periods of 2022. ARCA expects interest income in 2024 to be lower than 2023, as ARCA continues to use its cash and cash equivalents to fund operations, assuming interest rates remain consistent with 2023.

Other Expense

There was no other expense for the year ended December 31, 2023. Other expense was $5,000 for the year ended December 31, 2022. The amounts were nominal to ARCA's overall operations. Based on ARCA's current capital structure, other expense is expected to be negligible in 2024.

Liquidity and Capital Resources

Cash and Cash Equivalents as of March 31, 2024 and 2023

	March 31, 2024	December 31, 2023
	(in thousands)	
Cash and cash equivalents	$ 35,903	$ 37,431

As of March 31, 2024, ARCA had total cash and cash equivalents of $35.9 million, as compared to $37.4 million as of December 31, 2023. The net decrease of $1.5 million primarily reflects the cash used in operating activities during the three months ended March 31, 2024.

Cash and Cash Equivalents as of December 31, 2023 and 2022

	December 31,	
	2023	2022
	(in thousands)	
Cash and cash equivalents	$ 37,431	$ 42,445

As of December 31, 2023, ARCA had total cash and cash equivalents of approximately $37.4 million, as compared to $42.4 million as of December 31, 2022. The net decrease of $5.0 million during the year primarily reflects cash used in operating activities during the year ended December 31, 2023.

Cash Flows from Operating, Investing and Financing Activities

	Three Months Ended March 31,	
	2024	2023
	(in thousands)	
Net cash used in:		
Operating activities	$ (1,528)	$ (1,595)
Investing activities	—	—
Financing activities	—	—
Net decrease in cash and cash equivalents	$ (1,528)	$ (1,595)

Net cash used in operating activities for the three months ended March 31, 2024 was consistent with the same period in 2023. This was primarily due to lower outflows related to changes in operating assets and liabilities and a higher net loss in 2024, as discussed in Results of Operations above.

There were no investing activities in the three months ended March 31, 2024 and 2023.

There were no financing activities in the three months ended March 31, 2024 and 2023.

	Years Ended December 31,	
	2023	2022
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$ (5,014)	$ (10,912)
Investing activities	—	(2)
Financing activities	—	—
Net increase in cash and cash equivalents	$ (5,014)	$ (10,914)

Net cash used in operating activities for the year ended December 31, 2023 decreased approximately $5.9 million compared with 2022. This was primarily due to lower outflows related to changes in operating assets and liabilities and a lower net loss in 2022, as discussed in Results of Operations above.

There were no investing activities in the year ended December 31, 2023. Net cash used in investing activities for the year ended December 31, 2022 was $2,000 for the purchase of property and equipment.

There were no financing activities in the years ended December 31, 2023 or 2022.

Sources and Uses of Capital

ARCA's primary sources of liquidity to date have been capital raised from issuances of shares of its preferred and common stock. The primary uses of ARCA's capital resources to date have been to fund operating activities, including research, clinical development and drug manufacturing expenses, license payments, and spending on capital items.

In 2020, ARCA entered into a new sales agreement with a placement agent to sell, from time to time, in an "at the market offering."

In 2021, ARCA amended the new sales agreement and the amount available for the offering under its prospectus to its registration statement on Form S-3 (No. 333-254585), which expired in March 2024. In April 2024, ARCA terminated such sales agreement in accordance with its terms. No sales were made under this sales agreement in 2024 or 2023.

ARCA's ability to execute its development programs in accordance with ARCA's projected timeline depends on a number of factors, including, but not limited to, the following:

- the timing and outcome of the strategic review process;
- the consummation of any particular strategic transactions, including the Merger;
- the costs and timing for the potential additional clinical trials in order to gain possible regulatory approval for Gencaro, rNAPc2 or any other product candidate;
- the market price of ARCA's stock and the availability and cost of additional equity capital from existing and potential new investors;
- ARCA's ability to retain the listing of its common stock on the Nasdaq Capital Market;
- ARCA's ability to control costs associated with its operations;
- general economic and industry conditions affecting the availability and cost of capital, including as a result of deteriorating market conditions due to investor concerns regarding inflation, adverse developments affecting the financial services industry, continued hostilities between Russia and Ukraine and Hamas' attack against Israel and the ensuing conflict;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- the terms and conditions of ARCA's existing collaborative and licensing agreements.

ARCA believes its cash and cash equivalents as of March 31, 2024 will be sufficient to fund operations through the middle of fiscal year 2025. ARCA's future viability beyond that point is dependent on the results of the strategic review process and its ability to raise additional capital to fund its operations. ARCA expects to continue to incur costs and expenditures in connection with the process of evaluating strategic alternatives. There can be no assurance, however, that ARCA will be able to successfully consummate any particular strategic transaction, including the Merger. The process of continuing to evaluate these strategic options may be very costly, time-consuming and complex and ARCA has incurred, and may in the future incur, significant costs related to this continued evaluation, such as legal, accounting and advisory fees and expenses and other related charges, see the section titled "*The Merger Agreement*" in this proxy statement/prospectus. Should ARCA pursue additional clinical trials for its product candidates, ARCA will have to raise additional capital for clinical trials of Gencaro. ARCA may not be able to raise sufficient capital on acceptable terms, or at all, to continue development of Gencaro or rNAPc2 or to otherwise continue operations and may not be able to execute any strategic transaction. The Merger Agreement discussed above may impact this projection. Conducting a Phase 3 PRECISION-AF trial would likely require additional financing, subject to ARCA's pursuit of a potential strategic transaction and the consummation of such potential transaction. However, changing circumstances may cause ARCA to consume capital significantly faster or slower than currently anticipated. ARCA has based these estimates on assumptions that may prove to be wrong, and it could exhaust its available financial resources sooner than ARCA currently anticipates; therefore, ARCA may have to raise additional capital for other clinical trials. Initiating any Phase 3 clinical trial of Gencaro will require additional financing. If ARCA resumes the development of product candidates, ARCA may not be able to raise sufficient capital on acceptable terms, or at all, to continue development and potential commercialization Gencaro or to otherwise continue operations and may not be able to execute any strategic transaction.

In April 2022, ARCA established a Special Committee of ARCA's board of directors to conduct a comprehensive review of strategic alternatives. As part of the strategic review process, ARCA explored potential strategic alternatives that included, without limitation, an acquisition, merger, business combination or other transactions. ARCA has and is continuing to explore strategic alternatives related to its product candidates and related assets, including, without limitation, licensing transactions and asset sales.

Contractual Obligations and Commitments

In December 2022, ARCA's board of directors approved retention bonuses for certain employees, subject to continued employment with ARCA through the earlier of a change in control of ARCA or certain clinical development decisions totaling $265,000. In November 2023, the retention bonuses were amended to increase

the aggregate amount of the retention bonus by 50% and in order to assist with tax obligations associated with the vesting of certain ARCA restricted stock unit awards in December 2023, a total of $86,000 was paid in December 2023. On April 20, 2024, ARCA's board of directors approved the second amendment of certain retention bonus letters between ARCA and each of Thomas A. Keuer and C. Jeffrey Dekker to increase the aggregate amount of the retention bonus with respect to each such executive to $200,000. The remaining portion of the retention bonus with respect to Thomas A. Keuer and C. Jeffrey Dekker, consisting of $165,000, will become payable consistent with the original terms of the applicable retention bonus letter and first amendment to retention bonus letter. Any payment related to the retention bonuses of Thomas A. Keuer and C. Jeffrey Dekker will be paid by ARCA via payroll within 30 business days of the date of occurrence of the applicable "Payment Event Date" (as such term is otherwise defined in the applicable second amendment to the retention bonus letter). Each such retention bonus letter and first amendment to retention bonus letter will otherwise remain subject to their original terms and conditions. As of March 31, 2024, the unpaid retention bonuses totaled $311,000, none of which was accrued as of March 31, 2024, since there had not been a change in control or clinical development decision. In April 2024, the retention bonuses were again amended to increase the aggregate amount of the retention bonus, with the unpaid retention bonus increasing to $444,000.

On August 29, 2020, ARCA entered into a lease agreement for approximately 5,200 square feet of office facilities in Westminster, Colorado which serves as ARCA's primary business office effective October 1, 2020 (the "October 2020 Lease"). The lease term was 42 months beginning October 1, 2020. In March 2024, ARCA entered into an amendment to extend the lease term six (6) months through September 2024. If ARCA elects to stay in the property after September 2024, it will pay rent month to month equal to 125% of the base rent paid in September 2024. In June 2021, ARCA entered into a sublease agreement for approximately 3,000 square feet of additional office facilities in ARCA's primary business office. The sublease term was 29 months and terminated in October 2023. The leases include real estate taxes and insurance, which is not a lease component and is not included in the lease obligation. In addition, common area maintenance charges are based on actual costs incurred and are a non-lease component that is not included in the lease obligation. Rent expense, which is included in general and administrative expense, for the three months ended March 31, 2024 and 2023 was $22,000 and $31,000, respectively. As of March 31, 2024, the lease liability was $48,000.

ARCA has licensed worldwide rights to all preclinical and clinical data through the BEST trial for development of bucindolol. The patents that were the subject of this license are expired. If the license agreement is deemed enforceable, ARCA would incur milestone and royalty obligations upon the occurrence of certain events, including if the FDA grants marketing approval for Gencaro, upon regulatory marketing approval in Europe and Japan and based on achievement of specified product sales levels.

Critical Accounting Policies and Estimates

A critical accounting policy is one that is both important to the portrayal of ARCA's financial condition and results of operation and requires management's most difficult, subjective or complex judgments, often as a result of the need to make estimates about the effect of matters that are inherently uncertain. While ARCA's significant accounting policies are described in Note 1 of ARCA's consolidated financial statements and notes thereto appearing elsewhere in this proxy statement/prospectus, ARCA believes the following critical accounting policy affected its most significant judgments, assumptions, and estimates used in the preparation of ARCA's financial statements and, therefore, is important in understanding ARCA's financial condition and results of operations. ARCA had no significant outsourcing expense activity in 2023 or 2022.

Accrued Outsourcing Expenses

As part of the process of preparing ARCA's financial statements, ARCA may be required to estimate accrued outsourcing expenses. This process involves identifying services that third parties have performed on ARCA's behalf and estimating the level of service performed and the associated cost incurred for these services as of the balance sheet date. Examples of estimated accrued outsourcing expenses include contract service fees, such as fees payable to contract manufacturers in connection with the production of materials related to ARCA's drug product, and service fees from clinical research organizations. ARCA develops estimates of liabilities using its judgment based upon the facts and circumstances known at the time.

Indemnifications

In the ordinary course of business, ARCA enters into contractual arrangements under which it may agree to indemnify certain parties from any losses incurred relating to the services they perform on ARCA's behalf or for losses arising from certain events as defined within the particular contract. Such indemnification obligations may not be subject to maximum loss clauses. ARCA has entered into indemnity agreements with each of ARCA's directors, officers and certain employees. Such indemnity agreements contain provisions, which are in some respects broader than the specific indemnification provisions contained in Delaware law. ARCA also maintains an insurance policy for its directors and executive officers insuring against certain liabilities arising in their capacities as such.

ORUKA'S MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of Oruka's financial condition and results of operations together with the sectioned titled "Oruka's Business" and Oruka's financial statements and the related notes appearing elsewhere in this proxy statement/prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this proxy statement/prospectus, including information with respect to Oruka's plans and strategy for its business and related financing, includes forward-looking statements that involve risks, uncertainties, and assumptions. As a result of many factors, including those factors set forth in the section titled "Risk Factors — Risks Related to Oruka," Oruka's actual results could differ materially from the results described in or implied by these forward-looking statements. You should carefully read the section titled "Risk Factors — Risks Related to Oruka" to gain an understanding of the factors that could cause actual results to differ materially from Oruka's forward-looking statements. Please also see the section titled "Cautionary Note Regarding Forward-Looking Statements."

Overview

Oruka is a biotechnology company focused on developing novel monoclonal antibody therapeutics for psoriasis and other I&I indications. Oruka's name is derived from *or*, for "skin," and *arukah*, for "restoration"— reflects Oruka's mission to deliver therapies for chronic skin diseases that provide patients the most possible freedom from their condition. Oruka's strategy is to apply antibody engineering and format innovations to validated modes of action, which Oruka believes will enable it to improve meaningfully upon the efficacy and dosing regimens of standard-of-care medicines while significantly intending to reduce technical and biological risk. Oruka's programs aim to treat and potentially modify disease by targeting mechanisms with proven efficacy and safety involved in disease pathology and the activity of pathogenic tissue-resident memory T cells. Oruka's lead program, ORKA-001, is designed to target the p19 subunit of interleukin-23 ("IL-23p19") for the treatment of psoriasis. Oruka's co-lead program, ORKA-002, is designed to target interleukin-17A and interleukin-17F ("IL-17A/F") for the treatment of PsO, PsA, and other conditions. These programs each bind their respective targets at high affinity and incorporate half-life extension technology with the aim to increase exposure and decrease dosing frequency. Oruka believes that its focused strategy, differentiated portfolio, and deep expertise position it to set a new treatment standard in large I&I markets with continued unmet need.

Oruka Therapeutics, Inc. was established and incorporated under the laws of the state of Delaware on February 6, 2024. Oruka Therapeutics, Inc. was founded by Paragon and has since assembled a management team with significant experience in clinical development.

ORKA-001 is a high affinity, extended half-life mAb designed to target IL-23p19. IL-23 is a pro-inflammatory cytokine that plays a critical role in the proliferation and development of Th17 cells, which are the primary drivers of several autoimmune and inflammatory disorders, including PsO. IL-23 is composed of two subunits: a p40 subunit that is shared with IL-12 and a p19 subunit that is specific to IL-23. First-generation IL-23 antibodies bound p40 and inhibited both IL-12 and IL-23 signaling, while more recent IL-23 antibodies targeting the p19 subunit have shown improved efficacy and safety when applied by other companies. Based on preclinical evidence, Oruka believes that ORKA-001 could achieve higher response rates than established therapies in PsO while requiring less frequent dosing and maintaining the favorable safety profile of therapies targeting IL-23p19. ORKA-001 is engineered with YTE half-life extension technology, a specific three amino acid change in the Fc domain to modify the pH-dependent binding to the neonatal FcRn. As a result, it has a pharmacokinetic profile designed to support an SQ injection as infrequently as once or twice a year. In addition, emerging evidence suggests that IL-23 blockade can modify the disease biology of PsO, possibly leading to durable remissions and preventing the development of PsA. Oruka believes that the expected characteristics of ORKA-001 increase its potential to deliver these disease-modifying benefits. Oruka plans to initiate a Phase 1 trial of ORKA-001 in the first half of 2025 that will have the potential to not only generate important pharmacokinetic and safety data but also to demonstrate its efficacy in PsO patients.

ORKA-002 is a high affinity, extended half-life mAb designed to target IL-17A/F. IL-17 inhibition has become central to the treatment of psoriatic diseases, including PsO and PsA, and has also shown efficacy in other I&I indications, such as HS and axSpA. More recently, the importance of inhibiting the IL-17F isoform along with IL-17A has become appreciated, and dual blockade with the recently approved therapy Bimzelx (bimekizumab) has

led to higher response rates in patients than blockade of IL-17A alone. ORKA-002 is designed to bind IL-17A/F at similar epitopes, or binding sites, and affinity ranges as bimekizumab, but incorporates half-life extension technology that could enable more convenient dosing intervals. Oruka plans to initiate Phase 1 trials of ORKA-002 in the second half of 2025.

Oruka views ORKA-002 and ORKA-001 as highly complementary. Patients with moderate-to-severe PsO that have purely skin manifestations are most often treated with IL-23 inhibitors due to the high efficacy and tolerability of this mechanism. However, for patients who also have joint involvement, or signs and symptoms of PsA, an IL-17 inhibitor is typically used due to its efficacy in addressing both skin and joint symptoms. In addition, IL-17 inhibitors are often used in patients with highly resistant skin symptoms that do not adequately resolve through treatment with an IL-23 inhibitor. Together, ORKA-001 and ORKA-002 provide the potential to offer a highly compelling product profile for most patients with PsO and/or PsA, as well as the opportunity to address additional I&I indications.

Oruka has a third mAb program, ORKA-003, designed to target an undisclosed pathway. Oruka's strategy as a company is to remain highly focused on I&I diseases, and specifically on inflammatory dermatology conditions. Oruka's third program provides the potential for indication expansion beyond PsO and creates combination opportunities with Oruka's more advanced programs.

Since Oruka's inception in February 2024, it has devoted substantially all of its resources to raising capital, organizing and staffing the company, business and scientific planning, conducting discovery and research activities, establishing arrangements with third parties for the manufacture of Oruka's programs and component materials, and providing general and administrative support for these operations. Oruka does not have any programs approved for sale and have not generated any revenue from product sales. To date, Oruka has funded its operations primarily with proceeds from the issuance of its Series A convertible preferred stock and the issuance of the Convertible Note, both of which were related party transactions. Through March 31, 2024, Oruka received gross proceeds of $3.0 million from the issuance of its Series A convertible preferred stock and gross proceeds of $25.0 million from the issuance of the Convertible Note. Under the Series A Preferred Stock and Convertible Note Purchase Agreement (the "Purchase Agreement") pursuant to which the Convertible Note was sold, Oruka can sell up to an additional $30.0 million in convertible notes. Oruka intends to sell an additional $30.0 million in convertible notes but there is currently no expectation as to when that will occur.

Oruka has incurred operating losses since inception. Oruka's ability to generate product revenue sufficient to achieve profitability will depend heavily on the successful development and eventual commercialization of any programs Oruka may develop. Oruka generated net losses of $7.1 million for the period from February 6, 2024 (inception) to March 31, 2024. As of March 31, 2024, Oruka had an accumulated deficit of $7.1 million. Oruka expects to continue to incur significantly increased expenses for the foreseeable future if and as it:

- continues its research and development and discovery-related development of its programs, ORKA-001, ORKA-002, and ORKA-003;
- submits for and receives allowance to proceed with its investigational new drug applications, or INDs, for certain of its programs in order to commence future clinical trials;
- successfully completes future preclinical studies for its pipeline;
- seeks and identifies additional research programs and product candidates and initiates discovery-related activities and preclinical studies for those programs;
- hires additional research and development and clinical personnel;
- experiences any delays, challenges, or other issues associated with the pre-clinical and clinical development of its programs, including with respect to its regulatory strategies;
- seeks marketing approvals for any programs for which it successfully completes clinical trials;
- develops, maintains and enhances a sustainable, scalable, reproducible and transferable manufacturing process for the programs it may develop;
- ultimately establishes a sales, marketing and distribution infrastructure to commercialize any programs for which it may obtain marketing approval;

- adds operational, financial and management information systems and personnel, including personnel to support its product development;
- seeks timely and successful completion of preclinical studies;
- pursues effective investigational new drug applications or comparable foreign applications that allow commencement of its planned clinical trials or future clinical trials for any programs it may develop;
- initiates enrollment and successful completion of clinical trials;
- pursues positive results from its future clinical trials that support a finding of safety and effectiveness, and an acceptable risk-benefit profile in the intended populations;
- seeks marketing approvals from applicable regulatory authorities;
- maintains, expands, enforces, defends and protects its intellectual property portfolio and other intellectual property protection or regulatory exclusivity for any products it may develop;
- seeks maintenance of a continued acceptable safety, tolerability and efficacy profile of any programs it may develop following approval;
- further acquires or in-licenses product candidates or programs, intellectual property and technologies;
- establishes and maintains any future collaborations, including making royalty, milestone or other payments thereunder;
- maintains a continued acceptable safety profile of its products following approval; and
- incurs additional costs of operating as a public company, including audit, legal, regulatory and tax related services associated with maintaining compliance with an exchange listing and SEC requirements, director and officer insurance premium and investor relation cost.

Any changes in the outcome of any of these variables with respect to the development of programs that Oruka may identify could mean a significant change in the costs and timing associated with the development of such programs. For example, if the FDA or another regulatory authority were to require Oruka to conduct clinical trials beyond those that Oruka currently anticipates will be required for the completion of clinical development of a program, or if Oruka's experiences significant delays in its clinical trials due to patient enrollment or other reasons, Oruka would be required to expend significant additional financial resources and time on the completion of clinical development. Oruka may never obtain regulatory approval for any of its programs.

Oruka will not generate revenue from product sales unless and until it successfully initiate and complete clinical development and obtain regulatory approval for any product candidates. If Oruka obtains regulatory approval for any of its programs and do not enter into a commercialization partnership, Oruka expects to incur significant expenses related to developing Oruka's commercialization capability to support product sales, manufacturing, marketing, and distribution.

As a result, Oruka will need substantial additional funding to support its continued operations and growth strategy. Until such a time as Oruka can generate significant revenue from product sales, if ever, it expects to finance its operations through the sale of equity, debt financings or other capital sources, including collaborations with other companies or other strategic transactions. Oruka may be unable to raise additional funds or enter into such other agreements on favorable terms, or at all. If Oruka fails to raise capital or enter into such agreements as, and when, needed, Oruka may have to significantly delay, scale back or discontinue the development and commercialization of one or more of Oruka's programs.

Because of the numerous risks associated with product development, Oruka is unable to accurately predict the timing or amount of increased expenses or when or if Oruka will be able to achieve or maintain profitability. Even if Oruka is able to generate product sales, it may not become profitable. If Oruka fails to become profitable or are unable to sustain profitability on a continuing basis, then Oruka may be unable to continue Oruka's operations at planned levels and be forced to reduce or terminate its operations.

Oruka believes that the expected net proceeds from the Merger and the Oruka pre-closing financing, together with Oruka's existing cash and sales of additional convertible notes under the Purchase Agreement, will enable Oruka to fund its operating expenses through 2027. Oruka has based this estimate on assumptions that may prove to be wrong, and Oruka could exhaust its available capital resources sooner than Oruka expects. See "*— Liquidity and Capital Resources*" and "*Risk Factors — Risks Related to Oruka's Financial Condition and Capital Requirements*."

Without giving effect to any proceeds from this Merger and the Oruka pre-closing financing, as well as any proceeds from additional borrowings under the Convertible Note, as of March 31, 2024, Oruka expects that its existing cash will be sufficient to fund its operating expenses through the end of second quarter of 2024. Beyond that point, Oruka will need to raise additional capital to finance its operations, which cannot be assured. As disclosed in Oruka's financial statements for the period February 6, 2024 (inception) to March 31, 2024, Oruka concluded that there is substantial doubt about its ability to continue as a going concern within one year of the date those financial statements are available to be issued. See Note 1 to Oruka's financial statements appearing at the end of this proxy statement/prospectus for additional information on its assessment.

Impact of Risk Factors on Oruka's Operations

Uncertainty in the global economy presents significant risks to Oruka's business. Oruka is subject to continuing risks and uncertainties in connection with the current macroeconomic environment, including increases in inflation, rising interest rates, recent bank failures, geopolitical factors, including the ongoing conflicts between Russia and Ukraine and Israel and Gaza and the responses thereto, and supply chain disruptions. While Oruka is closely monitoring the impact of the current macroeconomic conditions on all aspects of Oruka's business, including the impacts on its participants in future clinical trials, employees, suppliers, vendors and business partners, the ultimate extent of the impact on its business remains highly uncertain and will depend on future developments and factors that continue to evolve. Most of these developments and factors are outside Oruka's control and could exist for an extended period of time. Oruka will continue to evaluate the nature and extent of the potential impacts to Oruka's business, results of operations, liquidity and capital resources. For additional information, see the section titled "*Risk Factors — Risks Related to Oruka*."

Components of Results of Operations

Revenue

To date, Oruka has not generated revenue from any sources, including product sales, and do not expect to generate any revenue from the sale of products in the foreseeable future. If Oruka's development efforts for its product candidates are successful and result in regulatory approval, Oruka may generate revenue in the future from product sales or payments from future collaboration or license agreements that Oruka may enter into with third parties, or any combination thereof. Oruka cannot predict if, when, or to what extent it will generate revenue from the commercialization and sale of its product candidates. Oruka may never succeed in obtaining regulatory approval for any of its product candidates.

Operating Expenses

Research and Development

Research and development expenses consist primarily of costs incurred in connection with the development and research of Oruka's programs. These expenses include costs of funding research performed by third parties, including Paragon, that conduct research and development activities on Oruka's behalf, expenses incurred in connection with continuing Oruka's current research programs and discovery-phase development of any programs Oruka may identify, including under future agreements with third parties, such as consultants and contractors, and personnel related expenses, including salaries, bonuses, benefits, and equity-based compensation expense.

Oruka expenses research and development costs as incurred. For the period from February 6, 2024 (inception) to March 31, 2024 Oruka recognized $5.0 million of expenses, in connection with services provided by Paragon and Paruka under the Option Agreements, including nonrefundable research and development expense fees associated with each Research Plan on its condensed statement of operations and comprehensive loss. See "*— Contractual Obligations and Commitments*" below for further details on Oruka's research plans.

Oruka's primary focus since inception has been the identification and development of its pipeline programs. Oruka's research and development expenses primarily consist of external costs, such as fees paid to Paragon under the Paragon Option Agreements. Oruka separately tracks the amount of costs incurred under the Paragon Option Agreements with Paragon between ORKA-001 and ORKA-002. See "*— Contractual Obligations and Commitments*" below for further details on the Paragon Option Agreements.

General and Administrative

General and administrative expenses consist primarily of personnel related expenses, including salaries, bonuses, benefits, and equity-based compensation, for individuals in Oruka's executive, finance, operations, human resources, business development and other administrative functions. Other significant general and administrative expenses include legal fees relating to corporate matters, professional fees for accounting, auditing, tax, information technology, insurance, and recruiting costs. Oruka currently operates as a virtual company. Therefore, Oruka does not incur material operating expenses for the rent, maintenance and insurance of facilities or for depreciation of fixed assets. In April 2024, Oruka entered into a lease agreement with Oak Grove LP ("Oak Grove Lease") for office space located in Menlo Park, California. The Oak Grove Lease begins on June 15, 2024 with an initial term of 39.5 months. Oruka's lease payment is expected to be $1.4 million over the initial lease term.

Oruka expects that its general and administrative expenses will increase substantially for the foreseeable future as Oruka increases its headcount to support the expected growth. Oruka also expects to incur increased expenses associated with a reverse merger public transaction and becoming a public company, including increased costs of accounting, audit, legal, regulatory and tax related services associated with maintaining compliance with SEC requirements, additional director and officer insurance costs, and investor and public relations costs. Oruka also expects to incur additional intellectual property-related expenses as Oruka files patent applications to protect innovations arising from its research and development activities.

Other Expense

Interest expense of $0.2 million incurred for the period from February 6, 2024 (inception) to March 31, 2024 relates to the Convertible Note issued to Fairmount Fund II in March 2024.

Income Taxes

No provision for income taxes was recorded for the period of February 6, 2024 (inception) through March 31, 2024. Deferred tax assets generated from Oruka's net operating losses have been fully reserved as Oruka believes it is not more likely than not that the benefit will be realized due to its cumulative losses generated to date.

Results of Operations

The following table summarizes Oruka's statement of operations and comprehensive loss for the period presented (in thousands):

	Period from February 6, 2024 (Inception) to March 31, 2024
Operating expenses	
Research and development[(1)]	$ 5,193
General and administrative[(2)]	1,670
Total operating expenses	6,863
Loss from operations	(6,863)
Other expense	
Interest expense[(3)]	(214)
Total other expense	(214)
Net loss and comprehensive loss	$ (7,077)

(1) Includes related party amount of $5,051 (see Note 12 to Oruka's unaudited condensed financial statements for the period February 6, 2024 (Inception) to March 31, 2024)

(2) Includes related party amount of $848 (see Note 12 to Oruka's unaudited condensed financial statements for the period February 6, 2024 (Inception) to March 31, 2024)
(3) Includes related party amount of $214 (see Note 12 to Oruka's unaudited condensed financial statements for the period February 6, 2024 (Inception) to March 31, 2024)

Research and Development Expenses

The following table summarizes Oruka's research and development expenses incurred for the period presented (in thousands):

	Period from February 6, 2024 (Inception) to March 31, 2024
External research and development costs by selected target:	
ORKA-002[1]	$ 4,155
ORKA-001[2]	750
Other research and development costs:	
Personnel-related (including stock-based compensation)[3]	264
Other	24
Total research and development expenses	$ 5,193

(1) Includes related party amount of $4,155 for the period February 6, 2024 (Inception) to March 31, 2024
(2) Includes related party amount of $750 for the period February 6, 2024 (Inception) to March 31, 2024
(3) Includes related party amount of $146 for the period February 6, 2024 (Inception) to March 31, 2024

Research and development expenses were $5.2 million for the period from February 6, 2024 (inception) to March 31, 2024 and consisted primarily of the following:

- $4.2 million of research and development expense due to Paragon for services rendered under the Paragon Option Agreement for ORKA-002;
- $0.8 million of research initiation fee expense due to Paragon related to the Paragon Option Agreement for ORKA-001; and
- $0.2 million of personnel-related costs related to recruiting costs, salaries, benefits and other compensation-related costs, including stock-based compensation of less than $0.1 million and $0.1 million of personnel-related costs are amounts due to Paragon related to recruiting costs for hiring Oruka's research and development team.

General and Administrative Expenses

The following table summarizes Oruka's total general and administrative expenses for the period presented (in thousands):

	Period from February 6, 2024 (Inception) to March 31, 2024
Personnel-related (including stock-based compensation)[1]	$ 781
Professional and consulting fees	444
Legal fees related to patent[2]	256
Other[3]	189
Total general and administrative expenses	$ 1,670

(1) Includes related party amount of $505 for the period February 6, 2024 (Inception) to March 31, 2024
(2) Includes related party amount of $256 for the period February 6, 2024 (Inception) to March 31, 2024
(3) Includes related party amount of $87 for the period February 6, 2024 (Inception) to March 31, 2024

General and administrative expenses were $1.7 million for the period from February 6, 2024 (inception) to March 31, 2024 and consisted primarily of the following:

- $0.8 million of personnel-related costs related to recruiting costs, salaries, benefits and other compensation-related costs, including stock-based compensation of less than $0.1 million and $0.5 million of personnel-related costs are amounts due to Paragon related to recruiting costs for hiring Oruka's executive team, legal, and finance and accounting functions;
- $0.4 million of professional and consulting fees associated with increases in accounting, audit, and legal fees due to an increase in Oruka's business activity and as Oruka began preparation to become a public company;
- $0.3 million of legal fees due to Paragon associated with patent related activities;
- $0.1 million of investor and public relations costs and fees associated with company formation; and
- $0.1 million of costs due to Paragon related to company formation fees.

Liquidity and Capital Resources

Since Oruka's inception, Oruka has incurred significant operating losses. Oruka expects to incur significant expenses and operating losses for the foreseeable future as Oruka commences the pre-clinical and clinical development of its programs and continue its early-stage research activities. Oruka has not yet commercialized any products and Oruka does not expect to generate revenue from sales of products for several years, if at all. To date, Oruka has funded its operations primarily with proceeds from the sale of its Series A convertible preferred stock and the issuance of the Convertible Note. In March 2024, Oruka received $3.0 million in gross proceeds from the issuance of Series A convertible preferred stock and $25.0 million in gross proceeds from the issuance of the Convertible Note, both of which were related party transactions. As of March 31, 2024, Oruka had cash of $27.7 million.

Cash Flows

The following table summarizes Oruka's cash flows for the period presented (in thousands):

	Period from February 6, 2024 (Inception) to March 31, 2024
Net cash used in operating activities	$ (168)
Net cash provided by financing activities	27,911
Net increase in cash	$ 27,743

Operating Activities

From February 6, 2024 (inception) to March 31, 2024, net cash used in operating activities was $0.2 million and was primarily attributable to a net loss of $7.1 million, offset by a $6.1 million increase in related parties accounts payable and other current liabilities and a $0.8 million increase in accrued expenses and other current liabilities. The increase in amounts due to related parties and accrued expenses and other current liabilities was primarily due to an increase in Oruka's business activity, as well as vendor invoicing and payments.

Financing Activities

From February 6, 2024 (inception) to March 31, 2024, net cash provided by financing activities was $27.9 million, consisting of $2.9 million of net proceeds from the issuance of Oruka's Series A convertible preferred stock and $25.0 million of net proceeds from the issuance of the Convertible Note.

Funding Requirements

To date, Oruka has not generated any revenue from product sales. Oruka has devoted substantially all of its resources to advancing the development of its portfolio of programs, organizing and staffing, business planning, raising capital, and providing general and administrative support for these operations. Current and future programs will require significant research and development efforts, including preclinical and clinical trials, and regulatory approvals to commercialization. These efforts require significant amounts of additional capital, adequate personnel, and infrastructure. Even if Oruka's development efforts are successful, it is uncertain when, if ever, Oruka will realize significant revenue from product sales. If Oruka obtains regulatory approval for any of its product candidates and start to generate revenue, Oruka expects to incur significant expenses related to developing its internal commercialization capability to support product sales, marketing, and distribution.

Oruka believes its existing cash, together with the anticipated net proceeds from this Merger and the Oruka pre-closing financing, as well as issuances of additional convertible notes under the Purchase Agreement, will be sufficient to fund its operating expenses requirements through 2027. Oruka has based this estimate on assumptions that may prove to be wrong, and Oruka could exhaust its available capital resources sooner than Oruka expects. Oruka expects that it will require additional funding to advance its potential product candidates through development, regulatory approval and commercialization if any of its product candidates are approved.

Until such time, if ever, as Oruka can generate substantial product revenue, Oruka expects to finance its cash needs through a combination of equity offerings and debt financings. To the extent that Oruka raises additional capital through the sale of equity or convertible debt securities, ownership interest may be materially diluted, and the terms of such securities could include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve agreements that include restrictive covenants that limit Oruka's ability to take specified actions, such as incurring additional debt, making capital expenditures or declaring dividends. If Oruka is unable to raise additional funds, it may be required to delay, reduce or eliminate some or all of its planned operations.

Contractual Obligations and Commitments

Paragon Option Agreements

In March 2024, Oruka entered into the Paragon Option Agreements. Under the terms of the Paragon Option Agreements, Paragon identifies, evaluates and develops antibodies directed against certain mutually agreed therapeutic targets of interest to Oruka. The Option Agreement includes two selected targets, IL-23 (ORKA-001) and IL-17A/F (ORKA-002). Under each of the Paragon Option Agreements, Oruka has the exclusive option to, on a research program-by-research program basis, be granted an exclusive, worldwide license to all of Paragon's right, title and interest in and to the intellectual property resulting from the applicable research program to develop, manufacture and commercialize the antibodies and potential products directed to the selected targets. If Oruka exercises its options, Oruka will be required to make non-refundable milestone payments to Paragon of up to $12.0 million under each respective agreement upon the achievement of certain clinical development milestones, up to $10.0 million under each respective agreement upon the achievement of certain regulatory milestones, as well tiered royalty payments in the low-to-mid single-digits beginning on the first commercial sale. From time to time, Oruka can choose to add additional targets to the collaboration by mutual agreement with Paragon.

Pursuant to the terms of the Paragon Option Agreements, the parties initiated certain Research Programs. Each Research Program is aimed at discovering, generating, identifying and/or characterizing antibodies directed to the respective target. For each Research Program, the parties established a Research Plan that sets forth the activities that will be conducted, and the associated research budget. Oruka and Paragon will agree on initial Research Plans that outline the services that will be performed commencing at inception of the arrangement related to IL-17 and IL-23. Oruka's exclusive option with respect to each Research Program is exercisable at Oruka's sole discretion at any time during the period beginning on the initiation of activities under the associated Research Program and ending a specified number of days following the delivery of the data package from Paragon related to the results of the Research Plan activities. There is no payment due upon exercise of an Option pursuant to the Paragon Option Agreements.

Pursuant to the Paragon Option Agreements, on a research program-by-research program basis following the finalization of the Research Plan for each respective research program, Oruka was required to pay Paragon a nonrefundable fee in cash of $0.8 million related to the research initiation fee for ORKA-001. This amount was recognized as a research and development expense during the period from February 6 (inception) to March 31, 2024, and paid to Paragon in April 2024. Oruka is also responsible for 50% of the development costs incurred prior to March 31, 2024, provided that Oruka receives rights to at least one selected IL-23 antibody. Oruka's share of development costs incurred prior to March 31, 2024 is $5.9 million. As of the date of issuance of Oruka's condensed financial statements, Oruka has not received rights to a selected IL-23 antibody and has not paid or accrued the $5.9 million of development costs incurred prior to March 31, 2024. Oruka will be responsible for 50% of the ORKA-001 development costs incurred from and after March 31, 2024, through the completion of the IL-23 selection process.

Oruka was also required to reimburse Paragon $3.3 million for development costs related to ORKA-002 incurred by Paragon through December 31, 2023 and certain other development costs incurred between January 1, 2024 and March 6, 2024. This amount was recognized as a research and development expense during the period from February 6 (inception) to March 31, 2024, and accounts payable as of March 31, 2024. Oruka paid $3.3 million to Paragon in April 2024. Oruka is also responsible for the development costs incurred from January 1, 2024 to March 31, 2024 of $0.9 million, which was recognized as a research and development expense in the period from February 6 (inception) to March 31, 2024. Oruka will be required to pay Paragon $0.8 million for the research initiation fee related to ORKA-002 within 30 days following finalization of the ORKA-002 Research Plan as well as for subsequent development costs related to ORKA-002. Oruka will be responsible for ORKA-002 development costs incurred from and after March 31, 2024, through the completion of the IL-17 selection process.

Furthermore, the Paragon Option Agreements provide for an annual equity grant of warrants to purchase 1.00% of the then outstanding shares of Oruka common stock, on a fully diluted basis, on each of December 31, 2024 and December 31, 2025, during the term of the Paragon Option Agreements, at the fair market value determined by Oruka's board of directors.

Oruka expenses the service fees as the associated costs are incurred when the underlying services are rendered. Such amounts are classified within research and development expenses in the accompanying statement of operations and comprehensive loss.

Note Payable with Related Party

In March 2024, Oruka entered into the Purchase Agreement with Fairmount Fund II, whereby Oruka issued a convertible note, with an initial principal amount of $25.0 million that can be converted into Series A Preferred Stock (or a Series of preferred shares that is identical in respect to the shares of preferred shares issued in its next equity financing) or shares of the Company's common stock in exchange for aggregate proceeds of $25.0 million. The Convertible Note accrues interest at a rate of 12.0% per annum. All unpaid interest and principal are scheduled to mature on December 31, 2025 (the "Maturity Date"). Prepayment is not permitted without prior written consent of Fairmount Fund II. Pursuant to the Purchase Agreement, the Company has the right to sell and issue additional convertible notes up to an aggregate principal amount equal to $30.0 million, in addition to the $25.0 million of initial principal amount of the Convertible Note.

In connection with the proposed reverse recapitalization transaction, the Convertible Note will convert into a number of shares of common stock based on the aggregate principal amount, plus any unpaid accrued interest, divided by the conversion price, which is an amount to be determined based upon Oruka's fully-diluted capitalization immediately prior to the reverse recapitalization transaction. In the event the proposed reverse recapitalization transaction or any other proposed corporate transactions do not close prior to Oruka's next equity financing, the Convertible Note will convert into the series of issued convertible preferred stock.

As of March 31, 2024, the aggregate principal amount of outstanding borrowings under the Convertible Note was $25.0 million and Oruka has the right to issue and sell up to an additional $30.0 million in convertible notes under the Purchase Agreement.

Critical Accounting Policies and Significant Judgments and Estimates

Oruka's management's discussion and analysis of its financial condition and results of operations is based on its financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these condensed financial statements requires Oruka to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenues recognized and expenses incurred during the reporting periods. Oruka's estimates are based on its historical experience and on various other factors that Oruka believes are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

While Oruka's significant accounting policies are described in more detail in Note 2 to its financial statement and condensed financial statements included elsewhere in this proxy statement/prospectus, Oruka believes the following accounting policies used in the preparation of its financial statements require the most significant judgments and estimates.

Accrued Research and Development Expenses

As part of the process of preparing Oruka's financial statements, Oruka is required to estimate its accrued research and development expenses. This process involves estimating the level of service performed and the associated cost incurred for the services when Oruka has not yet been invoiced or otherwise notified of actual costs. The majority of Oruka's service providers invoice the company in arrears for services performed, on a pre-determined schedule or when contractual milestones are met; however, some require advance payments. Oruka makes estimates of its accrued expenses as of each balance sheet date in the financial statements based on facts and circumstances known to Oruka at that time. At each period end, Oruka corroborates the accuracy of these estimates with the service providers and make adjustments, if necessary. Estimated accrued research and development expenses include those related to fees paid to vendors in connection with discovery development activities and any research organizations in connection with studies and testing. Although Oruka does not expect its estimates to be materially different from amounts actually incurred, Oruka's understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low in any particular period.

Stock-Based Compensation

Oruka measures stock-based awards granted to employees, directors, and non-employees in the form of stock options to purchase shares of Oruka common stock, based on their fair value on the date of the grant using the Black-Scholes model. Oruka measures restricted common stock awards using the difference, if any, between the purchase price per share of the award and the fair value of Oruka common stock at the date of grant. Compensation expense for those awards is recognized over the requisite service period, which is generally the vesting period of the respective award for employees. Compensation expense for awards to non-employee with service-based vesting conditions is recognized in the same manner as if Oruka had paid cash in exchange for the goods or services, which is generally the over the vesting period of the award. Oruka uses the straight-line method to recognize the expense of awards with service-based vesting conditions. Oruka accounts for forfeitures as they occur.

The Black-Scholes model uses inputs that are determined by the Board on the date of grant and assumptions Oruka makes for the volatility of stock-based awards, the expected term of stock-based awards, the risk-free interest rate for a period that approximates the expected term of Oruka's stock-based awards and its expected dividend yield. Oruka has historically been a private company and lack company-specific historical and implied volatility information of Oruka's stock. Therefore, Oruka estimates its expected stock volatility based on the historical volatility of a representative group of public companies in the biotechnology industry for a term equal to the remaining time of the expected term. The expected term of Oruka's stock options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" stock options. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve for time periods approximately equal to the remaining contractual term of the options on the date of measurement. Oruka has estimated a 0% dividend yield based on the expected dividend yield and the fact that Oruka has never paid, and do not expect to pay, any cash dividends in the foreseeable future.

Determination of Fair Value of Common Stock

As there has been no public market for Oruka's stock-based awards to date, the estimated fair value of stock-based awards has been determined by Oruka's board of directors as of the date of grant, with input from management, and with consideration of additional objective and subjective factors that it believed were relevant. In addition, Oruka's board of directors considered various objective and subjective factors to determine the fair value of its share-based awards as of each grant date, including:

- the prices at which Oruka sold shares of Series A convertible preferred stock and preferences of the Series A convertible preferred stock relative to Oruka's stock-based awards at the time of each grant;
- the progress of Oruka's research and development programs, including the status of discovery-phase studies for its product candidates;
- Oruka's stage of development and business strategy;
- external market conditions affecting the biotechnology industry and trends within the biotechnology industry;
- Oruka's financial position, including cash on hand, and Oruka's historical and forecasted performance and operating results;
- the lack of an active public market for Oruka common stock and its Series A convertible preferred stock;
- the likelihood of achieving a liquidity event, such as the proposed reverse recapitalization transaction, or sale of Oruka in light of prevailing market conditions; and
- the analysis of reverse recapitalization transactions and market performance of similar companies in the biotechnology industry.

Oruka's common stock valuations were prepared using a hybrid method, including an option pricing method ("OPM"). The OPM treats common stock and preferred stock as call options on the total equity value of a company, with exercise prices based on the value thresholds at which the allocation among the various holders of a company's securities changes. Under this method, the common stock has value only if the funds available for distribution to stockholders exceed the value of the preferred stock liquidation preferences at the time of the liquidity event, such as a strategic sale or a merger. The hybrid method is a probability-weighted expected return method ("PWERM"), where the equity value in one or more of the scenarios is calculated using an OPM. The PWERM is a scenario-based methodology that estimates the fair value of common stock based upon an analysis of future values for the company, assuming various outcomes. The common stock value is based on the probability-weighted present value of expected future investment returns considering each of the possible outcomes available as well as the rights of each class of stock. The future value of the common stock under each outcome is discounted back to the valuation date at an appropriate risk-adjusted discount rate and probability weighted to arrive at an indication of value for the common stock. A discount for lack of marketability of the common stock is then applied to arrive at an indication of value for the common stock.

The assumptions underlying these valuations represented management's best estimate, which involved inherent uncertainties and the application of management's judgment. As a result, if Oruka had used significantly different assumptions or estimates, the fair value of Oruka's incentive shares and its stock-based compensation expense could have been materially different.

Once a public trading market for Oruka common stock has been established in connection with the completion of this Merger, it will no longer be necessary for Oruka's board of directors to estimate the fair value of its stock-based awards in connection with its accounting for granted stock-based awards or other such awards Oruka may grant, as the fair value of Oruka's common stock and share-based awards will be determined based on the quoted market price of Oruka's common stock.

Recently Issued Accounting Pronouncements

A description of recently issued accounting pronouncements that may potentially impact Oruka's financial position, results of operations or cash flows is disclosed in Note 2 to Oruka's condensed financial statements as of March 31, 2024 appearing at the end of this proxy statement/prospectus.

Off-Balance Sheet Arrangements

As of March 31, 2024, Oruka did not have any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

The Convertible Note bears interest until December 2025 at a fixed rate per annum equal 12%. An immediate 10% change in the prime rate would not have a material impact on Oruka's debt-related obligations, financial position or results of operations.

Inflation Risk

Oruka's results of operations and financial condition are presented based on historical cost. While it is difficult to accurately measure the impact of inflation due to the imprecise nature of the estimates required, Oruka believes the effects of inflation, if any, on Oruka's results of operations and financial condition have been immaterial. Oruka cannot assure you its business will not be affected in the future by inflation.

MANAGEMENT FOLLOWING THE MERGER

Executive Officers and Directors

Upon the completion of the Merger, the business and affairs of the combined company will be managed under the direction of the combined company's board of directors.

The combined company's board of directors will initially be fixed at six members, consisting of six current Oruka board members, namely Lawrence Klein, Kristine Ball, Carl Dambkowski, Peter Harwin, Samarth Kulkarni and Cameron Turtle. The staggered structure of the current ARCA board of directors will remain in place for the combined company following the completion of the Merger.

Each executive officer of the combined company will serve at the discretion of the combined company's board of directors and holds office until his or her successor is duly elected and qualified or until his or her earlier resignation or removal. There are no family relationships among any of the proposed combined company's directors or executive officers.

All of ARCA's current directors are expected to resign from their positions as directors of ARCA, effective as of the closing of the Merger.

The following table sets forth the name, age as of July 22, 2024 and position of each of the individuals who are expected to serve as executives and directors of the combined company following completion of the Merger:

Name	Age	Position
Executive Officers:		
Lawrence Klein	42	President, Chief Executive Officer and Director
Arjun Agarwal	48	Senior Vice President, Finance and Treasurer
Joana Goncalves	51	Chief Medical Officer
Paul Quinlan	61	General Counsel and Secretary
Non-Employee Directors:		
Samarth Kulkarni	45	Chair and Director
Kristine Ball	52	Director
Carl Dambkowski	39	Director
Peter Harwin	38	Director
Cameron Turtle	34	Director

Executive Officers

Lawrence Klein, Ph.D. Dr. Klein has served as Chief Executive Officer of Oruka and as a member of its board of directors since February 2024. Prior to joining Oruka, Dr. Klein was a Partner at Versant Venture Management, LLC, a healthcare and biotechnology venture capital firm, from January 2023 to February 2024, where he invested in and helped to grow early-stage biotechnology companies. Prior to Versant, Dr. Klein served in various positions at CRISPR Therapeutics AG (Nasdaq: CRSP), a biopharmaceutical company, including Chief Operating Officer from January 2020 to October 2022, Chief Business Officer from January 2019 to January 2020, Senior Vice President, Business Development and Strategy from November 2017 to December 2018 and as Vice President, Strategy from February 2016 to November 2017, where he helped to initiate and execute on several transformative partnerships, establish the strategic direction of the company, oversee important pipeline programs and led several functions, including program and portfolio management. Before joining CRISPR, Dr. Klein was an Associate Partner at McKinsey & Company, a global management consulting firm, from October 2014 to February 2016. Dr. Klein served as a member of the board of directors of Dyne Therapeutics, Inc. (Nasdaq: DYN) from September 2019 to May 2023 and of Jasper Therapeutics, Inc. (Nasdaq: JSPR) from September 2021 to June 2023. Dr. Klein received his B.S. in biochemistry and physics from the University of Wisconsin-Madison and his Ph.D. in biophysics from Stanford University.

Oruka believes Dr. Klein is qualified to serve as a member of the board of directors of the combined company because of his business development, operational and senior management experience in the biotechnology industry and his academic expertise and accomplishments.

Arjun Agarwal. Mr. Agarwal has served as the Senior Vice President of Finance of Oruka since March 2024, where he is responsible for overseeing the company's finance and accounting functions. Prior to joining Oruka, Mr. Agarwal served as VP of Finance at Jasper Therapeutics, Inc. (Nasdaq: JSPR), a biotechnology company, from June 2021 to March 2024, including through multiple financings and the company's successful transition to become a publicly traded entity. Before joining Jasper, Mr. Agarwal served as Vice President, Corporate Controller at Protagonist Therapeutics, Inc. (Nasdaq: PTGX), a biotechnology company, from August 2019 to June 2021, where he was responsible for overseeing the company's finance and accounting functions. Prior to joining Protagonist, Mr. Agarwal served in various roles of increasing responsibility at McKesson Corporation (NYSE: MCK), an international healthcare services company, from 2009 to 2019. Prior to McKesson, Mr. Agarwal worked at PricewaterhouseCoopers LLP, where he managed a portfolio of audit clients. He is a graduate of Sydenham College of Commerce and Economics at Mumbai University, India. He is a Certified Public Accountant (CPA) and a Chartered Accountant accredited by the Institute of Chartered Accountants of India.

Joana Goncalves, MBChB. Dr. Goncalves has served as the Chief Medical Officer of Oruka since April 2024. Prior to joining Oruka, Dr. Goncalves served as Chief Medical Officer of Cara Therapeutics, Inc. (Nasdaq: CARA), a biopharmaceutical company, from October 2018 to April 2024, where she was responsible for representing Cara Therapeutics in interactions with regulatory agencies, the investor and scientific communities and the board of directors, building multifunctional terms and developing the clinical development strategy in dermatological conditions. Prior to Cara, Dr. Goncalves held various positions at Celgene Corporation, a pharmaceutical company, which was later acquired by Bristol-Myers Squibb Company, from April 2014 to October 2018, where she most recently served as Vice President, Medical Affairs for Dermatology and Neurology and was instrumental in planning and executing medical support activities for a number of programs, including OTEZLA® for psoriasis. Prior to Celgene, Dr. Goncalves served as Vice President, Medical Strategy and Scientific Affairs at LEO Pharma Inc., the U.S. subsidiary of LEO Pharma A/S, a global healthcare company specializing in dermatology and critical care, from February 2012 to April 2014. She began her pharmaceutical career at Novartis Pharmaceuticals, working on a range of products across various therapeutic areas from 2001 to 2012. Dr. Goncalves received her MBChB from the University of Cape Town, South Africa.

Paul Quinlan. Mr. Quinlan has served as General Counsel of Oruka since April 2024. Prior to joining Oruka, Mr. Quinlan served as General Counsel, Chief Compliance Officer and Corporate Secretary of CymaBay Therapeutics, Inc., a biopharmaceutical company, from October 2020 to March 2024, where he was responsible for the general supervision of the company's legal affairs. From December 2017 to February 2020, he served as General Counsel and Corporate Secretary of CymaBay, where he was responsible for the general supervision of the company's legal affairs. Prior to CymaBay, Mr. Quinlan served as General Counsel and Secretary, from 2010 to January 2018, and Chief Legal Officer from 2016 to January 2018, of TerraVia Holdings, Inc., a biotechnology company, where he was responsible for the general supervision of the company's legal affairs. Prior to joining TerraVia, Mr. Quinlan served as General Counsel of Metabolex, Inc., a biopharmaceutical company, from 2005 to 2010. Prior to joining Metabolex, Mr. Quinlan held various positions at Maxygen, Inc., a biopharmaceutical company, from 2000 to 2005. Prior to Maxygen, Mr. Quinlan practiced law at Cooley LLP and Cravath, Swaine, & Moore LLP. Mr. Quinlan received a law degree from Columbia Law School and an M.Sc. in Medical Biophysics from the University of Toronto.

Non-Employee Directors

Kristine Ball. Ms. Ball has served as a member of the board of directors of Oruka since May 2024. Ms. Ball has served as President and Chief Executive Officer of Antiva Biosciences, Inc., a private biopharmaceutical company, since April 2023. Prior to Antiva, Ms. Ball served as Chief Executive Officer of Soteria Biotherapeutics, Inc., a private biotechnology company, from September 2020 to August 2022. Prior to joining Soteria, Ms. Ball served as Senior Vice President, Corporate Strategy and Chief Financial Officer of Menlo Therapeutics, Inc., a Nasdaq-listed biopharmaceutical company, which later became VYNE Therapeutics Inc. (Nasdaq: VYNE), from September 2017 to March 2020, where she was responsible for leading all non-R&D functions, including strategic planning, corporate development, commercial, human resources, legal, finance and information technology. Prior to joining Menlo, Ms. Ball served as Chief Financial Officer and Senior Vice President of Relypsa, Inc., a Nasdaq-listed pharmaceutical company, which was later acquired by Galenica Group, from November 2012 to October 2016. Prior to Relypsa, Ms. Ball held various other finance roles in the life sciences industry, including Senior Vice President of Finance & Administration and Chief Financial Officer of KAI Pharmaceuticals, Inc., a

biopharmaceutical company, and Vice President of Finance at Exelixis, Inc. (Nasdaq: EXEL), a biotechnology company. Prior to that, Ms. Ball served as a senior manager in life sciences audit practice of Ernst & Young LLP. Ms. Ball has previously served on the boards of directors of Atreca, Inc. (Nasdaq: BCEL), a biopharmaceutical company, from 2020 to 2024, Soteria from 2020 to 2022 and Forty Seven, Inc., a Nasdaq-listed biotechnology company, which was later acquired by Gilead Sciences, Inc., from 2018 to 2020. Ms. Ball received a B.S. from Babson College.

Oruka believes Ms. Ball is qualified to serve as a member of the board of directors of the combined company because of her experience as an executive officer and director of life sciences companies and her background in finance, corporate development and strategic planning.

Carl Dambkowski, M.D. Dr. Dambkowski has served as a member of the board of directors of Oruka since February 2024. Dr. Dambkowski has served as the Chief Medical Officer of Apogee Therapeutics, Inc. (Nasdaq: APGE), a biotechnology company, since September 2022. Prior to joining Apogee, Dr. Dambkowski served as a strategic and clinical leader for a variety of companies, including as Chief Medical Officer of QED Therapeutics, Inc., a private biotechnology company, from July 2021 to September 2022; Chief Strategy Officer and EVP of Operations of Origin Biosciences, Inc., a private bioecology company, from March 2018 to June 2021; and Chief Medical Officer of Navire Pharma, Inc., a private biotechnology company, from January 2020 to September 2022, where he served as the clinical lead starting prior to IND for BBP-398 through the out licensing of the compound to Bristol-Myers Squibb based on initial clinical data and for low-dose infigratinib in achondroplasia through initial proof-of-concept data. He was part of the core team that brought TRUSELTIQ® (infigratinib) and NULIBRY® (fosdenopterin) through regulatory review and FDA approval at QED Therapeutics and Origin Biosciences, respectively. From July 2016 to March 2018, Dr. Dambkowski was an associate at McKinsey & Company, a global management consulting firm, where he advised biotech and pharmaceutical companies across the world on a range of research and development activities. Dr. Dambkowski co-founded Novonate, Inc., a private medical device company focused on building life-saving devices for neonates, in January 2015. Dr. Dambkowski has coauthored numerous peer-reviewed publications and scientific abstracts and is a named inventor on multiple published and granted patents. Dr. Dambkowski was trained as a physician at Stanford University, where he also received his M.D. with a concentration in bioengineering. He also received a B.A. (with honors) from Stanford University and an M.A. from Columbia University.

Oruka believes Dr. Dambkowski is qualified to serve as a member of the board of directors of the combined company because of his significant experience and innovations in the biotechnology industry and his academic expertise and accomplishments.

Peter Harwin. Mr. Harwin has served as a member of the board of directors of Oruka since February 2024. Mr. Harwin is a Managing Member at Fairmount Funds Management, a healthcare investment firm he co-founded in April 2016. Prior to Fairmount Funds Management, Mr. Harwin was a member of the investment team at Boxer Capital, LLC, an investment fund that was part of the Tavistock Group, based in San Diego. Mr. Harwin also serves as chairman of the board of directors of Cogent Biosciences, Inc. (Nasdaq: COGT) and is a member of the board of directors of Apogee Therapeutics, Inc. (Nasdaq: APGE), Viridian Therapeutics, Inc. (Nasdaq: VRDN) and Spyre Therapeutics, Inc. (Nasdaq: SYRE). Mr. Harwin received a B.B.A. from Emory University.

Oruka believes Mr. Harwin is qualified to serve as a member of the board of directors of the combined company because his experience serving as a director of biotechnology companies and as a manager of funds specializing in the area of life sciences.

Samarth Kulkarni, Ph.D. Dr. Kulkarni has served as a member of the board of directors of Oruka since February 2024. Dr. Kulkarni has served as the Chief Executive Officer of CRISPR Therapeutics AG (Nasdaq: CRSP), a biopharmaceutical company, since December 2017, where he has also served as a member and chair of the board of directors since June 2018 and September 2023, respectively. Previously, Dr. Kulkarni served as CRISPR's President and Chief Business Officer from May 2017 to November 2017 and as Chief Business Officer from August 2015. Prior to joining CRISPR, Dr. Kulkarni was at McKinsey & Company, a global management consulting firm, from 2006 to 2015, with various titles, his most recent being Partner within the Pharmaceuticals and Biotechnology practice. Dr. Kulkarni has also served as a member of the boards of directors of Black Diamond Therapeutics, Inc. (Nasdaq: BDTX), a precision oncology company, since 2019, including as lead independent director since September 2023, Repare Therapeutics Inc. (Nasdaq: RPTX), a precision oncology company, since November 2019 and Centessa Pharmaceuticals plc (Nasdaq: CNTA), a biotechnology company,

since February 2021. Dr. Kulkarni received a Ph.D. in Bioengineering and Nanotechnology from the University of Washington and a B. Tech. from the Indian Institute of Technology. Dr. Kulkarni has authored several publications in leading scientific and business journals.

Oruka believes that Dr. Kulkarni is qualified to serve as a member of the board of directors of the combined company because of his experience as a consultant and an executive in the biopharmaceutical industry and his academic expertise and accomplishments.

Cameron Turtle, D.Phil. Dr. Turtle has served as a member of the board of directors of Oruka since February 2024. Dr. Turtle has served as Chief Executive Officer and a member of the board of directors of Spyre Therapeutics, Inc. (formerly Aeglea BioTherapeutics, Inc.) (Nasdaq: SYRE), a biotechnology company, since November 2023 and, before that, as Chief Operating Officer from June 2023 to November 2023. Prior to joining Spyre, Dr. Turtle was an advisor to Spyre Therapeutics, Inc., a private biotechnology company, from May 2023 to June 2023. Previously, he served as Venture Partner at Foresite Labs, a life sciences investment firm, from July 2022 to May 2023; Chief Strategy Officer of BridgeBio Pharma (Nasdaq: BBIO), a biotechnology company, from January 2021 to April 2022; and Chief Business Officer of Eidos Therapeutics (Nasdaq: EIDX), a biopharmaceutical company, from November 2018 to January 2021, where he led business development, investor relations, and multiple operational functions as the company advanced an investigational medicine for a form of heart failure. Prior to joining BridgeBio and Eidos, he was a consultant at McKinsey & Company, a global management consulting firm, where he worked with pharmaceutical and medical device companies on topics including M&A, growth strategy, clinical trial strategy, and sales force optimization. Dr. Turtle received his B.S. with honors in Bioengineering from the University of Washington and his D.Phil. in Cardiovascular Medicine from the University of Oxford, St. John's College. He is the recipient of several awards, including a Rhodes Scholarship, Goldwater Scholarship, Forbes 30 Under 30, San Francisco Business Times 40 Under 40, and the Biocom Life Sciences Catalyst Award.

Oruka believes Dr. Turtle is qualified to serve as a member of the board of directors of the combined company because of his experience as a leader in building, financing, and shaping biopharmaceutical organizations from preclinical development to late-stage clinical trials and commercialization.

Composition of the Board of Directors

ARCA's board of directors currently consists of five members, divided into three staggered classes, with one class to be elected at each annual meeting to serve for a three-year term. The staggered structure of the board of directors will remain in place for the combined company following the completion of the Merger, with Class I directors holding terms expiring at the 2025 annual meeting of stockholders, Class II directors holding terms expiring at the 2026 annual meeting of stockholders and Class III directors holding terms expiring at the 2027 annual meeting of stockholders. It is anticipated that the incoming directors will be appointed to classes of the combined company board of directors following the completion of the Merger as follows: Carl Dambkowski and Peter Harwin are expected to be Class I directors; Cameron Turtle and Lawrence Klein are expected to be Class II directors; and Samarth Kulkarni and Kristine Ball are expected to be Class III directors.

Director Independence

Nasdaq listing rules require a majority of a listed company's board of directors to be comprised of independent directors who, in the opinion of the board of directors, do not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Subject to specified exceptions, each member of a listed company's audit, compensation and nominating committees must be independent, and audit and compensation committee members must satisfy additional independence criteria under the Exchange Act.

Based on information provided by each proposed director concerning her or his background, employment and affiliations, ARCA and Oruka expect that the combined company's board of directors will determine that each of the directors other than Lawrence Klein, Oruka's current President and Chief Executive Officer, who is expected to serve as President and Chief Executive Officer of the combined company, will qualify as an "independent director" as defined under applicable Nasdaq listing rules. In making these determinations, the combined company's board of directors will consider the current and prior relationships that each director has with ARCA and Oruka and all other facts and circumstances that the company's board of directors deems relevant in determining the independence of each proposed director, including the interests of each combined company director in the Merger, any relevant

related party transactions and the beneficial ownership of securities of ARCA, Oruka or the combined company by each combined company director. See also the sections titled "*The Merger — Interests of Oruka's Directors and Executive Officers in the Merger*," "*Certain Relationships and Related Party Transactions of the Combined Company*" and "*Principal Stockholders of Oruka*" beginning on pages 124, 280 and 315, respectively, of this proxy statement/prospectus for additional information.

Board Leadership Structure

Following the completion of the Merger, Dr. Kulkarni is expected to serve as Chair of the board of directors of the combined company. The combined company's Principles of Corporate Governance will provide its board of directors with the flexibility to combine or separate the positions of Chair of the board of directors and Chief Executive Officer. Oruka believes that having these positions be separate is the appropriate leadership structure for the combined company at this time as it will help facilitate independent oversight of management by the board of directors of the combined company and allow the Chief Executive Officer to focus on strategy execution and managing the business while the Chair focuses on corporate governance and managing the combined company's board of directors.

Committees of the Board of Directors

Following the completion of the Merger, ARCA and Oruka anticipate that the board of directors of the combined company will establish an audit committee, a compensation committee and a nominating and corporate governance committee, each of which will operate pursuant to a charter adopted by the board of directors of the combined company. ARCA and Oruka believe that following the completion of the Merger the functioning and composition of these committees of the combined company will comply with the requirements of Nasdaq listing rules and SEC rules and regulations. The board of directors of the combined company may also establish other committees from time to time to assist the combined company and its board of directors. Each of the audit committee, compensation committee, nominating and corporate governance committee is expected to have the responsibilities described below.

Audit Committee

Following the completion of the Merger, the initial members of the combined company's audit committee are expected to be Kristine Ball, Carl Dambkowski and Cameron Turtle, each of whom qualifies as an independent director for audit committee purposes, as defined under the rules of the SEC and the applicable Nasdaq listing rules and has sufficient knowledge in financial and auditing matters to serve on the combined company's audit committee. Kristine Ball is expected to chair the audit committee. Kristine Ball is an "audit committee financial expert" as defined in Item 407(d)(5)(ii) of Regulation S-K promulgated under the Securities Act.

The primary responsibilities of the combined company's audit committee will be to oversee the combined company's accounting and financial reporting processes, including the audits of the financial statements, and the internal and external audit processes. The audit committee will also oversee the system of internal controls established by management and the combined company's compliance with legal and regulatory requirements. The audit committee will also be responsible for the review, consideration and approval or ratification of related party transactions. The audit committee will oversee the independent auditors, including their independence and objectivity. The audit committee will be empowered to retain outside legal counsel and other advisors as it deems necessary or appropriate to assist it in fulfilling its responsibilities and to approve the fees and other retention terms of the advisors.

Compensation Committee

Following the completion of the Merger, the initial members of the combined company's compensation committee are expected to be Peter Harwin, Samarth Kulkarni and Cameron Turtle, each of whom qualifies as an independent director, as defined under applicable Nasdaq listing rules and also meets the additional, heightened independence criteria applicable to members of the compensation committee. Cameron Turtle is expected to chair the compensation committee.

The primary responsibilities of the combined company's compensation committee will be to periodically review and approve the compensation and other benefits for the combined company's senior officers and directors. This will include reviewing and approving corporate goals and objectives relevant to the compensation of the combined company's Chief Executive Officer and other executive officers, evaluating the performance of these officers in light of the goals and objectives and setting or recommending to the combined company's board of directors the officers' compensation. The compensation committee will also administer and make recommendations to the combined company's board of directors regarding equity incentive plans that are subject to the board of directors' approval and approve the grant of equity awards under the plans.

Nominating and Corporate Governance Committee

Following the completion of the Merger, the initial members of the combined company's nominating and corporate governance committee are expected to be Kristine Ball, Samarth Kulkarni and Peter Harwin, each of whom qualifies as an independent director, as defined under applicable Nasdaq listing rules. Peter Harwin is expected to chair the nominating and corporate governance committee.

The combined company's nominating and corporate governance committee will be responsible for engaging in succession planning for the combined company's board of directors, developing and recommending to the combined company's board of directors criteria for identifying and evaluating qualified director candidates and making recommendations to the combined company's board of directors regarding candidates for election or reelection to the board of directors at each annual stockholders' meeting. In addition, the nominating and corporate governance committee will be responsible for overseeing the combined company's corporate governance matters. The nominating and corporate governance committee will also be responsible for overseeing the structure, composition and functioning of the combined company's board of directors and its committees.

Compensation Committee Interlocks and Insider Participation

None of the expected members of the combined company's compensation committee has at any time been one of the officers or employees of the combined company. None of the combined company's expected executive officers currently serves, or in the past fiscal year has served, as a member of the board of directors or compensation committee of any entity that has one or more executive officers that is or are expected to serve on the combined company's board of directors or compensation committee following the completion of the Merger.

Code of Conduct and Ethics

Following the completion of the Merger, the combined company will adopt a Code of Conduct and Ethics that establishes the standards of ethical conduct applicable to all of the combined company's directors, officers and employees. The full text of the combined company's Code of Conduct and Ethics will be posted on the combined company's website. The Code of Conduct and Ethics is expected to address, among other matters, compliance with laws and policies, conflicts of interest, corporate opportunities, regulatory reporting, external communications, confidentiality requirements, insider trading, proper use of assets and how to report compliance concerns. The combined company intends to disclose any amendments to the Code of Conduct and Ethics, or any waivers of its requirements, on its website to the extent required by applicable rules. The combined company's audit committee will be responsible for applying and interpreting the Code of Conduct and Ethics in situations where questions are presented to it. Information contained on, or that can be accessed through, the combined company's website is not incorporated by reference into this proxy statement/prospectus, and you should not consider information on the combined company's website to be part of this proxy statement/prospectus.

Director Compensation

Prior to the Merger, Oruka did not have a formal policy to provide any cash or equity compensation to its non-employee directors for their service on its board of directors or committees of its board of directors. Oruka's non-employee director compensation is described under "*Oruka Director Compensation*" in this proxy statement/prospectus. Except as described below, determinations with respect to director compensation after the closing of the Merger have not yet been made. In connection with closing of the Merger, it is expected that the board of directors of the combined company will adopt a non-employee director compensation policy designed to enable the combined company to attract and retain, on a long-term basis, highly qualified non-employee directors and align its directors' interests with those of its stockholders. Employee directors will not receive additional compensation for their services as directors. It is expected that each director who is not an employee will be paid cash and equity compensation for serving on the board of directors of the combined company, the amount and terms of which have not yet been determined. The combined company will also reimburse its non-employee directors for reasonable travel and out-of-pocket expenses incurred in connection with attending the board of director and committee meetings.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS OF THE COMBINED COMPANY

In addition to the compensation arrangements, including employment, termination of employment and change in control arrangements, with Oruka's and ARCA's directors and executive officers, including those discussed in the sections titled "*Management Following the Merger*," "*Oruka Executive Compensation*" and "*ARCA Executive Compensation*," the following is a description of each transaction involving ARCA since January 1, 2022, each transaction involving Oruka since February 6, 2024 (inception) and each currently proposed transaction in which:

- either Oruka or ARCA has been or is to be a participant;
- the amounts involved exceeded or will exceed the lesser of $120,000 and 1% of the average of Oruka's or ARCA's total assets at year-end for the last two completed fiscal years, as applicable; and
- any of Oruka's or ARCA's directors, executive officers or holders of more than 5% of Oruka's or ARCA's capital stock, or an affiliate or immediate family member of the foregoing persons, had or will have a direct or indirect material interest.

ARCA Transactions

As a smaller reporting company, SEC rules require ARCA to disclose any transaction for the last two completed fiscal years or any currently proposed transaction in which ARCA is a participant and in which any related person has or will have a direct or indirect material interest involving an amount in excess of $120,000 or 1% of the average of ARCA's total assets at year-end for the last two fiscal years. A related person is any executive officer, director, nominee for director or holder of 5% or more of ARCA's common stock or an affiliate or immediate family member of any of those persons.

Other than the compensation arrangements and other arrangements disclosed above under the headings "*ARCA Executive Compensation*" and "*ARCA Director Compensation*" and the transactions described below, since January 1, 2022, there has not been and there is not currently proposed, any transaction or series of similar transactions to which ARCA was, or will be, a party in which the amount involved exceeded, or will exceed, $120,000 (or, if less, 1% of the average of ARCA's total assets amounts at December 31, 2022 and 2023) and in which any director, executive officer, holder of 5% or more of any class of ARCA's capital stock or any member of the immediate family of, or entities affiliated with, any of the foregoing persons, had, or will have, a direct or indirect material interest.

Transactions With ARCA's Former President and Chief Executive Officer

ARCA has entered into unrestricted research grants with its former President and Chief Executive Officer's academic research laboratory at the University of Colorado. Funding of any unrestricted research grants is contingent upon ARCA's financial condition, and can be deferred or terminated at ARCA's discretion. There was no expense under these arrangements for the three months ended March 31, 2024. Total expense under these arrangements for the three months ended March 31, 2023 was $108,000. Total expense under these arrangements for the years ended December 31, 2023 and 2022 was $(91,000) and $432,000, respectively. In December 2023, ARCA made a payment of $125,000 for the grant period July 2022 through December 2023 under these arrangements. In April 2024, the President and Chief Executive Officer resigned.

Cooperation Agreement

ARCA is party to a Cooperation Agreement (the "Cooperation Agreement") with Cable Car Capital LLC, The Funicular Fund, LP, Funicular Funds, LP and Jacob Ma-Weaver (collectively, "Cable Car").

Pursuant to the Cooperation Agreement, ARCA's board of directors appointed Mr. Ma-Weaver as a Class III director with a term expiring at ARCA's 2024 annual meeting of stockholders, effective June 15, 2022 and appointed Mr. Ma-Weaver to the Special Committee of ARCA's board of directors (the "First Director Appointment").

Additionally, under the terms of the Cooperation Agreement, ARCA and Cable Car initiated a process and subsequently identified a mutually acceptable second independent director, Mr. James Flynn, to join ARCA's board of directors. Mr. Flynn was elected as director at the 2022 annual meeting of stockholders.

Under the terms of the Cooperation Agreement, Cable Car agreed to abide by customary standstill restrictions from the date of the Cooperation Agreement until the earlier to occur of (i) the 180th day after the First Director Appointment is no longer serving as a director of ARCA and (ii) the 90th day prior to the 2023 Annual Meeting (such period, the "Cooperation Period"), including that Cable Car will not, among other things, (i) seek additional representation, or the removal of an existing director, on ARCA's board of directors, (ii) engage in any solicitation of proxies, or (iii) initiate, propose or otherwise solicit, including any solicitations of the type contemplated by Rule 14a-2(b) promulgated under the Securities Exchange Act of 1934 of ARCA's stockholders for the approval of, any stockholder proposal. The Cooperation Period expired on November 1, 2023, the 90th day prior to the 2023 Annual Meeting.

ARCA and Cable Car also agreed to customary mutual non-disparagement obligations.

Policies and Procedures for Related Party Transactions

ARCA's Audit Committee reviews and approves all related party transactions. This review covers any material transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which ARCA was or will be a participant, and a related party had or will have a direct or indirect material interest, including, purchases of goods or services by or from the related party or entities in which the related party has a material interest, indebtedness, guarantees of indebtedness and employment by ARCA of a related party. In evaluating any related party transaction, ARCA's Audit Committee considers, among other things, the relative benefits of the transaction to ARCA, what, if any, alternatives may be available from persons not affiliated to ARCA, if the terms of the transaction have been negotiated on an arm's length basis and any other matters that ARCA's Audit Committee may deem relevant in determining whether such related party transaction is in the best interests of ARCA and its stockholders.

Oruka Transactions

The following is a summary of each transaction or series of similar transactions since February 6, 2024 (inception) or any currently proposed transaction, to which Oruka was or is a party in which:

- the amounts involved exceeded or will exceed the lesser of $120,000 and 1% of Oruka's total assets; and
- any of Oruka's directors or executive officers, any holder of 5% of any class of Oruka capital stock or an affiliate or immediate family member of the foregoing persons had or will have a direct or indirect material interest.

Compensation arrangements for Oruka named executive officers and directors are described elsewhere in this proxy statement/prospectus under "*Oruka Executive Compensation*" and "*Oruka Director Compensation*."

Private Placements of Securities

Series A Preferred Stock and Convertible Note Financing

On March 6, 2024, Oruka completed a preferred stock and convertible note financing (the "Oruka Series A Financing") and issued and sold to Fairmount Fund II (i) an aggregate of 20,000,000 shares of Series A preferred stock at a purchase price of $0.15 per share and (ii) the Convertible Note with an initial principal amount of $25,000,000 at an interest rate of 12% per annum, for aggregate gross proceeds of $28 million. Fairmount Fund II is expected to contribute the aggregate principal amount and all accrued interest under the Convertible Note in exchange for Oruka common stock and Oruka pre-funded warrants in connection with Oruka's pre-closing financing. Fairmount Funds Management is the investment manager of Fairmount. Peter Harwin, a director of Oruka, is a managing member of Fairmount Funds Management.

Oruka Pre-Closing Financing

On April 3, 2024, in connection with the execution of the Merger Agreement, Oruka entered into the Subscription Agreement with certain investors to consummate the Oruka pre-closing financing. Pursuant to the Subscription Agreement, the investors agreed to purchase an estimated aggregate of 40,033,228 shares of Oruka common stock and 9,504,686 Oruka pre-funded warrants, at an estimated price of $5.55 per share of common stock

and per warrant, for aggregate gross proceeds of approximately $275.0 million (which includes $25.0 million of proceeds previously received from the issuance of the Convertible Note and accrued interest on such note). The aggregate purchase price of $275.0 million is fixed, while the purchase price per share or warrant and the aggregate number of shares and warrants to be purchased is subject to change pursuant to the terms of the Subscription Agreement. Please see the section titled "*Agreements Related to the Merger — Subscription Agreement*." The closing of the Oruka pre-closing financing is conditioned upon the satisfaction or waiver of the conditions to the Merger as well as certain other conditions. Three of the investors or their affiliates are, or are expected to be as of immediately following the Oruka pre-closing financing, beneficial holders of more than 5% of Oruka's capital stock, and the table below sets forth the number of shares of Oruka common stock and Oruka pre-funded warrants expected to be purchased by such holders at the closing of the Oruka pre-closing financing (based on the currently estimated purchase price per share or warrant, as applicable).

Participant	Shares of Oruka Common Stock	Pre-funded Warrants of Oruka	Total Purchase Price
Entities affiliated with Fairmount	5,155,246	9,255,792	$ 80,000,000[1]
Entities affiliated with Venrock Healthcare Capital Partners	5,155,245	248,894	$ 30,000,000
Entities affiliated with FMR LLC	4,503,445	—	$ 25,000,000

(1) Includes $25.0 million of proceeds previously received by Oruka from the issuance of the Convertible Note and accrued interest on such note, with the remainder of the purchase price to be paid in cash.

Oruka's Relationship with Paragon and Paruka

Oruka is party to a number of agreements with Paragon and Paruka. Paragon and Paruka each beneficially own more than 5% of Oruka's capital stock through their respective holdings of Oruka common stock. Fairmount beneficially owns more than 5% of Oruka's capital stock, has one seat on Oruka's board of directors and beneficially owns more than 5% of Paragon. Fairmount appointed Paragon's board of directors and has the contractual right to approve the appointment of any executive officers of Paragon, but is not the beneficial owner of Paragon's securities. Paruka is an entity formed by Paragon as a vehicle to hold equity in Oruka in order to share profits with certain employees of Paragon.

In March 2024, Oruka entered into the Paragon Option Agreements. Under the Paragon Option Agreements, Oruka has the exclusive option to, on a research program-by-research program basis, be granted an exclusive, worldwide license to all of Paragon's right, title, and interest in and to the intellectual property resulting from the applicable research program to develop, manufacture, and commercialize the antibodies and products directed to the selected target(s).

Upon signing of the Paragon Option Agreement for ORKA-001, a one-time, non-refundable research initiation fee of $0.8 million was due from Oruka to Paragon. This amount was recognized by Oruka as a research and development expense during the period ended March 31, 2024, and paid to Paragon in April 2024. Oruka is also responsible for 50% of the development costs incurred prior to March 31, 2024, provided that Oruka receives rights to at least one selected IL-23 antibody. Oruka's share of development costs incurred prior to March 31, 2024 is $5.9 million. As of the date of filing of this proxy statement/prospectus, Oruka has not received such rights and has not paid such development costs. Oruka will be responsible for 50% of the ORKA-001 development costs incurred from and after March 31, 2024, through the completion of the IL-23 selection process.

Under the Paragon Option Agreement for ORKA-002, Oruka was required to reimburse Paragon for the pre-effective date development costs. During the period ended March 31, 2024, this was recognized as a research and development expense, and Oruka paid $3.3 million to Paragon in April 2024. Oruka is also responsible for the development costs incurred from January 1, 2024 to March 31, 2024 of $0.9 million, which was recognized as a research and development expense in the period ended March 31, 2024. Oruka will be required to pay Paragon $0.8 million for the research initiation fee related to ORKA-002 within 30 days following finalization of the ORKA-002 research plan as well as for subsequent development costs related to ORKA-002.

As of the date of filing of this proxy statement/prospectus, Oruka has not exercised its options with respect to ORKA-001 or ORKA-002. For each of the Paragon Option Agreements, if Oruka exercises its options, it will be required to make non-refundable milestone payments to Paragon of up to $12.0 million upon the achievement of certain clinical development milestones, up to $10.0 million upon the achievement of certain regulatory milestones, as well as tiered royalty payments in the low-to-mid single-digits beginning on the first commercial sale.

Additionally, as part of the Paragon Option Agreements, on each of December 31, 2024 and December 31, 2025, Oruka will grant Paruka warrants to purchase a number of shares equal to 1.00% of Oruka's outstanding shares on a fully-diluted basis as of the date of the grant, with an exercise price equal to the fair market value of the underlying shares on the grant date.

For additional detail regarding Oruka's arrangements with Paragon, including the Paragon Option Agreements, see the section titled "*Oruka's Business — License Agreements*."

Other Agreements with Oruka Stockholders

In connection with the Oruka Series A Financing, Oruka entered into investors' rights, voting and right of first refusal and co-sale agreements containing registration rights, information rights, voting rights and rights of first refusal, among other things, with certain holders of Oruka preferred stock and certain holders of Oruka common stock. These stockholder agreements will terminate upon the closing of the Merger.

Oruka Indemnification Agreements and Insurance

Oruka has entered into an indemnification agreement with each of its directors and officers and purchased directors' and officers' liability insurance. The indemnification agreements require Oruka to indemnify its directors and officers to the fullest extent permitted under Delaware law.

Oruka Policies for Approval of Related Party Transactions

Oruka does not have a formal policy regarding approval of transactions with related parties. To date, all disclosable transactions with related parties have been approved by the directors not interested in such transaction pursuant to Section 144(a)(1) of the DGCL.

UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

Defined terms included below shall have the same meaning as terms defined and included elsewhere in this proxy statement/prospectus.

On April 3, 2024, Oruka entered into a Merger Agreement with ARCA and the Merger Subs, pursuant to which, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, First Merger Sub will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the Merger. Immediately following the First Merger and as part of the same overall transaction, Oruka will merge with and into Second Merger Sub, with Second Merger Sub being the surviving entity of the Second Merger. The transaction is expected to be completed in the third quarter of 2024 (the "Closing Date" or the "Effective Time") following the filed Form S-4 being deemed effective by the SEC and receipt of approval by the stockholders of each of Oruka and ARCA, in the latter case pursuant to a special meeting. In connection with the Merger, Second Merger Sub will change its corporate name to "Oruka Therapeutics Operating Company, LLC" and ARCA will change its name to "Oruka Therapeutics, Inc." ARCA following the Merger is referred to herein as the "combined company." The combined company will be led by Oruka's management team and will remain focused on developing biologics to optimize the treatment of inflammatory skin diseases.

In accordance with an exchange ratio determined in accordance with the terms of the Merger Agreement (the "Exchange Ratio") (together with the Oruka pre-closing financing, the "Transactions"), immediately prior to the Effective Time, (i) each share of Oruka common stock outstanding, including outstanding and unvested Oruka restricted stock and shares of Oruka common stock issued in connection with the Subscription Agreement (both defined in Note 1 of the accompanying notes), will be converted into the right to receive shares of ARCA common stock, which will be subject to the same vesting provisions as those immediately prior to the Merger, (ii) each share of Oruka Series A convertible preferred stock will be converted into the right to receive ARCA Series B convertible preferred stock, (iii) each option or warrant to purchase Oruka common stock will be converted into the right to receive an option or warrant to purchase ARCA common stock, which will be subject to the same vesting provisions as those immediately prior to the Merger, and (iv) each pre-funded warrant to purchase shares of Oruka common stock issued in connection with the Subscription Agreement will be converted into the right to receive a pre-funded warrant to purchase shares of ARCA common stock.

The Exchange Ratio is currently estimated to be approximately 6.8699 shares of ARCA common stock for each fully-diluted share of Oruka common stock. Under the Exchange Ratio formula, the former Oruka stockholders immediately before the effective time, including those purchasing shares and pre-funded warrants in the Oruka pre-closing financing, are currently estimated to own approximately 97.6% of the outstanding common stock of the combined company on a fully-diluted basis, and the stockholders of ARCA immediately before the effective time are currently estimated to own approximately 2.4% of the outstanding common stock of the combined company on a fully-diluted basis and are subject to certain assumptions, including, but not limited to, (a) ARCA's net cash balance (as defined in the Merger Agreement) as of the Closing being approximately $5.0 million, (b) Oruka closing on approximately $275.0 million in the Oruka pre-closing financing described in this proxy statement/prospectus, (c) a valuation for ARCA equal to its net cash as of the business day immediately prior to the closing date of the Merger, plus $6.0 million, and (d) a valuation for Oruka equal to $175.0 million, in each case as further described in the Merger Agreement.

The following unaudited pro forma condensed combined financial information gives effect to the Merger, which is expected to be accounted for as a reverse recapitalization under United States Generally Accepted Accounting Principles, or U.S. GAAP. For further detail related to the accounting for the Merger, please see Notes 1 and 3 below.

The unaudited pro forma condensed combined balance sheet combines the historical balance sheets of ARCA and Oruka as of March 31, 2024 and depicts the accounting of the transactions prepared pursuant to the rules and regulations of Article 11 of SEC Regulation S-X, as amended ("pro forma balance sheet transaction accounting adjustments"). The unaudited pro forma condensed combined statements of operations for the three months ended March 31, 2024 for ARCA, the period from February 6, 2024 (inception) to March 31, 2024 for Oruka, and the year ended December 31, 2023 for ARCA combine the historical results of ARCA and Oruka for those periods and depict the pro forma transaction accounting adjustments assuming that those adjustments were made as of January 1, 2023

("pro forma statements of operations transaction accounting adjustments"). Collectively, pro forma balance sheet transaction accounting adjustments and pro forma statements of operations transaction accounting adjustments are referred to as "transaction accounting adjustments" or "pro forma adjustments".

These unaudited pro forma condensed combined financial information and related notes have been derived from and should be read in conjunction with:

- the historical unaudited condensed financial statements of Oruka as of March 31, 2024 and for the period from February 6, 2024 (inception) to March 31, 2024, and the related notes included elsewhere in this proxy statement/prospectus;
- the historical unaudited condensed consolidated financial statements of ARCA as of and for the three months ended March 31, 2024, and the related notes included elsewhere in this proxy statement/prospectus;
- the historical audited consolidated financial statements of ARCA for the year ended December 31, 2023, and the related notes included elsewhere in this proxy statement/prospectus; and
- the sections titled "*ARCA's Management's Discussion and Analysis of Financial Condition and Results of Operations*," "*Oruka's Management's Discussion and Analysis of Financial Condition and Results of Operation*," and other financial information relating to ARCA and Oruka included elsewhere in this proxy statement/prospectus.

The unaudited pro forma condensed combined financial information is based on the assumptions and pro forma adjustments that are described in the accompanying notes. The pro forma adjustments are preliminary, subject to further revision as additional information becomes available and additional analyses are performed including but not limited to additional financing, additional direct and incremental offering costs and a reverse stock split. Adjustments have been made solely for the purpose of providing unaudited pro forma condensed combined financial information. Differences between these preliminary estimates and the final accounting, expected to be completed after the Closing, may occur and these differences could have a material impact on the accompanying unaudited pro forma condensed combined financial information.

The unaudited pro forma condensed combined financial information does not give effect to the potential impact of current financial conditions, regulatory matters, operating efficiencies or other savings or expenses that may be associated with the integration of the two companies. The unaudited pro forma condensed combined financial information is not necessarily indicative of the financial position or results of operations in the future periods or the result that actually would have been realized had ARCA and Oruka been a combined organization during the specified periods. The actual results reported in periods following the Merger may differ significantly from those reflected in the unaudited condensed combined pro forma financial information presented herein for a number of reasons, including, but not limited to, differences in the assumptions used to prepare this unaudited pro forma condensed combined financial information.

UNAUDITED PRO FORMA CONDENSED COMBINED BALANCE SHEET
AS OF MARCH 31, 2024
(In thousands, except share amounts)

	Historical				
	5(A) ARCA biopharma, Inc.	5(B) Oruka Therapeutics, Inc.	Transaction Accounting Adjustments	Notes	Pro Forma Combined
Assets					
Current assets:					
Cash and cash equivalents	$ 35,903	$ 27,743	$ (1,687)	5(a)	$ 267,004
			249,786	5(c)	
			(19,512)	5(d)	
			(4,973)	5(e)	
			(256)	5(h)	
			(20,000)	5(i)	
Prepaid expenses and other current assets	767	—	(716)	5(f)	51
Total current assets	36,670	27,743	202,642		267,055
Operating lease right-of-use assets	17	—	(17)	5(g)	—
Property and equipment, net	7	—	(7)	5(g)	—
Other assets	12	488	(488)	5(d)	12
Total assets	$ 36,706	$ 28,231	$ 202,130		$ 267,067
Liabilities, Convertible Preferred Stock and Stockholders' Equity (Deficit)					
Current liabilities:					
Accounts payable	$ 529	$ 4	$ —		$ 533
Accrued expenses and other current liabilities	1,052	1,262	(21)	5(c)	1,326
			(919)	5(e)	
			(48)	5(g)	
Related party accounts payable and other current liabilities		5,899	—		5,899
Total current liabilities	1,581	7,165	(988)		7,758
Long term liabilities:					
Accrued interest payable, related party	—	214	(214)	5(c)	—
Notes payable to related parties, noncurrent	—	24,980	(24,980)	5(c)	—
Total liabilities	1,581	32,359	(26,182)		7,758
Oruka convertible preferred stock	—	2,931	(2,931)	5(b)	
ARCA convertible preferred stock	—	—	2,931	5(b)	2,931
Stockholders' equity (deficit)					
ARCA common stock, $0.001 par value	14	—	(14)	5(j)	—
Oruka common stock, $0.0001 par value	—	1	0	5(c)	6
			4	5(c)	
Additional paid-in capital	225,861	17	25,214	5(c)	263,449
			249,782	5(c)	
			(20,000)	5(d)	
			22	5(h)	
			(20,000)	5(i)	
			(197,446)	5(j)	
Accumulated deficit	(190,750)	(7,077)	(1,687)	5(a)	(7,077)
			(4,053)	5(e)	
			(716)	5(f)	
			24	5(g)	
			(278)	5(h)	
			197,460	5(j)	
Total stockholders' equity (deficit)	35,125	(7,059)	228,312		256,378
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$ 36,706	$ 28,231	$ 202,130		$ 267,067

See accompanying notes to the unaudited pro forma condensed combined financial information.

UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS
FOR THE THREE MONTHS ENDED MARCH 31, 2024
(In thousands, except share and per share amounts)

	Historical					
	6(A) ARCA biopharma, Inc.	6(B) Oruka Therapeutics, Inc.	Transaction Accounting Adjustments	Notes	Pro Forma Combined	Notes
Operating expenses:						
Research and development	$ 165	$ 5,193	$ 304	6(f)	$ 5,662	
General and administrative	2,317	1,670	829	6(f)	4,816	
Total operating expenses	2,482	6,863	1,133		10,478	
Income (loss) from operations	(2,482)	(6,863)	(1,133)		(10,478)	
Other income (expense), net						
Interest income	473	—	—		473	
Interest expense	—	(214)	214	6(e)	—	
Total other income (expense), net	473	(214)	214		473	
Net loss	$ (2,009)	$ (7,077)	$ (919)		$ (10,005)	
Net loss	$ (2,009)				$ (10,005)	
Weighted average common shares outstanding, basic and diluted	14,501,143				393,270,139	6(g)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.14)				$ (0.03)	

See accompanying notes to the unaudited pro forma condensed combined financial information.

UNAUDITED PRO FORMA CONDENSED COMBINED STATEMENT OF OPERATIONS
FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2023
(In thousands, except share and per share amounts)

	Historical					
	6(A) ARCA biopharma, Inc.	6(B) Oruka Therapeutics, Inc.	Transaction Accounting Adjustments	Notes	Pro Forma Combined	Notes
Operating expenses:						
Research and development	$ 1,013	$ —	$ 1,215	6(f)	$ 2,228	
General and administrative	6,283		1,687	6(a)	12,256	
			716	6(b)		
			(24)	6(c)		
			278	6(d)		
			3,316	6(f)		
Total operating expenses	7,296	—	7,188		14,484	
Income (loss) from operations	(7,296)	—	(7,188)		(14,484)	
Other income (expense), net						
Interest income	1,957		—		1,957	
Interest expense	—		—		—	
Total other income (expense), net	1,957	—	—		1,957	
Net loss	$ (5,339)	$ —	$ (7,188)		$ (12,527)	
Net loss	$ (5,339)				$ (12,527)	
Weighted average common shares outstanding, basic and diluted	14,415,877				393,184,873	6(g)
Net loss per share attributable to common stockholders, basic and diluted	$ (0.37)				$ (0.03)	

See accompanying notes to the unaudited pro forma condensed combined financial information.

NOTES TO UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION

1. Description of the Merger

On April 3, 2024, ARCA, Oruka, First Merger Sub, and Second Merger Sub entered into the Merger Agreement to which the First Merger Sub merges with and into Oruka, with Oruka becoming a wholly owned subsidiary of ARCA. Oruka will merge with and into the Second Merger Sub, with the Second Merger Sub being the surviving entity. Subsequent to the Second Merger, Second Merger Sub would remain a wholly owned subsidiary of ARCA and ARCA will change its name to "Oruka Therapeutics, Inc." Subject to the terms and conditions of the Merger Agreement, at closing of the Merger (the "Closing"):

a) each outstanding share of, and pre-funded warrant related to, Oruka common stock, including (i) outstanding and unvested Oruka Restricted Stock (defined below) will be converted into the right to receive a number of shares of, and pre-funded warrants related to, ARCA common stock, based on the Exchange Ratio;

b) each outstanding share of Oruka Series A convertible preferred stock at closing will be exchanged into ARCA Series B convertible preferred stock, which are each convertible into 1,000 shares of ARCA common stock, equal to the Exchange Ratio divided by 1,000; and

c) each outstanding and unexercised option or warrant to purchase shares of Oruka common stock ("Oruka options" or "Oruka warrants", respectively) immediately prior to Closing will be assumed by ARCA and will be converted into an option or warrant to purchase shares of ARCA common stock which continues to vest pursuant to the original terms, with necessary adjustments to the number of shares and exercise price to reflect the Exchange Ratio.

All Oruka restricted stock outstanding and unvested immediately prior to Closing ("Oruka Restricted Stock") that is assumed by ARCA in the Merger will remain unvested to the same extent and will be subject to the same repurchase option, risk of forfeiture or other condition under any applicable restricted stock purchase agreement.

Under the terms of the Merger Agreement, the board of directors of ARCA will take actions to accelerate the vesting of certain outstanding options to purchase ARCA common stock held by a current employee, director or consultant of ARCA as of the closing of the Merger. The acceleration of vesting of ARCA's options occurs either upon a change of control as defined, pursuant to the terms of the original awards, or a modification of the awards as a result of the Merger. The incremental fair value of ARCA's options associated with the modification to accelerate vesting has been included as an adjustment to the unaudited pro forma condensed combined financial information.

Immediately following the Merger, ARCA stockholders are expected to own approximately 2.4% of the outstanding capital stock of the combined company on a fully diluted basis, former Oruka stockholders are expected to own approximately 41.5% of the outstanding capital stock of the combined company on a fully diluted basis, and investors participating in the Subscription Agreement (defined below) are expected to own approximately 56.1% of the outstanding capital stock of the combined company on a fully diluted basis. Oruka stockholders are expected to receive approximately 251,912,528 shares on a fully diluted basis in connection with the Merger, including (i) 76,066,047 shares of ARCA common stock, stock options and warrants subject to vesting terms, based on the number of shares of Oruka common stock outstanding immediately prior to the Merger, including Oruka Restricted Stock, (ii) the number of shares of, and pre-funded warrants related to, Oruka common stock issued to investors participating in the Subscription Agreement (defined below), and (iii) Oruka convertible preferred stock outstanding as of March 31, 2024, which will be exchanged into shares of ARCA Series B convertible preferred stock. These estimates are subject to certain inputs, which include, but are not limited to, (a) ARCA's net cash balance (as defined in the Merger Agreement) as of the Closing being approximately $5.0 million, (b) Oruka raising approximately $275.0 million in the Oruka pre-closing financing described in this proxy statement/prospectus, (c) a valuation for ARCA equal to its net cash as of the business day immediately prior

to the closing date of the Merger, plus $6.0 million and (d) a valuation for Oruka equal to $175.0 million, in each case as further described in the Merger Agreement. The following table summarizes the pro forma number of shares of common stock of the combined company outstanding following the consummation of the Transactions:

	Pro Forma (Assuming ARCA Net Cash at Closing of $5.0 Million)	
Equity Capitalization Summary (fully diluted basis) Upon Consummation of the Merger	**Number of Shares Owned**	**% Ownership**
Oruka stockholders	251,912,528	41.5%
ARCA stockholders	14,501,143	2.4%
Investors participating in the Subscription Agreement[(1)]	340,320,515	56.1%
Total common stock of the combined company	606,734,186	100.0%

(1) Includes 65,296,242 pre-funded warrants related to the Subscription Agreement after reflecting the estimated Exchange Ratio.

Consummation of the Merger is subject to certain closing conditions, including, among other things, (1) approval by ARCA stockholders, (2) approval by the requisite Oruka stockholders of the adoption and approval of the Merger Agreement and the transactions contemplated thereby, (3) Nasdaq's approval of the listing of the shares of ARCA common stock to be issued in connection with the Merger and (4) the effectiveness of a registration statement filed with the SEC in connection with the Merger.

The employment agreements for ARCA employees include entitlement to change in control payments for certain executives, and severance and retention bonus payments for certain non-executives, the aggregate of which will be treated as pre-Merger compensation expense of ARCA and will be reflected as an increase to accrued expenses of ARCA, which will be assumed by the combined company at Closing. Prior to the Closing, ARCA also (i) discontinued its research and development activities, (ii) sold its assets held for sale, and (iii) terminated and/or expired its operating leases. Additionally, ARCA's current Directors & Officers ("D&O") policy will be fully utilized at Closing.

Private Financing Transaction — Subscription Agreement

Concurrently with the execution of the Merger Agreement, certain parties entered into a subscription agreement with Oruka to purchase, prior to the consummation of the Merger, approximately 40,033,288 shares of Oruka common stock and 9,504,686 pre-funded warrants, at an estimated purchase price of $5.55 per share and $5.54 per warrant, for an aggregate purchase price of approximately $275.0 million, which includes $25.0 million proceeds received as of March 31, 2024 from the issuance of a convertible note and accrued interest. The subscription agreement was subsequently amended and restated on July 3, 2024 (the "Subscription Agreement") to provide for, among other things, the issuance of warrants to certain of Oruka's employees, directors and service providers. The purchase price of the common stock and pre-funded warrants was reduced to the amounts above due to the issuance of employee stock options since the original Subscription Agreement signing. Shares of Oruka common stock and pre-funded warrants to purchase shares of Oruka common stock issued pursuant to the Subscription Agreement will be converted into shares of ARCA common stock and pre-funded warrants to purchase shares of ARCA common stock at Closing per the Merger Agreement.

2. Basis of Presentation

The unaudited pro forma condensed combined financial information has been prepared in accordance with Article 11 of SEC Regulation S-X, as amended. The adjustments presented in the unaudited pro forma condensed combined financial information have been identified and presented to provide relevant information necessary for an understanding of the combined company upon consummation of the Merger. The unaudited pro forma condensed combined statement of operations data for the three months ended March 31, 2024 and the unaudited pro forma condensed combined statement of operations data for the year ended December 31, 2023, give effect to the Merger as if it had been consummated on January 1, 2023. The unaudited pro forma condensed combined balance sheet as of March 31, 2024 gives effect to the Merger and combines the historical balance sheets of ARCA and Oruka as of such date.

The unaudited pro forma condensed combined financial information is based on the assumptions and adjustments that are described in the accompanying notes. Accordingly, the pro forma adjustments are preliminary, subject to further revision as additional information becomes available and additional analyses are performed and have been made solely for the purpose of providing unaudited pro forma condensed combined financial information. Differences between these preliminary accounting conclusions and estimates and the final accounting conclusions and amounts may occur as a result of, among other reasons: (i) changes in initial assumptions in the determination of

the accounting acquirer and related accounting, (ii) changes in the amount of ARCA's net cash to be assumed at the Closing Date, and (iii) other changes in ARCA's assets and liabilities, which are expected to be completed after the Closing, and these differences could have a material impact on the accompanying unaudited pro forma condensed combined financial information and the combined company's future results of operations and financial position.

3. Accounting for the Merger

The unaudited pro forma condensed combined financial information gives effect to the Merger, which will be accounted for under U.S. GAAP as an in-substance reverse recapitalization of ARCA by Oruka, as the transaction is, in essence, the issuance of equity for ARCA's net assets, which will primarily consist of cash and other nominal non-operating assets and liabilities. Under this method of accounting, Oruka will be considered the accounting acquirer for financial reporting purposes. This determination is based on the expectations that, immediately following the Merger:

- Oruka is not a variable interest entity as it has sufficient equity at risk in order to fund its next development milestones;
- Oruka stockholders will own a substantial majority of the voting rights in the combined company;
- Oruka's largest stockholder will retain the largest interest in the combined company;
- Oruka will designate the initial members of the board of directors of the combined company;
- Oruka's executive management team will become the management of the combined company; and
- The combined company will be renamed "Oruka Therapeutics, Inc."

As a result of Oruka being the accounting acquirer, Oruka's assets and liabilities will be recorded at their pre-combination carrying amounts. ARCA's assets and liabilities will be measured and recognized at their fair values as of the effective time, which are expected to approximate the carrying value of the acquired cash and other non-operating assets, with no goodwill or other intangible assets recorded. Any difference between the consideration transferred and the fair value of the net assets of ARCA following the determination of the actual consideration transferred for ARCA will be reflected as an adjustment to additional paid-in capital. For periods prior to Closing, the historical financial statements of Oruka shall become the historical financial statements of the combined company.

4. Shares of ARCA Common Stock, Convertible Preferred Stock, Options, and Warrants Issued to Oruka Stockholders upon Closing of the Merger

At Closing, all outstanding shares of Oruka common stock, on a fully-diluted basis, will be exchanged for shares of ARCA common stock based on the preliminary estimated Exchange Ratio of 6.8699, determined in accordance with the terms of the Merger Agreement. The estimated number of shares of ARCA common stock that ARCA expects to issue to Oruka's stockholders assumes ARCA's net cash at Closing is $5.0 million and is determined as follows:

Shares of Oruka common stock outstanding as of March 31, 2024[(1)]	9,460,019
Shares of Oruka common stock to be issued upon conversion of Oruka convertible preferred stock	20,000,000
Shares of Oruka common stock issued upon exercise of Oruka stock options and warrants[(2)]	7,209,005
Estimated shares of Oruka common stock to be issued in connection with the Subscription Agreement, see Note 5(c)	40,033,228
Estimated shares of Oruka common stock to be issued upon exercise of Oruka pre-funded warrants to be issued in connection with the Subscription Agreement, see Note 5(c)	9,504,686
Total Oruka fully diluted shares prior to the closing of the Merger	86,206,938
Estimated Exchange Ratio	6.8699
Estimated fully diluted shares to be issued to Oruka stockholders and Investors participating in Subscription Agreement upon closing of the Merger[(3)]	592,233,043

(1) Represents shares of Oruka common stock outstanding as of March 31, 2024, including 3,863,361 shares of unvested Oruka Restricted Stock.

(2) Represents the outstanding options and warrants to acquire Oruka common stock as of March 31, 2024. Such stock options and warrants will become exercisable for shares of ARCA common stock following the Merger.

(3) Represents the total estimated fully diluted shares to be issued to Oruka stockholders at Closing based on the preliminary estimated Exchange Ratio of 6.8699.

5. Adjustments to Unaudited Pro Forma Condensed Combined Balance Sheet as of March 31, 2024

The pro forma notes and adjustments, based on preliminary estimates that could change materially as additional information is obtained, are as follows:

Pro forma notes:

5(A) Derived from the unaudited condensed consolidated balance sheet of ARCA as of March 31, 2024.

5(B) Derived from the unaudited condensed balance sheet of Oruka as of March 31, 2024.

Pro forma Balance Sheet Transaction Accounting Adjustments:

5(a) To reflect preliminary estimated incremental compensation expense of $1.7 million related to severance, retention bonuses and change in control payments resulting from pre-existing employment agreements or from approval from ARCA's board of directors that is expected to be incurred upon closing of the Merger. The pro forma adjustment is reflected as a decrease in cash of $1.7 million for the severance and retention bonuses payments made subsequent to March 31, 2024 and an increase to accumulated deficit of $1.7 million.

5(b) To reflect the exchange of all outstanding shares of Oruka Series A convertible preferred stock, with a carrying amount of $2.9 million, into ARCA Series B convertible preferred stock at closing of the Merger, with the terms of ARCA Series B convertible preferred stock resulting in classification within stockholders' equity.

5(c) To reflect the issuance of 40,033,228 shares of Oruka common stock and 9,504,686 pre-funded warrants, pursuant to the Subscription Agreement entered into concurrently with the execution of the Merger Agreement, for an aggregate purchase price of $275.0 million, which includes $25.0 million proceeds received as of March 31, 2024 from the issuance of the convertible note. The aggregate proceeds are net less than $0.1 million of debt issuance costs and include accrued interest of $0.2 million as of March 31, 2024 adjusted through accumulated deficit (see Note 6(e)), for net proceeds prior to transaction costs of $249.8 million. The proceeds received in connection with the Subscription Agreement are recorded net of transaction costs deemed to be direct and incremental costs of the equity financing in the amount of approximately $20.0 million (see Note 5(d)) for net proceeds from the Subscription Agreement post-transaction costs of $229.8 million. The issuance of shares in connection with the Subscription Agreement are recorded as the issuance of Oruka common stock at par value, with the remaining amount recorded to additional paid-in-capital.

The net cash proceeds received prior to direct and incremental transaction costs from the Subscription Agreement and corresponding adjustment to additional paid-in-capital upon close of the Merger is determined as follows (in thousands):

Aggregate purchase price of the Subscription Agreement	$ 275,000
Net proceeds previously received from issuance of convertible note as of March 31, 2024	(24,980)
Debt issuance costs recorded as part of issuance of convertible note as of March 31, 2024	(20)
Accrued interest payable as part of issuance of convertible note as of March 31, 2024, see Note 6(e)	(214)
Net proceeds received prior to direct and incremental transaction costs from the Subscription Agreement upon close of the Merger	$ 249,786
Issuance of Oruka common stock and pre-funded warrants at par value upon close of the Merger	(4)
Additional paid-in capital related to the issuance of Oruka common stock and pre-funded warrants upon close of the Merger (excluding Oruka common stock to be issued in connection with conversion of convertible note)	$ 249,782

5(d) To reflect preliminary estimated transaction costs of $19.5 million, not yet reflected in the historical financial statements, that are expected to be incurred by Oruka in connection with the Merger, and $0.5 million reflected in the historical financial statements as deferred offering costs, such as advisory, legal and auditor fees, as a reduction in cash and a reduction in other assets in the unaudited pro forma condensed combined balance sheet. As the Merger will be accounted for as a reverse recapitalization equivalent to the issuance of equity for the net assets, primarily cash, of ARCA, these direct and incremental costs are treated as a reduction of the net proceeds received within additional paid-in capital.

5(e) To reflect preliminary estimated transaction costs of $4.1 million, not yet reflected in the historical financial statements and $0.9 million reflected in the historical financial statements, which are expected to be incurred by ARCA in connection with the Merger, such as advisory, legal and auditor fees and including the estimated $1.7 million cost of a D&O tail policy, as a reduction in cash of $5.0 million, a reduction in accrued expenses of $0.9 million, and a reduction in accumulated deficit of $4.1 million in the unaudited pro forma condensed combined balance sheet.

5(f) To derecognize $0.7 million of ARCA's prepaid expenses consisting of $0.1 million of prepaid expenses related to software that will not be utilized and $0.6 million of prepaid insurance primarily related to the current ARCA's D&O policy that will be fully utilized at Closing.

5(g) To reflect the derecognition of ARCA's operating leases that will expire prior to the closing of the Merger and the derecognition of property and equipment that will be fully depreciated prior to the closing of the Merger. The operating lease right-of-use assets and property and equipment of less than $0.1 million will be derecognized.

5(h) To reflect the one-time stock compensation expense of $0.3 million in general and administrative expense related to the acceleration of stock options pursuant to pre-existing grant agreements, which provide for such acceleration upon a change in control provision, which will be triggered by the Merger, as well as a modification to accelerate vesting of in-the-money stock options, and to reflect the one-time cash payment of $0.3 million to settle in-the-money stock options per terms of the Merger Agreement.

5(i) To reflect an estimate of the one-time dividend of $20.0 million declared and paid on the shares of ARCA common stock outstanding prior to the Merger. The dividend will be treated as a decrease in additional paid-in capital in the unaudited pro forma condensed combined balance sheet.

5(j) To reflect the recapitalization of Oruka, pursuant to the Merger Agreement, through the contribution of 251,912,528 shares of Oruka common stock, including 76,066,047 shares of Oruka Restricted Stock, Oruka stock options and Oruka warrants (see Note 4), and the issuance of 275,024,273 shares of Oruka common stock and 65,296,242 pre-funded warrants and 137,398,000 preferred stock, reflecting the estimated Exchange Ratio of 6.8699 and to reflect the derecognition of the accumulated deficit of ARCA which is reversed to additional paid-in capital.

The derecognition of accumulated deficit of ARCA of $197.5 million is determined as follows (in thousands):

Accumulated deficit of ARCA as of March 31, 2024	$	190,750
Compensation expense related to ARCA severance, retention bonuses and change in control payments, see Note 5(a)		1,687
Preliminary estimated transaction costs of ARCA, see Note 5(e)		4,053
Derecognition of ARCA prepaid software expenses and prepaid insurance, see Note 5(f)		716
Derecognition of ARCA operating leases, see Note 5(g)		(24)
Pre-Merger stock-based compensation expense for ARCA's accelerated awards, see Note 5(h)		278
Total adjustment to derecognize the accumulated deficit of ARCA	$	197,460

6. Adjustments to Unaudited Pro Forma Condensed Combined Statement of Operations

The pro forma notes and adjustments, based on preliminary estimates that could change materially as additional information is obtained, are as follows:

Pro forma notes:

6(A) Derived from the unaudited condensed consolidated statement of operations and comprehensive loss of ARCA for the three months ended March 31, 2024.

6(B) Derived from the unaudited condensed statement of operations and comprehensive loss of Oruka for the period February 6, 2024 (inception) to March 31, 2024.

6(C) Derived from the audited consolidated statement of operations and comprehensive loss of ARCA for the year ended December 31, 2023.

6(D) Derived from the unaudited condensed statement of operations and comprehensive loss of Oruka for the year ended December 31, 2023.

Oruka and ARCA did not record any provision or benefit for income taxes during the three months ended March 31, 2024 because each company expects to incur a pre-tax loss in 2024 and each company maintains a full valuation allowance on its deferred tax assets. Accordingly, no pro forma adjustments have an impact on associated income tax.

Pro forma Statements of Operations Transaction Accounting Adjustments:

6(a) To reflect preliminary estimated incremental compensation expense related to severance, retention bonuses and change in control payments recorded in general and administrative expenses of $1.7 million, resulting from pre-existing employment agreements or from approval from ARCA's board of directors that will be incurred upon Closing assuming that the adjustment described in Note 5(a) was made on January 1, 2023.

6(b) To reflect the derecognition of ARCA's prepaid expenses of $0.1 million related to software that will not be utilized, and prepaid insurance of $0.6 million primarily related to the current ARCA D&O policy that will be fully utilized at Closing, assuming the adjustment made in Note 5(f) was made on January 1, 2023.

6(c) To reflect the derecognition of ARCA's operating leases that will expire prior to the closing of the Merger and the derecognition of property and equipment that will be fully depreciated prior to the closing of the Merger. The operating lease right-of-use assets and property and equipment of less than $0.1 million will be derecognized, assuming the adjustment made in Note 5(g) was made on January 1, 2023.

6(d) To reflect the one-time stock compensation expense of $0.3 million in general and administrative expense related to the acceleration of stock options pursuant to pre-existing grant agreements which provide for such acceleration upon a change in control provision, which will be triggered by the Merger, as well as a modification to accelerate vesting of in-the-money stock options, assuming the adjustment made in Note 5(h) was made on January 1, 2023.

6(e) To reflect Oruka's interest expense related to its convertible note that is recorded in its historical financial statements, to be derecognized in the unaudited pro forma condensed combined statement of operations for the three months ended March 31, 2024 assuming that the adjustment described in Note 5(c) was made on January 1, 2023.

6(f) To reflect stock compensation expenses of $3.3 million and $0.8 million for the year ended December 31, 2023 and the three months ended March 31, 2024, respectively, in general and administrative expense and reflect stock compensation expenses of $1.2 million and $0.3 million for the year ended December 31, 2023 and the three months ended March 31, 2024, respectively in research and development, related to warrants to be issued to certain employees, directors and service providers pursuant to the Subscription Agreement as amended and restated, assuming the adjustment was made on January 1, 2023. These warrants vest over 4 years from the date of issuance.

6(g) The pro forma combined basic and diluted net loss per share has been adjusted to reflect the pro forma net loss for the three months ended March 31, 2024. In addition, the number of shares used in calculating the pro forma combined basic and diluted net loss per share has been adjusted to reflect the estimated total number of shares of common stock of the combined company for the respective periods. Pro forma weighted average shares outstanding includes the pre-funded warrants related to the Subscription Agreement as the exercise price is negligible and they are fully vested and exercisable. For the three months ended March 31, 2024, the pro forma weighted average shares have been calculated as follows:

	March 31, 2024	December 31, 2023
	Basic and Diluted	Basic and Diluted
Historical weighted average number of ARCA common shares outstanding	14,501,143	14,415,877
Estimated shares of ARCA common stock expected to be issued to Oruka stockholders upon Closing, assuming consummation of the Merger as of January 1, 2023, see Note 4[(1)]	378,768,996	378,768,996
Pro forma combined weighted average number of common shares outstanding	393,270,139	393,184,873

(1) Represents the estimated shares of ARCA common stock expected to be issued to Oruka stockholders at Closing, excluding (i) the outstanding and unvested Oruka Restricted Stock, Oruka stock options and Oruka warrants at Closing that will be converted to the right to receive 26,540,904 shares of ARCA common stock, 14,177,200 stock options, and 35,347,944 warrants respectively, after reflecting the estimated Exchange Ratio and (ii) the outstanding Oruka convertible preferred stock that will be exchanged for 137,398,000 shares of ARCA convertible preferred stock. The 26,540,904 shares of ARCA common stock, 14,177,200 stock options, and 35,347,944 warrants are subject to the same vesting conditions (see Note 4).

DESCRIPTION OF ARCA CAPITAL STOCK

The following description of ARCA capital stock and provisions of the ARCA Charter and ARCA Bylaws are summaries and are qualified by reference to such charter and bylaws and applicable provisions of Delaware corporate law. Copies of these documents are filed as exhibits to the registration statement of which this proxy/prospectus forms part.

Authorized Capital Stock

The ARCA Charter authorizes ARCA to issue 100,000,000 shares of ARCA common stock and 5,000,000 shares of preferred stock, $0.001 par value per share ("ARCA preferred stock").

ARCA Common Stock

Voting Rights. Each holder of ARCA common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders, including the election of directors; provided, however, holders of ARCA common stock may not, unless otherwise required by law, vote on any amendment to the ARCA Charter that relates solely to the terms of one or more series of ARCA preferred stock that ARCA may issue if the holders of such ARCA preferred stock are entitled to vote on such amendment. In all such matters other than the election of directors, the affirmative vote of the majority of shares present in person, by remote communication, or represented by proxy at a meeting of the stockholders and entitled to vote generally on the subject matter shall be the act of the stockholders. Directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, or represented by proxy at a meeting of the stockholders and entitled to vote generally on the election of directors. ARCA's stockholders do not have cumulative voting rights in the election of directors. Accordingly, holders of a majority of the voting shares are able to elect all of the directors to be elected at any particular time. See the section of this proxy statement/prospectus titled "*Description of ARCA Capital Stock — Anti-Takeover Effects of Delaware Law and Provisions of the ARCA Charter and ARCA Bylaws*" for a description of elections of members of ARCA's board of directors.

Dividends. Subject to preferences that may be applicable to any then outstanding ARCA preferred stock, holders of ARCA common stock are entitled to receive dividends, if any, as may be declared from time to time by ARCA's board of directors out of legally available funds.

Liquidation. In the event of ARCA's liquidation, dissolution or winding up, holders of ARCA common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of ARCA's debts and other liabilities and the satisfaction of any liquidation preference granted to the holders of any then outstanding shares of ARCA preferred stock.

Rights and Preferences. Holders of ARCA common stock have no preemptive, conversion, subscription or other rights, and there are no redemption provisions applicable to ARCA common stock. The rights, preferences and privileges of the holders of ARCA common stock are subject to and may be adversely affected by the rights of the holders of shares of any series of ARCA preferred stock that ARCA may designate in the future.

Fully Paid and Nonassessable. All outstanding shares of ARCA common stock are fully paid and nonassessable.

ARCA Preferred Stock

Pursuant to the ARCA Charter, ARCA's board of directors has the authority, without further action by ARCA's stockholders, to issue up to 5,000,000 shares of ARCA preferred stock, in one or more series, to establish from time to time the number of shares to be included in each such series, and to fix the designations, powers, preferences, privileges and relative participating, optional or special rights and the qualifications, limitations or restrictions thereof, including dividend rights, conversion rights, preemptive rights, voting rights, terms of redemption and repurchase, liquidation preferences and sinking fund terms, any or all of which may be greater than the rights of ARCA common stock. ARCA preferred stock may be convertible into ARCA common stock or other securities of ARCA, or may be exchangeable for debt securities. Conversion may be mandatory or at the holder's option and would be at prescribed conversion rates. Because ARCA's board of directors, without stockholder approval, can issue ARCA preferred stock with voting, conversion or other rights, ARCA preferred stock could be issued quickly

with terms calculated to delay or prevent a change in control of ARCA or make removal of management more difficult. Additionally, the issuance of ARCA preferred stock may have the effect of decreasing the market price of ARCA common stock and may adversely affect the voting power of holders of ARCA common stock and reduce the likelihood that ARCA's common stockholders will receive dividend payments and payments upon liquidation.

The Delaware General Corporation Law provides that the holders of any class or series of ARCA preferred stock will have the right to vote separately as a class on any proposed amendment to the ARCA Charter that would alter or change the powers, preferences or special rights of the holders of such class or series of ARCA preferred stock so as to affect them adversely. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

Series A Convertible Preferred Stock

ARCA's board of directors has designated 135,000 of the 5,000,000 authorized shares of preferred stock as "Series A Convertible Preferred Stock."

The Series A Convertible Preferred Stock ranks:

- senior to all of ARCA's common stock;
- on parity with any class or series of ARCA capital stock specifically ranking by its terms on parity with the Preferred Stock; and
- junior to any class or series of ARCA capital stock specifically ranking by its terms senior to the Preferred Stock;

in each case, as to distributions of assets upon ARCA's liquidation, dissolution or winding up whether voluntarily or involuntarily.

Each share of Series A Convertible Preferred Stock is convertible into 100 shares of ARCA's common stock (subject to adjustment as provided in the related certificate of designation of preferences) at any time at the option of the holder, provided that the holder is prohibited from converting Preferred Stock into shares of ARCA's common stock if, as a result of such conversion, the holder, together with its affiliates, would beneficially own more than 9.99% of the total number of shares of ARCA's common stock then issued and outstanding.

In the event of ARCA's liquidation, dissolution, or winding up, holders of Series A Convertible Preferred Stock will receive a payment equal to $0.001 per share of Series A Convertible Preferred Stock before any proceeds are distributed to the holders of ARCA's common stock. In addition, each share of Series A Convertible Preferred Stock will be entitled to receive, on an as-if-converted basis, *pari passu* with each share of ARCA's common stock, any distributions of ARCA's assets or surplus funds which ARCA makes upon shares of ARCA's common stock.

Shares of Series A Convertible Preferred Stock have no voting rights, except as required by law.

Except for stock dividends or certain other distributions set forth in the certificate of designation, shares of Series A Convertible Preferred Stock will be entitled to receive dividends (on an as-converted basis) in the same form as dividends actually paid on shares of ARCA's common stock when and if declared by ARCA's board of directors.

ARCA is not obligated to redeem or repurchase any shares of Series A Convertible Preferred Stock. Shares of Series A Convertible Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous fund provisions.

No shares of Series A Convertible Preferred Stock are currently issued and outstanding.

Series B Non-Voting Convertible Preferred Stock

ARCA's board of directors will designate approximately 137,398 shares of ARCA preferred stock as ARCA Series B Preferred Stock through its certificate of designation in the form attached as *Annex F* (the "Certificate of Designation"), after giving effect to the estimated exchange ratio of 6.8699. Holders of the ARCA Series B Preferred Stock will be entitled to receive dividends on shares of ARCA Series B Preferred Stock equal to, on an

as-if-converted-to-ARCA common stock basis, and in the same form as dividends actually paid on shares of ARCA common stock. Except as otherwise required by the Certificate of Designation or law, the ARCA Series B Preferred Stock will not have voting rights. However, as long as any shares of ARCA Series B Preferred Stock are outstanding, ARCA will not, without the affirmative vote of the holders of a majority of the then outstanding shares of the ARCA Series B Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the ARCA Series B Preferred Stock, (b) alter or amend the Certificate of Designation, (c) amend ARCA's charter, bylaws or other charter documents in any manner that adversely affects any rights of the holders of the ARCA Series B Preferred Stock, (d) file any articles of amendment, certificate of designations, preferences, limitations and relative rights of any series of Preferred Stock (as defined in the Certificate of Designation), if such action would adversely alter or change the preferences, rights, privileges or powers of, or restrictions provided for the benefit of the ARCA Series B Preferred Stock, (e) issue further shares of the ARCA Series B Preferred Stock or increase or decrease (other than by conversion) the number of authorized shares of the ARCA Series B Preferred Stock, (f) at any time while at least 30% of the originally issued ARCA Series B Preferred Stock remains issued and outstanding, consummate either (A) a Fundamental Transaction (as defined in the Certificate of Designation) or (B) any merger or consolidation of ARCA or other business combination in which the stockholders of ARCA immediately before such transaction do not hold at least a majority of the capital stock of ARCA immediately after such transaction, or (f) enter into any agreement with respect to any of the foregoing. The ARCA Series B Preferred Stock does not have a preference upon any liquidation, dissolution or winding-up of ARCA.

Following the closing of the First Merger (as defined elsewhere in this proxy statement/prospectus), each share of ARCA Series B Preferred Stock then outstanding shall be convertible, at any time and from time to time, at the option of the holder of the ARCA Series B Preferred Stock, into a number of shares equal to 1,000 shares of ARCA common stock, subject to certain limitations, including that a holder of ARCA Series B Preferred Stock is prohibited from converting shares of ARCA Series B Preferred Stock into shares of ARCA common stock if, as a result of such conversion, such holder, together with its affiliates, would beneficially own more than a specified percentage (initially set at 9.99%) of the total number of shares of ARCA common stock issued and outstanding immediately after giving effect to such conversion.

Anti-Takeover Effects of Delaware Law and Provisions of the ARCA Charter and ARCA Bylaws

Certificate of Incorporation and Bylaws

The ARCA Charter and ARCA Bylaws include a number of provisions that may deter or impede hostile takeovers or changes of control. These provisions include:

Issuance of Undesignated ARCA preferred stock. Under the ARCA Charter, ARCA's board of directors has the authority, without further action by the stockholders, to issue up to 5,000,000 shares of undesignated ARCA preferred stock with rights and preferences, including voting rights, designated from time to time by ARCA's board of directors. The existence of authorized but unissued shares of ARCA preferred stock enables ARCA's board of directors to make it more difficult or to discourage an attempt to obtain control of ARCA by means of a merger, tender offer, proxy contest or otherwise.

Classified Board. The ARCA Charter provides for a classified board of directors consisting of three classes of directors, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of ARCA's stockholders, with the other classes continuing for the remainder of their respective three-year terms. This provision may have the effect of delaying a change in control of ARCA's board of directors.

Board of Directors Vacancies. The ARCA Charter and ARCA Bylaws authorize only ARCA's board of directors to fill vacant directorships, unless ARCA's board of directors determines by resolution that the stockholders shall fill such vacant directorships. In addition, the number of directors constituting ARCA's board of directors may be set only by resolution adopted by a majority vote of ARCA's entire board of directors. These provisions prevent a stockholder from increasing the size of ARCA's board of directors and gaining control of ARCA's board of directors by filling the resulting vacancies with its own nominees.

Stockholder Action; Special Meetings of Stockholders. The ARCA Charter provides that ARCA's stockholders may not take action by written consent, but may only take action at annual or special meetings of ARCA's stockholders. Under the ARCA Bylaws, stockholders are not permitted to cumulate their votes for the election of directors. The ARCA Bylaws further provide that special meetings of the stockholders may be called by

the chief executive officer, president, ARCA's board of directors, or by holders of ARCA common stock who hold, in the aggregate, not less than fifty percent (50%) of the outstanding shares of ARCA common stock for the purpose or purposes stated in the call of the meeting. These provisions may prevent stockholders from corporate actions as stockholders at times when they otherwise would like to do so.

Advance Notice Requirements for Stockholder Proposals and Director Nominations. The ARCA Bylaws provide advance notice procedures for stockholders seeking to bring business before ARCA's annual meeting of stockholders, or to nominate candidates for election as directors at ARCA's annual meeting of stockholders. The ARCA Bylaws also specify certain requirements as to the form and content of a stockholder's notice. These provisions may make it more difficult for ARCA's stockholders to bring matters before ARCA's annual meeting of stockholders or to nominate directors at ARCA's annual meeting of stockholders.

These provisions are intended to enhance the likelihood of continued stability in the composition of ARCA's board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of ARCA. These provisions are designed to reduce ARCA's vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, these provisions could have the effect of discouraging others from making tender offers for ARCA's shares and, as a consequence, they may also reduce fluctuations in the market price of ARCA's shares that could result from actual or rumored takeover attempts.

Section 203 of the Delaware General Corporation Law

ARCA is subject to Section 203 of the Delaware General Corporation Law. Section 203 generally prohibits certain Delaware corporations from engaging, under certain circumstances, in a "business combination" with any "interested stockholder for a period of three years following the time that such stockholder became an interested stockholder, unless:

- prior to such time the board of directors approved either the business combination or transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding (a) shares owned by persons who are directors and also officers and (b) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to such time the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions) involving the interested stockholder of 10% or more of the assets of the corporation (or its majority-owned subsidiary);
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect, directly or indirectly, of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; and
- the receipt by the interested stockholder of the benefit, directly or indirectly (except proportionately as a stockholder of such corporation), of any loans, advances, guarantees, pledges or other financial benefits, other than certain benefits set forth in Section 203, provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person that is an affiliate or associate of such entity or person.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or bylaws resulting from a stockholders' amendment approved by a majority of the outstanding voting shares. ARCA has not "opted out" of these provisions and do not plan to do so. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire ARCA.

Potential Effects of Authorized but Unissued Stock

Shares of ARCA common stock and ARCA preferred stock are available for future issuance without stockholder approval. ARCA may utilize these additional shares for a variety of corporate purposes, including future public offerings to raise additional capital, to facilitate corporate acquisitions, payment as a dividend on the capital stock or as equity compensation to ARCA's service providers under ARCA's equity compensation plans.

The existence of unissued and unreserved ARCA common stock and ARCA preferred stock may enable ARCA's board of directors to issue shares to persons friendly to current management or to issue ARCA preferred stock with terms that could render more difficult or discourage a third-party attempt to obtain control by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of ARCA's management. In addition, ARCA's board of directors has the discretion to determine designations, rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences of each series of ARCA preferred stock, all to the fullest extent permissible under the Delaware General Corporation Law and subject to any limitations set forth in the ARCA Charter. The purpose of authorizing the board of directors to issue ARCA preferred stock and to determine the rights and preferences applicable to such ARCA preferred stock is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of ARCA preferred stock, while providing desirable flexibility in connection with possible financings, acquisitions and other corporate purposes, could have the effect of making it more difficult for a third party to acquire, or could discourage a third party from acquiring, a majority of ARCA's outstanding voting stock.

Also, if ARCA issues additional shares of authorized, but unissued, ARCA common stock, these issuances will dilute the voting power and distribution rights of ARCA's existing common stockholders.

Amendments to Governing Documents

Generally, the amendment of the ARCA Charter requires approval by ARCA's board of directors and a majority vote of stockholders, provided that the provisions of the ARCA Charter relating to (i) the requirement that all stockholder action be taken only at a duly called annual meeting or special meeting; (ii) the authority and power of ARCA's board of directors and the procedure required to amend ARCA Bylaws; (iii) the percentage of the shares necessary to amend the ARCA Charter; (iv) the elimination of directors' personal liability for monetary damages arising from their negligence and gross negligence; and (v) indemnification of directors, officers and other persons requires approval of ARCA's stockholders holding at least 66-2/3% of ARCA's capital stock then outstanding and entitled to vote. Any amendment to ARCA Bylaws requires the approval of either a majority of ARCA's board of directors or approval of ARCA's stockholders holding at least 66-2/3% of ARCA's capital stock then outstanding and entitled to vote.

Listing

ARCA common stock is listed on the Nasdaq Capital Market under the symbol "ABIO."

Transfer Agent and Registrar

The transfer agent and registrar for ARCA common stock is Computershare Trust Company N.A.

COMPARISON OF RIGHTS OF HOLDERS OF ARCA CAPITAL STOCK AND ORUKA CAPITAL STOCK

If the Merger is completed, Oruka stockholders will receive shares of ARCA common stock and ARCA Series B Preferred Stock, pursuant to the terms of the Merger Agreement. Prior to or upon the closing of the Merger, assuming that Proposal Nos. 2, 3 and 4 are approved by ARCA's stockholders, the ARCA Charter will be amended to increase the number of shares of ARCA common stock that ARCA is authorized to issue from 100,000,000 to 545,000,000, to effect the proposed reverse stock split and to reflect Delaware law provisions regarding officer exculpation, respectively, as set forth in the forms of certificates of amendment attached as *Annex G, Annex H* and *Annex I*, to this proxy statement/prospectus.

ARCA and Oruka are both incorporated under the laws of the State of Delaware. The rights of ARCA stockholders and Oruka stockholders are generally governed by the DGCL. Upon completion of the Merger, Oruka stockholders will become ARCA stockholders, and their rights will be governed by the DGCL, the ARCA Bylaws and the ARCA Charter, as amended.

The material differences between the current rights of Oruka stockholders under the Oruka Charter and Oruka Bylaws and their rights as ARCA stockholders, after the Merger, under the ARCA Charter and ARCA Bylaws, both as will be in effect immediately following the completion of the Merger and assuming that that Proposal Nos. 2, 3 and 4 are approved by ARCA's stockholders, are summarized below. The summary below does not purport to be complete and is subject to, and qualified in its entirety by reference to, the DGCL and the governing corporate instruments that are subject to amendment in accordance with their terms. You should carefully read this entire document and the other referenced documents, including the governing corporate instruments, for a more complete understanding of the differences between being a stockholder of ARCA or Oruka before the Merger and being a stockholder of the combined company following the completion of the Merger. For more information on how to obtain these documents, see the section titled "*Where You Can Find More Information*" beginning on page 321 of this proxy statement/prospectus.

ARCA	Oruka
Organizational Documents	
The rights of ARCA stockholders are governed by the ARCA Charter, ARCA Bylaws and the DGCL.	The rights of Oruka stockholders are governed by the Oruka Charter, Oruka Bylaws and the DGCL. Rights of certain holders of Oruka preferred stock are governed by the Investors' Rights Agreement (the "Oruka IRA"), the Right of First Refusal and Co-Sale Agreement (the "Oruka ROFR Agreement"), and the Voting Agreement, each dated as of March 6, 2024.
Authorized Capital Stock	
ARCA is authorized to issue two classes of capital stock which are designated, respectively, "common stock" and "preferred stock." The total number of shares that ARCA is authorized to issue is 105,000,000, of which 100,000,000 shares are common stock, par value $0.001 per share, and 5,000,000 shares are preferred stock, par value $0.001 per share.	Oruka is authorized to issue two classes of capital stock which are designated, respectively, "common stock" and "preferred stock." The total number of shares that Oruka is authorized to issue is 85,000,000, of which 65,000,000 shares are common stock, par value $0.0001 per share, and 20,000,000 shares are preferred stock, par value $0.0001 per share. The number of authorized shares of Oruka common stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Oruka preferred stock that may be required under the Oruka Charter) the affirmative vote of the holders of shares of Oruka capital stock representing a majority of the votes represented by all outstanding shares of Oruka capital stock entitled to vote, irrespective of the provisions of Section 242(b)(2) of the DGCL.

ARCA	Oruka
Common Stock	
ARCA's authorized common stock consists of 100,000,000 shares of common stock, par value $0.001 per share.	Oruka's authorized common stock consists of 65,000,000 shares of common stock, par value $0.0001 per share.
Each holder of a share of ARCA common stock is entitled to one vote for each such share held of record on the applicable record date on each matter voted on at a meeting of stockholders.	Each holder of a share of Oruka common stock is entitled to one vote for each such share held of record on the applicable record date on each matter voted on at a meeting of stockholders (and written actions in lieu of meetings).
Preferred Stock	
ARCA's authorized preferred stock consists of 5,000,000 shares of preferred stock of which ARCA's board of directors has designated 135,000 shares of preferred stock as "Series A Convertible Preferred Stock."	All of Oruka's 20,000,000 shares of preferred stock are designated as shares of "Series A Preferred Stock," of which 20,000,000 are issued and outstanding. Each holder of a share of Oruka preferred stock is entitled to cast the number of votes equal to the number of whole shares of Oruka common stock into which the shares of preferred stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter.
No shares of ARCA Series A Convertible Preferred Stock or undesignated preferred stock are currently outstanding. ARCA's board of directors is authorized to issue shares of undesignated preferred stock in one or more series and to fix the designations, powers, preferences and relative, participating, optional and other rights, and any qualifications, limitations and restrictions, on such shares.	
In connection with the Merger, ARCA's board of directors intends to designate shares of undesignated preferred stock as Series B Non-Voting Convertible Preferred Stock through a certificate of designation in the form attached as *Annex F* (the "Certificate of Designation"). No shares of Series B Non-Voting Convertible Preferred Stock are currently authorized or outstanding. As long as any shares of Series B Non-Voting Preferred Stock are outstanding, ARCA will not, without the affirmative vote or written waiver of the holders of a majority of the then outstanding shares of the Series B Non-Voting Preferred Stock: (i) alter or change adversely the powers, preferences or rights given to the Series B Non-Voting Preferred Stock or alter or amend the Certificate of Designation, amend or repeal any provision of, or add any provision to, the ARCA Charter or ARCA Bylaws, or file any articles of amendment, certificate of designations, preferences, limitations and relative rights of any series of ARCA preferred stock, in each case if such action would adversely alter or change the preferences, rights, privileges or powers of, or restrictions provided for the benefit of the Series B Non-Voting Preferred Stock, regardless of whether any of the foregoing actions will be by means of amendment to the ARCA Charter or by merger, consolidation, recapitalization, reclassification, conversion or otherwise, (ii) issue further shares of Series B Non-Voting Preferred Stock beyond those contemplated for issuance in the Merger Agreement or increase or decrease (other than by conversion) the number of authorized shares of Series B Non-Voting Preferred Stock, (iii) at any time while at least 30% of the originally issued ARCA Series B Non-Voting Preferred Stock remains issued and outstanding, consummate either: (A) any Fundamental Transaction	

ARCA	Oruka
(as defined in the Certificate of Designation) or (B) any merger or consolidation of ARCA with or into another entity or any stock sale to, or other business combination in which the stockholders of ARCA immediately before such transaction do not hold at least a majority on an as-converted-to-ARCA common stock basis of the capital stock of ARCA, immediately after such transaction or (iv) enter into any agreement with respect to any of the foregoing that does not explicitly require the approval contemplated herein to consummate such transaction.	
Number and Qualification of Directors	
The number of ARCA directors is not less than two (2) nor more than ten (10), the exact number determined from time to time by resolution of ARCA's board of directors, acting by the affirmative vote of a majority of the directors. The ARCA's board of directors currently consists of five (5) members. No decrease in the authorized number of directors constituting ARCA's board of directors will shorten the term of any incumbent director. Directors of ARCA need not be stockholders of ARCA.	The number of directors of Oruka is established from time to time by the board of directors. Oruka's board of directors currently consists of six members.
Structure of Board of Directors; Term of Directors; Election of Directors	
ARCA's board of directors is divided into three classes, designated as Class I, Class II and Class III, respectively. Election of directors need not be by written ballot. The term of office of the first class expired at the first annual meeting of stockholders or any special meeting in lieu thereof following January 1, 2004, the term of office of the second class expired at the second annual meeting of stockholders or any special meeting in lieu thereof following January 1, 2004 and the term of office of the third class expired at the third annual meeting of stockholders or any special meeting in lieu thereof following January 1, 2004. At each succeeding annual meeting of stockholders, or special meeting in lieu thereof, directors are elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting or special meeting lieu of thereof. Notwithstanding the foregoing, directors elected to each class hold office until their successors are duly elected and qualified.	Oruka directors shall be elected at the annual meeting of stockholders by such stockholders as have the right to vote on such election. Election of directors need not be by written ballot. Each director shall hold office for a term of one year and until his or her successor is elected and qualified, or until such director's earlier resignation or removal. The holders of record of the shares of Oruka's Series A Preferred Stock, voting together exclusively and as a separate class, are entitled to elect one director of Oruka. The holders of record of the shares of common stock and of any other class or series of voting stock (including the Series A Preferred Stock), exclusively and voting together as a single class on an as-converted to Common Stock basis, shall be entitled to elect the balance of the total number of directors.
Removal of Directors	
Any director may be removed from office at any time, but only with cause and only by the affirmative vote of the holders of sixty-six and two-third percent or more of the voting power of the outstanding shares of capital stock of ARCA entitled to vote at an election of directors, unless otherwise provided under the DGCL or the ARCA Charter.	Any one or more or all of the Oruka directors may be removed, with or without cause, by the holders of a majority of shares entitled to vote at an election of directors, except that any director elected by the holders of Series A Preferred Stock may be removed without cause only by the affirmative vote of the holders of a majority of the outstanding shares of Series A Preferred Stock, together as a single class on an as-converted to common stock basis, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders.

ARCA	Oruka
Vacancies on the Board of Directors	
Any director may resign at any time by giving notice in writing to ARCA Chairperson of the board of directors, if one is elected, the ARCA Vice Chairperson of the board of directors, if one is elected, the Chief Executive Officer or the President. Such resignation shall be effective upon receipt, unless the resignation otherwise provides. Any vacancies and any newly created directorships resulting from any increase in the number of directors, will be filled solely and exclusively by the affirmative vote of a majority of the remaining directors then in office, even if less than a quorum, or by a sole remaining director, and not by the ARCA stockholders. Any director elected in accordance with the preceding sentence will hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor is elected and qualified or until his or her earlier resignation, death or removal.	Any director may resign at any time upon notice given in writing or by electronic transmission to Oruka. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event. A vacancy in any director seat not reserved for holders of Series A Preferred Stock can be filled by either (A) the vote or written consent in lieu of a meeting of the stockholders entitled elect those directors, or (B) the vote or written consent in lieu of a meeting of a majority of the remaining director(s), although less than a quorum. Vacancies and newly created directorships resulting from any increase in the authorized number of directors may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director, and the directors so chosen shall hold office until the next annual election and until their successors are duly elected and shall qualify, unless sooner displaced. If there are no directors in office, then an election of directors may be held in the manner provided by statute. If the holders of shares of Series A Preferred Stock fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, then any directorship not so filled shall remain vacant until such time as the holders of the Series A Preferred Stock elect a person to fill such directorship.
Stockholder Action by Written Consent	
No action may be taken by the ARCA stockholders except at an annual or special meeting of the ARCA stockholders called in accordance with the ARCA Bylaws, and no action may be taken by the ARCA stockholders by written consent in lieu of a meeting.	Any action required or permitted to be taken at any annual or special meeting of stockholders may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, is signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Every written consent shall bear the date of signature of each stockholder who signs the consent, and no written consent shall be effective to take the corporate action referred to therein unless, within 60 days of the earliest dated consent delivered to Oruka, a written consent signed by a sufficient number of stockholders to take action are delivered to Oruka.

ARCA	Oruka
Quorum	
Subject to the provisions of the ARCA Bylaws, ARCA Charter and the DGCL as to the vote that is required for a specified action, the presence in person or by proxy of the holders of at least one-third of the outstanding shares of ARCA entitled to vote at any meeting of stockholders shall constitute a quorum for the transaction of business. In the absence of a quorum, stockholders holding a majority of the shares present in person or by proxy and entitled to vote, regardless of whether or not they constitute a quorum, or if no stockholders are present, any officer entitled to preside at or act as secretary of the meeting, may adjourn the meeting to another time and place.	Except as otherwise provided by the DGCL or the Oruka Charter, the holders of a majority of the voting power of all of the shares of stock entitled to vote at the meeting, present in person or by proxy, shall constitute a quorum for all purposes. Where a separate vote by a class or series is required, a majority of the voting power of the shares of such class or series present in person or represented by proxy shall constitute a quorum entitled to take action with respect to that vote on that matter. The stockholders present at a duly constituted meeting may continue to transact business until adjournment notwithstanding the withdrawal of enough stockholders to reduce the voting shares below a quorum. If a quorum shall fail to attend any meeting, the chairman of the meeting or the holders of a majority of the shares of stock entitled to vote who are present, in person or by proxy, may adjourn the meeting to another place, if any, date, or time.
Special Meetings of Stockholders	
Special meetings of the stockholders may be called by ARCA's board of directors, Chief Executive Officer, President, or by holders of ARCA common stock who hold, in the aggregate, not less than fifty percent (50%) of the outstanding shares of ARCA common stock for the purpose or purposes stated in the call of the meeting.	Special meetings of the stockholders, for any purpose or purposes prescribed in the notice of the meeting, may be called by Oruka's board of directors or the Chief Executive Officer if one is elected, or the President, and shall be held at such place, date, and time as they or he or she shall fix.
Notice of Stockholder Meetings	
Notice of all meetings of ARCA stockholders shall state the place, if any, date and hour of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called, shall be given to each stockholder entitled to vote at the meeting, and unless otherwise provided in the DGCL, the ARCA Charter or the ARCA Bylaws, the notice shall be given not less than ten nor more than sixty days before the meeting to each stockholder entitled to vote at the meeting as of the record date for determining the stockholders entitled to notice of the meeting, and, if mailed, shall be deposited in the United States mail, postage prepaid, directed to the stockholder at the stockholder's address as it appears on the records of ARCA. The notice to stockholders for any meeting will be given in accordance with Section 232 of the DGCL.	Except as otherwise provided by the DGCL or the Oruka Charter, notice of the place, date, and time of all meetings of the stockholders, the means of remote communications, if any, by which stockholders and proxyholders may be deemed to be present in person and vote at such meeting, and the record date for determining the stockholders entitled to vote at the meeting, shall be given not less than 10 days nor more than 60 days before date of the meeting to each stockholder entitled to vote at such meeting as of the record date for determining the stockholders entitled to notice of the meeting.

ARCA	Oruka
Advance Notice Requirements for Stockholder Proposals	
Nominations of persons for election to ARCA's board of directors and the proposal of business to be considered by the stockholders may be made at an annual meeting of stockholders (i) pursuant to the corporation's notice of meeting, (ii) by or at the direction of ARCA's board of directors, or (iii) by any stockholder of ARCA who is a stockholder of record at the time of giving notice provided for in the ARCA Bylaws, who is entitled to vote at the meeting, who is present (in person or by proxy) at the meeting and who complies with the notice procedures set forth in the ARCA Bylaws as to such nomination or business. For the avoidance of doubt, the foregoing clause (ii) shall be the exclusive means for a stockholder to bring nominations or business properly before an annual meeting of stockholders (other than matters properly brought under Rule 14a-8 (or any successor rule) under the Exchange Act).	Neither the Oruka Charter nor the Oruka Bylaws contain advance notice requirements for stockholder proposals.
Amendment of Certificate of Incorporation	
The ARCA Charter provides that it may be amended by the affirmative vote of the majority of the voting rights of all classes of capital stock entitled to vote, provided, however, that no amendment, alteration, change or repeal of any provision requiring the affirmative vote of the holders of more than a majority of the voting rights may be made unless approved by the affirmative vote of such greater number of holders. The affirmative vote of the holders of 66 2/3% of the voting rights is required to amend, repeal or adopt any provision inconsistent with the provisions of the ARCA Charter relating to: (i) the requirement that all stockholder action be taken only at a duly called annual meeting or special meeting; (ii) the authority and power of ARCA's board of directors and the procedure required to amend the ARCA Bylaws; (iii) the percentage of the shares necessary to amend the ARCA Charter; (iv) the elimination of ARCA's directors' personal liability for monetary damages arising from their negligence and gross negligence; and (v) indemnification of ARCA's directors, officers and other persons.	The Oruka Charter may be amended pursuant to Section 242 of the DGCL; provided that, at any time when shares of preferred stock are outstanding, the written consent or affirmative vote of the holders of at least a majority of the outstanding shares of preferred stock, voting together as a single class on an as-converted to common stock basis (the "Requisite Holders"), is required to (i) amend, alter or repeal of any provision of the Oruka Charter in a manner that adversely affects the special rights, powers, and preferences of the preferred stock or any series thereof, (ii) create or issue any capital stock unless the same ranks junior to the preferred stock with respect to its special rights, powers and preferences or (iii) increase the authorized number of shares of preferred stock or any additional class or series of capital stock of Oruka unless the same ranks junior to the preferred stock with respect to its special rights, powers and preferences.
Amendment of Bylaws	
Except as otherwise provided by law, the ARCA Bylaws may be amended or repealed by ARCA's board of directors. The ARCA Bylaws may also be amended or repealed by the stockholders by the affirmative vote of not less than 66-2/3% of the outstanding shares of capital stock entitled to vote, voting together as a single class.	The Oruka Bylaws may be amended or repealed by Oruka's board of directors or by the stockholders; provided that, at any time when shares of preferred stock are outstanding, the written consent or affirmative vote of the Requisite Holders is required to amend, alter or repeal of any provision of the Oruka Bylaws in a manner that adversely affects the special rights, powers, and preferences of the preferred stock or any series thereof.

ARCA	Oruka
Limitation on Director and Officer Liability	
To the fullest extent permitted by the DGCL, as the same exists or as may hereafter be amended, a director of ARCA shall not be personally liable to ARCA or its stockholders for monetary damages for breach of fiduciary duty as a director. Any amendment, repeal or modification of Article IX of the ARCA Charter shall not adversely affect any right or protection existing at the time of such amendment, repeal or modification with respect to any acts or omissions occurring before such amendment, repeal or modification of a person serving as a director at the time of such amendment, repeal or modification.	To the fullest extent permitted by law, a director or officer of Oruka shall not be personally liable to Oruka or its stockholders for monetary damages for breach of fiduciary duty as a director or officer. If the DGCL or any other law of the State of Delaware is amended to authorize corporate action further eliminating or limiting the personal liability of directors or officers, then the liability of a director or officer of Oruka shall be eliminated or limited to the fullest extent permitted by the DGCL as so amended. Any amendment, repeal or elimination of the foregoing provisions by the Oruka stockholders shall not adversely affect any right or protection of a director of Oruka existing at the time of, or increase the liability of any Oruka director with respect to any acts or omissions of such director occurring prior to, such amendment, repeal or elimination.
To the fullest extent permitted by the DGCL, as the same exists or may hereafter be amended, an officer of ARCA shall not be personally liable to ARCA or its stockholders for monetary damages for breach of fiduciary duty as an officer. Any amendment, repeal or modification of Article XIII of the ARCA Charter shall not adversely affect any right or protection existing at the time of such amendment, repeal or modification with respect to any acts or omissions occurring before such amendment, repeal or modification of a person serving as an officer at the time of such amendment, repeal or modification.	
Indemnification	
ARCA will indemnify any person who was or is a party or is threatened to be made a party to, or otherwise becomes involved in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative and whether internal or external to ARCA (a "Proceeding"), by reason of the fact that the person is or was a director, officer, employee, or other agent of ARCA, or is or was serving at the request of ARCA as a director, officer, employee or agent of another foreign or domestic corporation, partnership, joint venture, trust or other enterprise (any such person, an "Agent of ARCA"). Expenses incurred by an Agent in connection with a Proceeding shall be paid by ARCA as they are incurred and in advance of the final disposition of such Proceeding, subject to certain conditions. These rights to indemnification and advancement of expenses shall not be deemed exclusive of any other rights to which a person seeking indemnification or advancement of expenses may be entitled. ARCA has the power to purchase and maintain insurance on behalf of any person who is or was an Agent of ARCA against any liability asserted against the person and incurred by the person in any such capacity, or arising out of the person's status as such, whether or not ARCA would have the power to indemnify the person against such liability.	To the fullest extent permitted by applicable law, Oruka is authorized to provide indemnification of (and advancement of expenses to) its directors, officers and agents (and any other persons to which the DGCL permits Oruka to provide indemnification) through Oruka Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the DGCL. Any amendment, repeal, modification or elimination of the foregoing provisions shall not (a) adversely affect any right or protection of any director, officer or other agent of Oruka existing at the time of such amendment, repeal, modification or elimination; or (b) increase the liability of any Oruka director, officer or agent with respect to any acts or omissions of such director, officer or agent occurring prior to, such amendment, repeal, modification or elimination. The Oruka Bylaws require Oruka to indemnify, to the fullest extent permitted by Delaware law, as the same exists or may hereafter be amended, and except in certain circumstances, each person who was or is made a party to or is threatened to be made a party to or is otherwise involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (a "proceeding"), by reason of the fact that he or she is or was a director or an officer of Oruka or is or was serving at the request of Oruka as a director, officer, or trustee of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit

ARCA	Oruka
	plan, whether the basis of such proceeding is alleged action in an official capacity as a director, officer or trustee, or in any other capacity while serving as a director, officer or trustee (an "indemnitee"). The Oruka Bylaws also provide that an indemnitee will have the right to be paid by Oruka expenses (including attorney's fees) incurred in defending any such proceeding in advance of its final disposition, provided, however, that, if the DGCL requires, an advancement of expenses incurred by an indemnitee in his or her capacity as a director or officer shall be made only upon delivery to Oruka of an undertaking, by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that such indemnitee is not entitled to be indemnified for such expenses. The Oruka Bylaws also provide that the rights to indemnification and advance of expenses shall not be exclusive of any other right which any person may have or hereafter acquire under any statute, the Oruka Charter, the Oruka Bylaws, agreement, vote of stockholders or disinterested directors or otherwise.
	Conversion Rights
ARCA does not have any outstanding shares of Series A Convertible Preferred Stock or undesignated preferred stock. When the Series B Non-Voting Convertible Preferred Stock is issued in connection with the Merger, the holders of Series B Non-Voting Convertible Preferred Stock will have the right to convert such shares into ARCA common stock at any time a ratio of 1 share of Series B Non-Voting Convertible Preferred Stock to 1000 shares of ARCA common stock.	The Oruka Charter provides that holders of preferred stock have the right to convert such shares into shares of common stock, at the option of the holder, at any time, at a conversion rate in accordance with the terms set forth in the Oruka Charter. In addition, upon the earliest to occur of (i) immediately prior to the closing of the sale of shares of common stock to the public at a price of at least $1.00 per share (subject to appropriate adjustment for any stock dividend, stock split, combination or other similar recapitalization with respect to the common stock) in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act, resulting in at least $50,000,000 of gross proceeds to Oruka and in connection with such offering the shares of Oruka common stock are listed for trading on the Nasdaq Stock Market's National Market, the New York Stock Exchange or another exchange or marketplace approved by Oruka's board of directors; and (ii) the date and time, or the occurrence of an event, specified by vote or written consent of the Requisite Holders, all outstanding shares of preferred stock will automatically be converted into shares of common stock, at the then effective conversion rate as calculated in accordance with the Oruka Charter.

ARCA	Oruka
Right of First Refusal	
ARCA does not have a right of first refusal in place.	Certain stockholders party to the Oruka ROFR Agreement wishing to transfer any shares of Oruka capital stock (other than any shares of preferred stock or common stock that are issued or issuable upon conversion of preferred stock) must first provide Oruka with the right to purchase such shares. In such an event, if Oruka does not elect to exercise its right of first refusal in full, certain stockholders party to the Oruka ROFR Agreement have a secondary refusal right to purchase all or any portion of such shares of Oruka capital stock which are proposed for sale or transfer and not purchased by Oruka pursuant to its right of first refusal.
Right of Co-Sale	
ARCA does not have a right of co-sale in place.	Certain stockholders party to the Oruka ROFR Agreement have a right of co-sale with respect to any Oruka capital stock proposed to be transferred or sold that is not either purchased by Oruka by exercise of its right of first refusal (as further described above) or by any Oruka stockholder by exercise of their secondary refusal right (as further described above), each pursuant to the Oruka ROFR Agreement.
Preemptive Rights	
ARCA stockholders do not have preemptive rights. Thus, if additional shares of ARCA common stock are issued, the current holders of ARCA common stock will own a proportionately smaller interest in a larger number of outstanding shares of common stock to the extent that they do not participate in the additional issuance.	Pursuant to the Oruka IRA, if Oruka proposes to offer or sell certain new equity securities, Oruka must first offer such securities to each Major Investor (as defined in the Oruka IRA, who will then have a right to purchase securities in such new offering equal to the proportion of the ownership interest of such Major Investor prior to such offering.
Distributions to Stockholders	
Dividends upon ARCA capital stock, subject to the provisions of the ARCA Charter and applicable law, if any, may be declared by ARCA's board of directors. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the ARCA Charter and applicable law. ARCA's board of directors may fix a record date for the determination of holders of ARCA capital stock entitled to receive payment of a dividend or distribution declared thereon, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date may not be more than 60 days prior to the date fixed for the payment thereof.	Oruka shall not declare, pay or set aside any dividends (other than dividends on shares of common stock payable in shares of common stock) unless holders of preferred stock first receive, or simultaneously receive, a dividend on each outstanding share of preferred stock in an amount calculated in accordance with the Oruka Charter.

ARCA	Oruka
Exclusive Forum	
ARCA does not have an exclusive forum in place.	The Oruka Charter provides that, unless Oruka consents in writing to the selection of an alternative forum, the Court of Chancery in the State of Delaware shall be the sole and exclusive forum for any stockholder (including a beneficial owner) to bring (i) any derivative action or proceeding brought on behalf of Oruka, (ii) any action asserting a claim of breach of fiduciary duty owed by any director, officer or other employee of Oruka to Oruka or Oruka's stockholders, (iii) any action asserting a claim against Oruka, its directors, officers or employees arising pursuant to any provision of the DGCL, the Oruka Charter or the Oruka Bylaws or (iv) any action asserting a claim against Oruka, its directors, officers or employees governed by the internal affairs doctrine or that otherwise relates to the internal affairs of Oruka, except for, as to each of (i) through (iv) above, any claim as to which the Court of Chancery determines that there is an indispensable party not subject to the jurisdiction of the Court of Chancery (and the indispensable party does not consent to the personal jurisdiction of the Court of Chancery within ten days following such determination), which is vested in the exclusive jurisdiction of a court or forum other than the Court of Chancery, or for which the Court of Chancery does not have subject matter jurisdiction. These provisions may impose additional costs on Oruka's stockholders in pursuing any such claims, particularly if the stockholders do not reside in or near the State of Delaware or were permitted to select another jurisdiction. Additionally, these provisions may limit Oruka's stockholders' ability to bring a claim in a judicial forum that they find favorable for disputes with Oruka or its directors, officers or other employees, which may discourage such lawsuits against Oruka and its directors, officers and other employees even though an action, if successful, might benefit its stockholders.
Registration Rights	
ARCA does not have any registration rights in place.	Under the Oruka IRA, certain holders of Oruka capital stock that are party to the Oruka IRA, have certain registration rights, including the right to demand that Oruka file a registration statement, so called "demand" registration rights, or request that their shares be covered by a registration statement that Oruka is otherwise filing, so-called "piggyback" registration rights. The registration rights granted under the Oruka IRA will terminate upon the earlier of: (i) the closing of a Deemed Liquidation Event (as such term is defined in the Oruka Charter), (ii) such time after Oruka's initial public offering when all registrable securities could be sold under Rule 144 of the Securities Act or a similar exemption without limitation during a three-month period without registration or (iii) the third anniversary of Oruka's initial public offering.

ARCA	Oruka
Stock Transfer Restrictions Applicable to Stockholders	
Shares of ARCA are transferable in the manner prescribed by the DGCL.	Shares of Oruka are transferable in the manner prescribed by the DGCL, subject to additional limits on certain holders of Oruka capital stock party to the Oruka ROFR Agreement and Oruka IRA.
Stockholder Rights Plan	
ARCA does not have a stockholder rights plan in place.	Oruka does not have a stockholder rights plan in place.

PRINCIPAL STOCKHOLDERS OF ARCA

Security Ownership of Certain Beneficial Owners

The following table sets forth certain information regarding the ownership of ARCA common stock as of July 16, 2024, by: (i) each director of ARCA, (ii) each ARCA named executive officer, (iii) all executive officers and directors of ARCA as a group and (iv) all those known by ARCA to be beneficial owners of more than five percent of its common stock. Unless otherwise noted below, the address of each beneficial owner listed on the table is c/o ARCA biopharma, Inc., 10170 Church Ranch Way, Suite 100, Westminster, Colorado, 80021.

ARCA has determined beneficial ownership in accordance with the rules of the SEC and includes voting or investment power with respect to ARCA common stock. Except as indicated by the footnotes below, ARCA believes, based on the information furnished to it, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of ARCA common stock that they beneficially own, subject to applicable community property laws. The table is based upon information supplied by officers, directors and principal stockholders of ARCA and Schedules 13G or 13D, Form 4s or other ownership reports filed with the SEC. Except as contemplated by the Merger and the Merger Agreement, ARCA does not know of any arrangements, including any pledge by any person of its securities, the operation of which may at a subsequent date result in a change of control of ARCA.

In computing the number of shares of ARCA common stock beneficially owned by a person and the percentage ownership of that person, ARCA deemed outstanding shares of ARCA common stock subject to options or warrants held by that person that are currently exercisable or exercisable within 60 days of July 16, 2024. ARCA did not deem these shares outstanding, however, for the purpose of computing the percentage ownership of any other person.

The percentages below are based on 14,507,143 shares of ARCA common stock outstanding as of July 16, 2024.

Beneficial Owner	Shares Beneficially Owned	Percentage Shares Beneficially Owned
Directors and Named Executive Officers		
Michael R. Bristow, M.D., Ph.D.[1]	270,108	1.8%
Thomas A. Keuer[2]	139,355	*
C. Jeffrey Dekker[3]	102,059	*
Linda Grais, M.D.[4]	22,895	*
Robert E. Conway[5]	72,895	*
Anders Hove, M.D.[6]	22,499	*
Jacob Ma-Weaver[7]	4,018,619	27.7%
James Flynn[8]	10,167	*
All current directors and executive officers as a group (7 persons)[9]	4,388,489	29.7%
5% Stockholders		
Funicular Funds, LP[10]	4,018,619	27.7%
Entities affiliated with Adage Capital[11]	1,200,000	8.3%
Entities affiliated with Janus Henderson[12]	1,891,312	13.0%
Entities affiliated with Allostery Investments[13]	1,065,016	7.3%
Entities affiliated with Avidity Partners[14]	1,000,000	6.9%
Entities affiliated with Venrock Healthcare Capital Partners[15]	754,669	5.2%

* Less than 1%.

(1) Includes the following: (i) 1,109 shares owned by Investocor Trust, of which Dr. Bristow is the sole trustee; (ii) 1,414 shares owned by NFS as Custodian for Michael Bristow's IRA; and (iii) options to purchase 265,300 shares that are exercisable within 60 days of July 16, 2024. Dr. Bristow and ARCA mutually agreed to conclude Dr. Bristow's employment effective April 3, 2024. Dr. Bristow's equity awards continue to vest during the term of his Consulting Agreement, dated as of April 3, 2024, with ARCA.

(2) Includes options to purchase 98,625 shares that are exercisable within 60 days of July 16, 2024.

(3) Includes options to purchase 62,059 shares that are exercisable within 60 days of July 16, 2024.

(4) Includes options to purchase 22,895 shares that are exercisable within 60 days of July 16, 2024.
(5) Includes options to purchase 22,895 shares that are exercisable within 60 days of July 16, 2024.
(6) Includes options to purchase 22,499 shares that are exercisable within 60 days of July 16, 2024.
(7) Includes options to purchase 18,167 shares that are exercisable within 60 days of July 16, 2024. Also see Footnote (10) below.
(8) Includes options to purchase 10,167 shares that are exercisable within 60 days of July 16, 2024.
(9) See Notes (2) through (8) above.
(10) Includes options to purchase 18,167 shares that are exercisable within 60 days of July 16, 2024 by Jacob Ma-Weaver and shares reported on the Form 4 filed on December 19, 2022 by The Funicular Funds, LP (the "Fund") and Mr. Ma-Weaver, reporting stock ownership as of December 16, 2022. The Fund, the Funicular Fund ("Funicular"), Cable Car Capital LLC ("Cable Car") and Mr. Ma-Weaver may be deemed to be a member of a Section 13(d) group that may be deemed to collectively beneficially own more than 10% of ARCA's outstanding shares of common stock. Despite such shared beneficial ownership, the reporting persons disclaim beneficial ownership of the securities except to the extent of their pecuniary interest therein. Funicular, as a feeder fund to the Fund, may be deemed to beneficially own the securities directly owned by the Fund. Cable Car, as the general partner of the Fund, may be deemed to beneficially own the securities directly owned by the Fund. Mr. Ma-Weaver, as the Managing Member of Cable Car, may be deemed to beneficially own the securities directly owned by the Fund.
(11) Based solely on a Schedule 13D filed on April 5, 2024 reporting stock ownership as of April 3, 2024 with respect to the following reporting persons: Adage Capital Management, L.P. ("ACM"), Robert Atchinson, and Phillip Gross. ACM and Messrs. Consists of 1,200,000 shares of ARCA common stock held directly by Adage Capital Partners, L.P. ("ACP"). Adage Capital Partners GP, L.L.C. ("ACPGP") is the general partner of ACP. ACM is the investment manager of ACP. Adage Capital Advisors, L.L.C. ("ACA") is managing member of ACPGP. Adage Capital Partners LLC ("ACPLLC") is general partner of ACM. Messrs. Atchinson and Gross are managing members of ACA and ACPLLC. Messrs. Atchinson and Gross may be deemed to have shared voting power and dispositive power over the shares held directly by ACP. The address of each of the entities and persons listed above is 200 Clarendon Street, 52nd Floor, Boston, Massachusetts 02116.
(12) Based on a Schedule 13G filed on July 5, 2024 reporting stock ownership as of July 2, 2024 and the Form 4 filed July 12, 2024 reporting stock ownership as of July 11, 2024, each with respect to the following reporting persons: Janus Henderson Group plc ("JHG") and Janus Henderson Biotech Innovation Master Fund Ltd ("JHB"). Consists of 1,891,312 shares of ARCA common stock held directly by JHB. JHG and JHB each reported that they hold shared voting power and shared dispositive power with respect to shares of ARCA common stock. JHG has a 100% ownership stake in Janus Henderson Investors U.S. LLC ("JHIUS"), Janus Henderson Investors UK Limited and Janus Henderson Investors Australia Institutional Funds Management Limited, (each an "Asset Manager" and collectively as the "Asset Managers"). Due to the above ownership structure, holdings for the Asset Managers are aggregated. Each Asset Manager is an investment adviser registered or authorized in its relevant jurisdiction and each furnishing investment advice to various fund, individual and/or institutional clients (collectively referred to herein as "Managed Portfolios"). As a result of its role as investment adviser or sub-adviser to the Managed Portfolios, JHIUS may be deemed to be the beneficial owner of 1,891,312 shares of ARCA common stock held by such Managed Portfolios. However, JHIUS does not have the right to receive any dividends from, or the proceeds from the sale of, the securities held in the Managed Portfolios and disclaims any ownership associated with such rights. The address of JHG is 201 Bishopsgate, EC2M 3AE, United Kingdom, and the address of JHB is C/O Janus Henderson Investors US LLC, 151 Detroit Street, Denver, Colorado 80206.
(13) Based solely on a Schedule 13G filed on April 15, 2024 reporting stock ownership as of April 3, 2024 with respect to the following reporting persons: Allostery Master Fund LP ("Allostery Master Fund"), Allostery Investments LP ("Allostery Investments"), Allostery Investments GP LLC ("Allostery Investments GP"), Christopher Staral, and David Modest. Allostery Master Fund, Allostery Investments LP, Allostery Investments GP, and Messrs. Staral and Modest each reported that they hold shared voting power and shared dispositive power with respect to 1,065,016 shares of ARCA common stock. Allostery Investments, as the investment manager of Allostery Master Fund, may be deemed to have beneficially owned the 1,065,016 shares beneficially owned by Allostery Master Fund. Allostery Investments GP, as the general partner of Allostery Investments, may be deemed to have beneficially owned the 1,065,016 shares beneficially owned by Allostery Investments. Messrs. Modest and Staral, as the managing members of Allostery Investments GP, may be deemed to have beneficially owned the 1,065,016 shares beneficially owned by Allostery Investment GP. The address of each of the entities and persons listed above is One Stamford Plaza, 9th Floor, 263 Tresser Boulevard, Stamford, Connecticut 06901.
(14) Based solely on a Schedule 13G filed on April 9, 2024 reporting stock ownership as of April 3, 2024 with respect to the following reporting persons: Avidity Partners Management LP, Avidity Partners Management (GP) LLC, Avidity Capital Partners Fund (GP) LP, Avidity Capital Partners (GP) LLC, Avidity Private Master Fund I LP, David Witzke, and Michael Gregory, which each reported that they hold shared voting power and shared dispositive power with respect to 1,000,000 shares of ARCA common stock. Avidity Partners Management (GP) LLC serves as the general partner of Avidity Partners Management LP. Avidity Capital Partners Fund (GP) LP serves as the general partner of Avidity Private Master Fund I LP. Avidity Capital Partners (GP) LLC serves as the general partner of Avidity Capital Partners Fund (GP) LP. Messrs. Witzke and Gregory serve as the managing members of Avidity Partners Management (GP) LLC and Avidity Capital Partners (GP) LLC. The address of each of the entities and persons listed above is 2828 N Harwood Street, Suite 1220, Dallas, Texas 75201.

(15) Based solely on a Schedule 13G filed on April 29, 2024 reporting stock ownership as of April 17, 2024 with respect to the following reporting persons: Venrock Healthcare Capital Partners III, L.P., VHCP Co-Investment Holdings III, LLC, Venrock Healthcare Capital Partners EG, L.P., VHCP Management III, LLC, VHCP Management EG, LLC, Nimish Shah, and Bong Koh, which each reported that they hold shared voting power and shared dispositive power with respect to 754,669 shares of ARCA common stock, consisting of (i) 164,442 shares held by Venrock Healthcare Capital Partners III, L.P., (ii) 16,450 shares held by VHCP Co-Investment Holdings III, LLC, and (iii) 573,777 shares held by Venrock Healthcare Capital Partners EG, L.P. VHCP Management III, LLC is the general partner of Venrock Healthcare Capital Partners III, L.P. and the manager of VHCP Co-Investment Holdings III, LLC. VHCP Management EG, LLC is the general partner of Venrock Healthcare Capital Partners EG, L.P. Messrs. Shah and Koh are the voting members of VHCP Management III, LLC and VHCP Management EG, LLC. The address of each of the entities and persons listed above is 7 Bryant Park, 23rd Floor, New York, New York 10018.

PRINCIPAL STOCKHOLDERS OF ORUKA

The following table sets forth certain information known to Oruka regarding beneficial ownership of Oruka capital stock on an as-converted to Oruka common stock basis as of July 16, 2024 for:

- each person or group of affiliated persons, who is known by Oruka to be the beneficial owner of more than 5% of Oruka capital stock;
- each of Oruka's directors;
- each Oruka named executive officer; and
- all of Oruka's directors and executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and thus represents voting or investment power with respect to Oruka's securities. Under such rules, beneficial ownership includes any shares over which the individual has sole or shared voting power or investment power as well as any shares that the individual has the right to acquire within 60 days of July 16, 2024. Shares of Oruka common stock that an individual has the right to acquire within 60 days of July 16, 2024 are deemed to be outstanding and beneficially owned by the individual for the purpose of computing the percentage ownership of that individual, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. To Oruka's knowledge and subject to applicable community property rules, and except as otherwise indicated below, the persons and entities named in the table have sole voting and sole investment power with respect to all shares beneficially owned. The percentage of beneficial ownership shown prior to the Merger and Oruka pre-closing financing in the table below is based on 29,460,019 shares of Oruka common stock deemed to be outstanding as of July 16, 2024, assuming the conversion of all outstanding shares of Oruka preferred stock into shares of Oruka common stock. The following table does not reflect any shares of Oruka common stock or Oruka pre-funded warrants that such holders have agreed to purchase in the Oruka pre-closing financing.

Unless otherwise indicated, the address for each beneficial owner is c/o Oruka Therapeutics, Inc., 855 Oak Grove Ave., Suite 100, Menlo Park, CA 94025.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Outstanding Beneficially Owned
Fairmount Healthcare Fund II, L.P.[1]	20,000,000	67.9%
Paragon Therapeutics, Inc.[2]	2,500,000	8.5%
Paruka Holding LLC[3]	2,500,000	8.5%
McKenna Capital Partners LLC[4]	1,491,646	5.1%
Named Executive Officers and Directors:		
Lawrence Klein[5]	1,491,646	5.1%
Arjun Agarwal	—	*
Cameron Turtle[6]	149,164	*
Samarth Kulkarni	—	*
Peter Harwin[1]	20,000,000	67.9%
Carl Dambkowski	—	*
Kristine Ball	—	*
All executive officers and directors as a group (9 persons)[7]	21,640,810	73.5%

* Less than 1%.

(1) Consists of 20,000,000 shares of Oruka common stock issuable upon conversion of 20,000,000 Oruka Series A Preferred Stock held by Fairmount Fund II. Fairmount GP II is the general partner of Fairmount Fund II. Fairmount Funds Management, as the investment manager, along with Fairmount GP II, as the general partner, exercise voting and investment power over Fairmount Fund II. Fairmount Funds Management has voting and dispositive power over the common stock held by Fairmount Fund II, which is deemed shared with Fairmount GP II. As managing members of

Fairmount Funds Management and Fairmount GP II, Peter Harwin and Tomas Kiselak may be deemed beneficial owners of any securities beneficially owned by Fairmount Funds Management. Fairmount Funds Management, Fairmount GP II, Mr. Harwin and Mr. Kiselak disclaim beneficial ownership of such shares of Oruka Series A Preferred Stock and the underlying shares of Oruka common stock except to the extent of their pecuniary interest therein. The principal business address for these persons and entities is 200 Barr Harbor Drive, Suite 400, West Conshohocken, Pennsylvania 19428.

(2) Consists of 2,500,000 shares of Oruka common stock held by Paragon. Paragon is managed by its board of directors, consisting of Peter Harwin, Tomas Kiselak, and Evan Thompson.

(3) Consists of 2,500,000 shares of Oruka common stock held by Paruka. Paruka is managed by its sole manager, Evan Thompson.

(4) Consists of 1,491,646 shares of Oruka common stock held by McKenna Capital Partners LLC ("McKenna Capital Partners"). Mark McKenna is the Chief Investment Officer and Managing Director of McKenna Capital Partners, a family office. Mr. McKenna disclaims beneficial ownership of such shares of Oruka common stock except to the extent of his pecuniary interest therein. The principal business address for these persons and entities is PO Box 9542, Rancho, Santa Fe, CA 92067.

(5) Consists of 1,491,646 shares of restricted voting common stock that Dr. Klein has the right to acquire within 60 days after the date of this table.

(6) Consists of 149,164 shares of restricted voting common stock held by the Turtle Family Trust, for which Mr. Turtle serves as Trustee, that will vest within 60 days of the date of this table.

(7) Consists of (i) 20,000,000 shares of Oruka common stock issuable upon conversion of 20,000,000 shares of Oruka Series A Preferred Stock and (ii) 1,640,810 shares of restricted voting common stock.

PRINCIPAL STOCKHOLDERS OF THE COMBINED COMPANY

Except where specifically noted, the following information and all other information contained in this proxy statement/prospectus does not give effect to the proposed reverse stock split described in Proposal No. 3 of this proxy statement/prospectus.

The following table sets forth certain information regarding beneficial ownership of the combined company's common stock immediately after consummation of the Merger, assuming the consummation of the Merger occurred on July 16, 2024 for:

- each person or group of affiliated persons, who is expected by ARCA and Oruka to be the beneficial owner of more than 5% of the combined company's common stock;
- each person expected to be a director of the combined company;
- each person expected to be a named executive officer of the combined company; and
- all of the combined company's expected directors and executive officers and directors as a group.

Beneficial ownership is determined in accordance with the rules of the SEC and thus represents voting or investment power with respect to the combined company's securities. Under such rules, beneficial ownership includes any shares over which the individual or entity has sole or shared voting power or investment power as well as any shares that the individual has the right to acquire within 60 days of July 16, 2024. Shares of the combined company's common stock that an individual or entity has the right to acquire within 60 days of July 16, 2024 are deemed to be outstanding and beneficially owned by the individual or entity for the purpose of computing the percentage ownership of that individual, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. To ARCA's and Oruka's knowledge and subject to applicable community property rules, and except as otherwise indicated below, the persons and entities named in the table have sole voting and sole investment power with respect to all shares beneficially owned.

The table lists applicable percentage ownership based on 354,514,799 shares of common stock expected to be outstanding upon consummation of the merger, after giving effect to the Oruka pre-closing financing and prior to giving effect to the anticipated ARCA reverse stock split and includes 11,272,201 shares of unvested restricted common stock. The number of shares beneficially owned includes shares of common stock that each person has the right to acquire within 60 days, including upon the exercise of stock options and warrants. These stock options and warrants shall be deemed to be outstanding for the purpose of computing the percentage of outstanding shares of the combined company's common stock expected to be owned by such person but shall not be deemed to be outstanding for the purpose of computing the percentage of outstanding shares of the combined organization's common stock expected to be owned by any other person.

Immediately after the Merger, ARCA securityholders as of immediately prior to the Merger are expected to own approximately 2.39% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis), and former holders of Oruka securities are expected to own approximately 97.61% of the outstanding shares of capital stock of the combined company (on a fully-diluted basis), subject to certain assumptions, including, but not limited to, ARCA's net cash as of closing being equal to $5.0 million. ARCA management currently anticipates ARCA's net cash as of closing will be approximately $5.0 million, after giving effect to the special cash dividend, which is expected to be approximately $20.0 million, and the currently estimated ownership percentages reflect this projection. There can be no assurances any of these assumptions will be accurate at closing when the final exchange ratio is determined. The table below assumes that, based on ARCA's and Oruka's capitalization as of July 16, 2024, the exchange ratio is estimated to be equal to approximately 6.8699 shares of ARCA common stock, prior to giving effect to the anticipated ARCA reverse stock split. The estimated exchange ratio was derived on a fully-diluted basis as of July 16, 2024, using a stipulated value of Oruka of approximately $175.0 million and of ARCA of approximately $11.0 million, assuming net cash of $5.0 million as of closing. The final exchange ratio is subject to adjustment prior to the closing of the Merger based upon ARCA's net cash at closing and the aggregate proceeds from the sale of Oruka common stock and Oruka pre-funded warrants in the Oruka pre-closing financing.

Unless otherwise indicated, the address for each beneficial owner is c/o Oruka Therapeutics, Inc., 855 Oak Grove Ave., Suite 100, Menlo Park, CA 94025.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percentage of Shares Outstanding Beneficially Owned
Entities affiliated with Fairmount Funds Management LLC[(1)]	35,416,024	9.99%
Entities affiliated with Venrock Healthcare Capital Partners[(2)]	35,416,018	9.99%
FMR LLC[(3)]	30,938,216	8.73%
Entities affiliated with RTW Investments, LP[(4)]	18,562,944	5.24%
Named Executive Officers and Directors:		
Lawrence Klein[(5)]	10,247,459	2.89%
Arjun Agarwal	—	*
Joana Goncalves	—	*
Paul Quinlan	—	*
Cameron Turtle[(6)]	1,024,742	*
Samarth Kulkarni	—	*
Peter Harwin[(1)]	35,416,024	9.99%
Carl Dambkowski	—	*
Kristine Ball	—	*
All executive officers and directors as a group (9 persons)	46,688,225	13.17%

* Less than 1%.

(1) Consists of (i) 4,477,780 shares of the combined company's common stock held by Fairmount Healthcare Fund II L.P. ("Fairmount Fund II") and (ii) 30,938,244 shares of the combined company's common stock held by Fairmount Healthcare Co-Invest III L.P. ("Fairmount Fund III"). Excludes (i) 63,586,365 shares issuable upon the exercise of the pre-funded warrants and (ii) 137,398,000 shares of preferred stock owned by Fairmount Fund II. The pre-funded warrants and shares of preferred stock are subject to a beneficial ownership limitation of 9.99%, which such limitations restrict Fairmount Funds Management LLC ("Fairmount Funds Management") and its affiliates from exercising that portion of the warrants and converting those shares of preferred stock that would result in Fairmount Funds Management and its affiliates owning, after exercise or conversion, a number of shares of the combined company's common stock in excess of the applicable ownership limitation. Fairmount Funds Management serves as investment manager for Fairmount Fund II and Fairmount Fund III. Fairmount Fund II and Fairmount Fund III have delegated to Fairmount Funds Management the sole power to vote and the sole power to dispose of all securities held in Fairmount Fund II and Fairmount Fund III's portfolios. Because Fairmount Fund II and Fairmount Fund III have divested themselves of voting and investment power over the securities they hold and may not revoke that delegation on less than 61 days' notice, Fairmount Fund II and Fairmount Fund III disclaim beneficial ownership of the securities they hold. The general partner of Fairmount Funds Management is Fairmount Founds Management GP LLC ("Fairmount GP"). As managing members of Fairmount GP, Peter Harwin and Tomas Kiselak may be deemed to have voting and investment power over the shares held by Fairmount Fund II and Fairmount Fund III. Fairmount Funds Management, Fairmount GP, Peter Harwin and Tomas Kiselak disclaim beneficial ownership of such shares, except to the extent of any pecuniary interest therein. The address of the entities and individuals listed is 200 Barr Harbor Drive, Suite 400, West Conshohocken, PA 19428.

(2) Consists (i) 26,926,800 shares of the combined company's common stock held by Venrock Healthcare Capital Partners EG, L.P. ("VHCPEG"), (ii) 7,717,151 shares of the combined company's common stock held by Venrock Healthcare Capital Partners III, L.P. ("VHCP3"), and (iii) 772,067 shares of the combined company's common stock held by VHCP Co-Investment Holdings III, LLC ("VHCPCo3"). Excludes 1,300,019, 372,582 and 37,276 shares issuable upon the exercise of the pre-funded warrants held by VHCPEG, VHCP3 and VHCPCo3, respectively. The pre-funded warrants are subject to a beneficial ownership limitation of 9.99%, which such limitations restrict Venrock Healthcare Capital Partners and its affiliates from exercising that portion of the warrants that would result in Venrock Healthcare Capital Partners and its affiliates owning, after exercise, a number of shares of the combined company's common stock in excess of the applicable ownership limitation. VHCP Management III, LLC ("VHCPM3") is the sole general partner of VHCP3 and the sole manager of VHCPCo3. VHCP Management EG, LLC ("VHCPM EG") is the sole general partner of VHCPEG. As voting members of VHCPM3 and VHCPM EG, Dr. Bong Koh and Nimish Shah may be deemed beneficial owners of any securities beneficially owned by VHCPM3 and VHCPM EG. The principal business address of each of these persons and entities is 7 Bryant Park, 23rd Floor, New York, NY 10018.

(3) These shares of the combined company's common stock are held by funds and accounts managed by direct or indirect subsidiaries of FMR LLC. Abigail P. Johnson is a Director, the Chairman and the Chief Executive Officer of FMR LLC. Members of the Johnson family, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. The principal business address of each of these persons and entities is 245 Summer Street, Boston, MA 02210.

(4) Consists of 18,562,944 shares of the combined company's common stock held in the aggregate by RTW Master Fund, Ltd. ("RTW Master Fund"), RTW Innovation Master Fund, Ltd. ("RTW Innovation Master Fund"), and RTW Biotech Opportunities Operating Ltd. ("RTW Biotech" and together with RTW Master Fund and RTW Innovation Fund, the "RTW Funds"). RTW Investments, LP ("RTW"), in its capacity as the investment manager of the RTW Funds, has the power to vote and the power to direct the disposition of the shares held by the RTW Funds. Accordingly, RTW may be deemed to be the beneficial owner of such securities. Roderick Wong, M.D., as the Managing Partner of RTW, has the power to direct the vote and disposition of the securities held by RTW. Dr. Wong disclaims beneficial ownership of the shares held by the RTW Funds, except to the extent of his pecuniary interest therein. The principal business address of RTW Investments, LP is 40 10th Avenue, Floor 7, New York, NY 10014, and the address of Dr. Wong and each of the RTW Funds is c/o RTW Investments, LP, 40 10th Avenue, Floor 7, New York, NY 10014.

(5) Includes 10,247,459 shares of restricted voting common stock that Dr. Klein has the right to acquire within 60 days after the date of this table.

(6) Includes 1,024,742 shares of restricted voting common stock held by the Turtle Family Trust, for which Mr. Turtle serves as Trustee, that will vest within 60 days of the date of this table.

LEGAL MATTERS

Wilson Sonsini Goodrich & Rosati, P.C. will pass upon the validity of ARCA's common stock offered by this proxy statement/prospectus.

EXPERTS

The financial statements of ARCA biopharma, Inc. as of December 31, 2023 and 2022 and for each of the years in the two-year period ended December 31, 2023, have been included herein in reliance upon the report of KPMG LLP, independent registered public accounting firm, appearing elsewhere herein, and upon the authority of said firm as experts in accounting and auditing.

The financial statement of Oruka Therapeutics, Inc. as of February 6, 2024 included in this proxy statement/prospectus has been so included in reliance on the report (which contains an explanatory paragraph relating to Oruka's ability to continue as a going concern as described in Note 1 to the financial statement) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

ARCA is subject to the informational requirements of the Exchange Act and in accordance therewith, files annual, quarterly and current reports, proxy statements and other information with the SEC electronically, and the SEC maintains a website that contains ARCA's filings as well as reports, proxy and information statements, and other information issuers file electronically with the SEC at *www.sec.gov*.

ARCA also makes available free of charge on or through its website at *www.arcabio.com*, its Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act as soon as reasonably practicable after ARCA electronically files such material with or otherwise furnishes it to the SEC. The website addresses for the SEC and ARCA are inactive textual references and except as specifically incorporated by reference into this proxy statement/prospectus, information on those websites is not part of this proxy statement/prospectus.

ARCA has filed with the SEC a registration statement on Form S-4, of which this proxy statement/prospectus is a part, under the Securities Act to register the shares of ARCA common stock (including the shares of ARCA common stock issuable upon conversion of ARCA Series B Preferred Stock) to be issued to Oruka stockholders in the Merger. The registration statement, including the attached annexes, exhibits and schedules, contains additional relevant information about ARCA and ARCA common stock. This proxy statement/prospectus does not contain all of the information set forth in the registration statement because certain parts of the registration statement are omitted in accordance with the rules and regulations of the SEC.

ARCA has supplied all information contained in this proxy statement/prospectus relating to ARCA and Oruka has supplied all information contained in this proxy statement/prospectus relating to Oruka.

If you would like to request documents from ARCA or Oruka, please send a request in writing or by telephone to either ARCA or Oruka at the following addresses:

ARCA biopharma, Inc.
10170 Church Ranch Way, Suite 100
Westminster, CO 80021
Attn: Corporate Secretary
Tel: (720) 940-2100

Oruka Therapeutics, Inc.
855 Oak Grove Ave., Suite 100
Menlo Park, CA 94025
Attn: Secretary
Tel: (650) 606-7910

If you are a ARCA stockholder and would like additional copies, without charge, of this proxy statement/prospectus or if you have questions about the Merger, including the procedures for voting your shares, you should contact ARCA's proxy solicitor, Innisfree M&A Incorporated, at the following telephone number:

Banks and Brokers Call: (877) 750-8310
Stockholders Call Toll Free: (212) 750-5833

STOCKHOLDER PROPOSALS OR DIRECTOR NOMINATIONS FOR 2025 ANNUAL MEETING

If an ARCA stockholder would like ARCA to consider including a proposal in ARCA's proxy statement for its 2025 annual meeting pursuant to Rule 14a-8 of the Exchange Act, then the proposal must be received by ARCA's corporate secretary at ARCA's principal executive offices on or before March 28, 2025. In addition, stockholder proposals must comply with the requirements of Rule 14a-8 regarding the inclusion of stockholder proposals in company-sponsored proxy materials. Proposals should be addressed to:

ARCA biopharma, Inc.
Attention: Corporate Secretary
10170 Church Ranch Way, Suite 100
Westminster, Colorado, 80021

The ARCA Bylaws also establish an advance notice procedure for stockholders who wish to present a proposal or nominate a director at an annual meeting, but do not seek to include the proposal or director nominee in ARCA's proxy statement. In order to be properly brought before ARCA's 2025 annual meeting, the stockholder must provide timely written notice to ARCA's corporate secretary, at ARCA's principal executive offices, and any such proposal or nomination must constitute a proper matter for stockholder action. The written notice must contain the information specified in the ARCA Bylaws. To be timely, a stockholder's written notice must be received by ARCA's corporate secretary at ARCA's principal executive offices:

- no earlier than May 24, 2025, and
- no later than June 23, 2025.

In the event that ARCA holds its 2025 annual meeting more than 30 days before, or more than 60 days after, the one-year anniversary of this year's annual meeting, then such written notice must be received by ARCA's corporate secretary at ARCA's principal executive offices:

- no earlier than the 90th day prior to the day of ARCA's 2025 annual meeting, and
- no later than close of business on the later of: (i) the 60th day prior to the day of ARCA's 2025 annual meeting or (ii) the 10th day following the earlier of the day on which public announcement of the date of ARCA's 2025 annual meeting is first made or notice is first given.

Availability of Bylaws

A copy of the ARCA Bylaws may be obtained by accessing ARCA's filings on the SEC's website at *www.sec.gov*. You may also contact ARCA's corporate secretary at ARCA's principal executive offices for a copy of the relevant bylaw provisions regarding the requirements for making stockholder proposals and nominating director candidates.

Householding of Proxy Materials

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for proxy materials with respect to two or more stockholders sharing the same address by delivering a single set of the proxy materials addressed to those stockholders. This process, which is commonly referred to as "householding," potentially means extra convenience for stockholders and cost savings for companies.

In connection with the ARCA special meeting, a number of brokers with account holders who are ARCA stockholders will be "householding" the proxy materials. A single set of the proxy materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be "householding" communications to your address, "householding" will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in "householding" and would prefer to receive a separate set of the proxy materials, please notify your broker or ARCA. Direct your written request to Secretary, ARCA biopharma, Inc., 10170 Church Ranch Way, Suite 100, Westminster, Colorado, 80021 or contact Investor Relations at (720) 940-2100. ARCA undertakes to promptly deliver a separate set of the proxy materials upon receiving your written request. Stockholders who currently receive multiple copies of the proxy materials at their addresses and would like to request "householding" of their communications should contact their brokers.

ARCA BIOPHARMA, INC.

INDEX TO FINANCIAL STATEMENTS

Years ended December 31, 2023 and 2022

Three months ended March 31, 2024 and 2023 Interim Financial Statements (Unaudited)

ORUKA THERAPEUTICS, INC.

As of February 6, 2024

Period from February 6, 2024 (Inception) to March 31, 2024

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors
ARCA biopharma, Inc.:

Opinion on the Financial Statements

We have audited the accompanying balance sheets of ARCA biopharma, Inc. (the Company) as of December 31, 2023 and December 31, 2022, the related statements of operations, stockholders' equity, and cash flows for the years then ended, and the related notes (collectively, the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and December 31, 2022, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

Critical audit matters are matters arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. We determined that there are no critical audit matters.

/s/ KPMG LLP

We have served as the Company's auditor since 2006.

Boulder, Colorado
February 1, 2024

ARCA BIOPHARMA, INC.
BALANCE SHEETS

	As of December 31,	
	2023	**2022**
	(in thousands, except share and per share amounts)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 37,431	$ 42,445
Other current assets	161	254
Total current assets	37,592	42,699
Right-of-use asset – operating	247	343
Property and equipment, net	10	25
Other assets	12	18
Total assets	$ 37,861	$ 43,085
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 362	$ 334
Accrued compensation and employee benefits	100	173
Accrued expenses and other liabilities (related party – $0 and $216 at December 31, 2023 and 2022, respectively)	175	625
Total current liabilities	637	1,132
Operating lease liability, net of current portion	204	280
Total liabilities	841	1,412
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.001 par value; 5 million shares authorized; no shares issued or outstanding at December 31, 2023 and 2022	—	—
Common stock, $0.001 par value; 100 million shares authorized at December 31, 2023 and 2022; 14,501,143 and 14,410,143 shares issued and outstanding at December 31, 2023 and 2022, respectively	14	14
Additional paid-in capital	225,747	225,061
Accumulated deficit	(188,741)	(183,402)
Total stockholders' equity	37,020	41,673
Total liabilities and stockholders' equity	$ 37,861	$ 43,085

See accompanying Notes to Financial Statements

ARCA BIOPHARMA, INC.
STATEMENTS OF OPERATIONS

	Years Ended December 31,	
	2023	2022
	(in thousands, except share and per share amounts)	
Costs and expenses:		
General and administrative	$ 6,283	$ 5,847
Research and development (related party – $(91) and $432 as of the years ended December 31, 2023 and 2022, respectively)	1,013	4,749
Total costs and expenses	7,296	10,596
Loss from operations	(7,296)	(10,596)
Interest and other income	1,957	675
Other loss	—	(5)
Net loss	$ (5,339)	$ (9,926)
Net loss per share:		
Basic and diluted	$ (0.37)	$ (0.69)
Weighted average shares outstanding:		
Basic and diluted	14,415,877	14,410,143

See accompanying Notes to Financial Statements

ARCA BIOPHARMA, INC.
STATEMENTS OF STOCKHOLDERS' EQUITY

	Stockholders' Equity				
	Common stock		Additional Paid-In	Accumulated	
	Shares	Amount	Capital	Deficit	Total
	(in thousands, except share and per share amounts)				
Balance, December 31, 2021	**14,410,143**	**$ 14**	**$ 224,505**	**$ (173,476)**	**$ 51,043**
Share-based compensation	—	—	556	—	556
Net loss	—	—	—	(9,926)	(9,926)
Balance, December 31, 2022	**14,410,143**	**14**	**225,061**	**(183,402)**	**41,673**
Issuance of common stock upon vesting of Restricted Stock Units	91,000	—	—	—	—
Share-based compensation	—	—	686	—	686
Net loss	—	—	—	(5,339)	(5,339)
Balance, December 31, 2023	**14,501,143**	**$ 14**	**$ 225,747**	**$ (188,741)**	**$ 37,020**

See accompanying Notes to Financial Statements

ARCA BIOPHARMA, INC.
STATEMENTS OF CASH FLOWS

	Years Ended December 31,	
	2023	2022
	(in thousands)	
Cash flows from operating activities:		
Net loss	$ (5,339)	$ (9,926)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	15	20
Amortization of right-of-use asset – operating	96	94
Share-based compensation	686	556
Loss from disposal of property and equipment	—	5
Change in operating assets and liabilities:		
Other current assets	93	808
Other assets	6	—
Accounts payable	28	(783)
Accrued compensation and employee benefits	(73)	(752)
Accrued expenses and other liabilities	(526)	(934)
Net cash used in operating activities	(5,014)	(10,912)
Cash flows from investing activities:		
Purchase of property and equipment	—	(2)
Net cash used in investing activities	—	(2)
Cash flows from financing activities:		
Net cash provided by financing activities	—	—
Net decrease in cash and cash equivalents	(5,014)	(10,914)
Cash and cash equivalents, beginning of year	42,445	53,359
Cash and cash equivalents, end of year	$ 37,431	$ 42,445
Supplemental cash flow information:		
Interest paid	$ —	$ —
Income tax refund received	$ —	$ —

See accompanying Notes to Financial Statements

(1) ARCA and Summary of Significant Accounting Policies

Description of Business

ARCA biopharma, Inc. ("ARCA"), a Delaware corporation, is headquartered in Westminster, Colorado. ARCA is a clinical-stage biopharmaceutical company applying a precision medicine approach to the development and commercialization of genetically targeted therapies for cardiovascular diseases. ARCA's lead product candidate is Gencaro™ (bucindolol hydrochloride) for the treatment of atrial fibrillation ("AF") in patients with chronic heart failure ("HF").

In April 2022, the Board of Directors established a Special Committee and, in May 2022, retained Ladenburg Thalmann & Co. Inc. to evaluate strategic options, including transactions involving a merger, sale of all or part of ARCA's assets, or other alternatives with the goal of maximizing stockholder value. ARCA does not have a defined timeline for the strategic review process and the review may not result in any specific action or transaction.

Liquidity and Going Concern

ARCA devotes substantially all of its efforts towards obtaining regulatory approval and raising capital necessary to fund its operations and it is subject to a number of risks associated with clinical research and development, including dependence on key individuals, the development of and regulatory approval of commercially viable products, the need to raise adequate additional financing necessary to fund the development and commercialization of its products, and competition from larger companies. ARCA has not generated revenue to date and has incurred substantial losses and negative cash flows from operations since its inception. ARCA has historically funded its operations through issuances of common and preferred stock.

ARCA believes that its current cash and cash equivalents as of December 31, 2023 will be sufficient to fund its operations through the middle of fiscal year 2025. ARCA's review of its strategic options may impact this projection. Changing circumstances may cause ARCA to consume capital significantly faster or slower than currently anticipated. ARCA has based these estimates on assumptions that may prove to be wrong, and ARCA could exhaust its available financial resources sooner than it currently anticipates. Therefore, ARCA will have to raise additional capital for clinical trials of Gencaro. ARCA may not be able to raise sufficient capital on acceptable terms, or at all, to continue development of Gencaro or rNAPc2 or to otherwise continue operations and may not be able to execute any strategic transaction.

ARCA's liquidity, and its ability to raise additional capital or complete any strategic transaction, depends on a number of factors, including, but not limited to, the following:

- the costs and timing for the potential additional clinical trials in order to gain possible regulatory approval for Gencaro, rNAPc2, or any other product candidate;
- the market price of ARCA's stock and the availability and cost of additional equity capital from existing and potential new investors;
- ARCA's ability to retain the listing of its common stock on the Nasdaq Capital Market;
- general economic and industry conditions affecting the availability and cost of capital, including as a result of deteriorating market conditions due to investor concerns regarding inflation, adverse developments affecting the financial services industry, continued hostilities between Russia and Ukraine and Hamas' attack against Israel and the ensuing conflict;
- ARCA's ability to control costs associated with its operations;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- the terms and conditions of ARCA's existing collaborative and licensing agreements.

(1) ARCA and Summary of Significant Accounting Policies (cont.)

The sale of additional equity or convertible debt securities would likely result in substantial additional dilution to ARCA's stockholders. If ARCA raises additional funds through the incurrence of indebtedness, the obligations related to such indebtedness would be senior to rights of holders of ARCA's capital stock and could contain covenants that would restrict ARCA's operations. ARCA also cannot predict what consideration might be available, if any, to it or its stockholders, in connection with any strategic transaction. Should strategic alternatives or additional capital not be available to ARCA, or not be available on acceptable terms, ARCA may be unable to realize value from its assets and discharge its liabilities in the normal course of business which may, among other alternatives, cause ARCA to further delay, substantially reduce or discontinue operational activities to conserve its cash resources.

Basis of Presentation

The accompanying financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") and include all adjustments necessary for the fair presentation of ARCA's financial position, results of operations and cash flows for the periods presented. Management has performed an evaluation of ARCA's activities through the date of filing of the Annual Report on Form 10-K.

Recent Accounting Pronouncements

ARCA reviewed all other recently issued accounting pronouncements and concluded that they were either not applicable or not expected to have a significant impact to the financial statements.

Accounting Estimates in the Preparation of Financial Statements

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of expenses during the reporting period. ARCA bases estimates on various assumptions that are believed to be reasonable under the circumstances. ARCA believes significant judgment was involved in estimating the outsourcing expenses, and in estimating other accrued liabilities and income taxes. Management is continually evaluating and updating these estimates, and it is possible that these estimates will change in the future or that actual results may differ from these estimates.

Cash Equivalents

Cash equivalents generally consist of money market funds and debt securities with maturities of 90 days or less at the time of purchase. ARCA invests its excess cash in securities with strong ratings and has established guidelines relative to diversification and maturity with the objective of maintaining safety of principal and liquidity.

Concentrations of Credit Risk

Financial instruments that potentially subject ARCA to significant concentrations of credit risk consist primarily of cash and cash equivalents. ARCA has no off-balance-sheet concentrations of credit risk, such as foreign exchange contracts, option contracts, or foreign currency hedging arrangements. ARCA maintains cash and cash equivalent balances in the form of bank demand deposits and money market fund accounts with financial institutions that management believes are creditworthy. Such balances may at times exceed the insured amount.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. Cost includes expenditures for equipment, leasehold improvements, replacements, and renewals. Maintenance and repairs are charged to expense as incurred. When assets are sold, retired, or otherwise disposed of, the cost and accumulated depreciation are removed from the accounts and any resulting gain or loss is reflected in operations. The cost of

(1) ARCA and Summary of Significant Accounting Policies (cont.)

property and equipment is depreciated using the straight-line method over the estimated useful lives of the related assets. Leasehold improvements are amortized over the shorter of the life of the lease or the estimated useful life of the assets.

Comprehensive Loss

Comprehensive loss is defined as the change in equity during a period from transactions and other events and/or circumstances from non-owner sources. If ARCA had comprehensive gains (losses), they would be reflected in the statement of operations and comprehensive loss and as a separate component in the statement of stockholders' equity. There were no elements of comprehensive loss during the years ended December 31, 2023 and 2022.

Leases

ARCA determines if an arrangement is a lease at inception. Operating leases are included in right-of-use ("ROU") asset — operating and lease obligations are included in accrued expenses and other liabilities and operating lease liability on ARCA's December 31, 2023 and 2022 balance sheets.

ROU lease assets represent ARCA's right to use an underlying asset for the lease term and lease obligations represent ARCA's obligation to make lease payments arising from the lease. Operating ROU lease assets are recognized at the commencement date based on the present value of lease payments over the lease term. As ARCA's lease does not provide an implicit rate, ARCA uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. ARCA's lease terms may include options to extend or terminate the lease when it is reasonably certain that ARCA will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Accrued Outsourcing Expenses

As part of the process of preparing its financial statements, ARCA is required to estimate accrued outsourcing expenses. This process involves identifying services that third parties have performed on ARCA's behalf and estimating the level of service performed and the associated cost incurred for these services as of the balance sheet date. Examples of estimated accrued outsourcing expenses include contract service fees, such as fees payable to contract manufacturers in connection with the production of materials related to ARCA's drug product, and service fees and pass through costs from clinical research organizations. ARCA develops estimates of liabilities using its judgment based upon the facts and circumstances known at the time.

Segments

ARCA operates in one segment. Management uses one measure of profitability and does not segment its business for internal reporting.

Research and Development

Research and development costs are expensed as incurred. These consist primarily of salaries, contract services, and supplies.

Costs, if any, related to clinical trial and drug manufacturing activities are based upon estimates of the services received and related expenses incurred by contract research organizations ("CROs"), clinical study sites, drug manufacturers, collaboration partners, laboratories, consultants, or otherwise. Related contracts vary significantly in length, and could be for a fixed amount, a variable amount based on actual costs incurred, capped at a certain limit, or for a combination of these elements. Activity levels are monitored through communications with the vendors, including detailed invoices and task completion review, analysis of expenses against budgeted amounts, and pre-approval of any changes in scope of the services to be performed. Certain significant vendors may also provide

(1) ARCA and Summary of Significant Accounting Policies (cont.)

an estimate of costs incurred but not invoiced on a periodic basis. Expenses related to the CROs and clinical studies, as well as contract drug manufacturers, are primarily based on progress made against specified milestones or targets in each period.

In accordance with certain research and development agreements, ARCA is obligated to make certain upfront payments upon execution of the agreement. ARCA records these upfront payments as prepaid research and development expenses, which are included in Other current assets or Other assets in the accompanying Balance Sheets. Such payments are recorded to research and development expense as services are performed. ARCA evaluates on a quarterly basis whether events and circumstances have occurred that may indicate impairment of remaining prepaid research and development expenses.

Stock-Based Compensation

ARCA's stock-based compensation cost recognized is based on the estimated grant date fair value. ARCA recognizes compensation costs for its stock-based awards on a straight-line basis over the requisite service period for the entire award, as adjusted for expected forfeitures.

Income Taxes

The current benefit for income taxes represents actual or estimated amounts payable or refundable on tax returns filed or to be filed each year. Deferred tax assets and liabilities are recognized for the estimated future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in the period that includes the enactment date. The overall change in deferred tax assets and liabilities for the period measures the deferred tax expense or benefit for the period. The measurement of deferred tax assets may be reduced by a valuation allowance based on judgmental assessment of available evidence if deemed more likely than not that some or all of the deferred tax assets will not be realized.

(2) Net Loss Per Share

ARCA calculates basic loss per share by dividing net loss by the weighted average common shares outstanding during the period. Diluted loss per share is computed by dividing net loss by the weighted average number of common shares outstanding during the period increased to include, if dilutive, the number of additional common shares that would have been outstanding if the potential common shares had been issued. ARCA's potentially dilutive shares include stock options and restricted stock units.

Because ARCA reported a net loss for the years ended December 31, 2023 and 2022, all potentially dilutive shares of ARCA common stock have been excluded from the computation of the dilutive net loss per share for all periods presented. Such potentially dilutive shares of ARCA common stock consist of the following:

	Years Ended December 31,	
	2023	2022
Potentially dilutive securities, excluded:		
Outstanding stock options	616,707	704,960
Unvested restricted stock units	—	91,000
	616,707	795,960

(3) Fair Value Disclosures

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date ("exit price"). Inputs used to measure fair value are classified into the following hierarchy:

- Level 1 — Unadjusted quoted prices in active markets for identical assets or liabilities. ARCA's Level 1 assets consist of money market investments. ARCA does not have any Level 1 liabilities.
- Level 2 — Unadjusted quoted prices in active markets for similar assets or liabilities; unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active; or inputs other than quoted prices that are observable for the asset or liability. ARCA's Level 2 assets consist of corporate bonds and commercial paper securities. ARCA does not have any Level 2 liabilities.
- Level 3 — Unobservable inputs for the asset or liability. ARCA does not have any Level 3 assets or liabilities.

As of December 31, 2023 and 2022, ARCA had $37.4 million and $42.4 million, respectively, of cash equivalents consisting of money market funds with original maturities of 90 days or less. ARCA has the ability to liquidate these investments without restriction. ARCA determines fair value for these money market funds with Level 1 inputs through quoted market prices. There were no transfers between any fair value hierarchy levels in 2023 or 2022.

Fair Value of Other Financial Instruments

The carrying amount of other financial instruments, including accounts payable, approximated fair value due to their short maturities. As of December 31, 2023 and 2022, ARCA did not have any debt outstanding.

(4) Property and Equipment

Property and equipment consist of the following (in thousands):

	Estimated Life	December 31, 2023	December 31, 2022
Computer equipment	3 years	$ 39	$ 39
Lab equipment	5 years	130	130
Furniture and fixtures	5 years	37	44
Computer software	3 years	16	16
		222	229
Accumulated depreciation and amortization		(212)	(204)
Property and equipment, net		$ 10	$ 25

For the years ended December 31, 2023 and 2022, depreciation and amortization expense was $15,000 and $20,000, respectively.

(5) Related Party Arrangements

Transactions with ARCA's President and Chief Executive Officer

ARCA has entered into unrestricted research grants with its President and Chief Executive Officer's academic research laboratory at the University of Colorado. Funding of any unrestricted research grants is contingent upon ARCA's financial condition, and can be deferred or terminated at ARCA's discretion. Total expense under these arrangements for the years ended December 31, 2023 and 2022 was $(91,000) and $432,000, respectively. In December 2023, ARCA made a payment of $125,000 for the grant period July 2022 through December 2023 under these arrangements.

(6) Commitments and Contingencies

ARCA has or is subject to the following commitments and contingencies:

Employment Agreements and Reduction of Workforce

ARCA maintains employment agreements with several key executive employees. The agreements may be terminated at any time by ARCA with or without cause upon written notice to the employee, and entitle the employee to wages in lieu of notice for periods not exceeding one calendar year from date of termination without cause or by the employee for good reason. Certain of these agreements also provide for payments to be made under certain conditions related to a change in control of ARCA.

In December 2022, ARCA's Board of Directors approved retention bonuses for certain employees, subject to continued employment with ARCA through the earlier of a change in control of ARCA or certain clinical development decisions totaling $265,000. In November 2023, the retention bonuses were amended to increase the aggregate amount of the retention bonus by 50% and in order to assist with tax obligations associated with the vesting of certain Company restricted stock unit awards in December 2023, a total of $86,000 was paid in December 2023. As of December 31, 2023, the unpaid retention bonuses totaled $311,000, none of which was accrued as of December 31, 2023, since there had not been a change in control or clinical development decision.

ARCA and Christopher D. Ozeroff, the Secretary, Senior Vice President and General Counsel of ARCA mutually agreed to conclude Mr. Ozeroff's employment effective March 31, 2023. Pursuant to Mr. Ozeroff's existing employment agreement, as previously amended, ARCA will provide Mr. Ozeroff severance benefits pursuant to the terms of his existing employment agreement with ARCA, as previously amended. The severance benefits include severance payments and reimbursement to cover out-of-pocket costs to continue group health insurance benefits under COBRA, whether he elects or is eligible to receive COBRA (provided, that even if he does not elect or is not eligible to receive COBRA, he will receive the equivalent of such out-of-pocket expenses paid by him not to exceed the costs that the benefits would equal under COBRA if he were so eligible). During the year ended December 31, 2023, ARCA recorded an expense of $159,000 for these severance benefits, none of which remains unpaid.

In 2022, ARCA implemented a strategic reduction of the workforce by approximately 67%, or 12 employees. Personnel reductions were primarily focused in research and development and general and administrative functions. The restructuring was a result of ARCA's decision to manage operating costs and expenses. During the year ended December 31, 2022, ARCA recorded total restructuring charges of approximately $755,000, of which $470,000 and $285,000 were recognized in research and development and general and administrative expenses, respectively, in connection with the restructuring, all in the form of one-time termination benefits, none of which remains unpaid.

Operating Lease

On August 29, 2020 ARCA entered into a lease agreement for approximately 5,200 square feet of office facilities in Westminster, Colorado which serves as ARCA's primary business office effective October 1, 2020 ("October 2020 Lease"). The lease term is 42 months beginning October 1, 2020 and includes an option to renew for an additional 36 month term at the then prevailing rental rate. The exercise of the lease renewal option is at ARCA's sole discretion. The amounts recorded assume ARCA will exercise its renewal option. In June 2021, ARCA entered into a sublease agreement for approximately 3,000 square feet of additional office facilities in its primary business office ("2021 Lease"). The sublease term was 29 months and terminated in October 2023. The leases include real estate taxes and insurance, which is not a lease component and is not included in the lease obligation. In addition, common area maintenance charges are based on actual costs incurred and are a non-lease component that is not included in the lease obligation.

(6) Commitments and Contingencies (cont.)

Future minimum commitments due under the October 2020 Lease agreement as of December 31, 2023 are as follows (in thousands):

2024	$ 93
2025	96
2026	100
2027	25
Total remaining lease payments	314
Less: imputed lease interest	(34)
Less: Current portion	(76)
Operating lease liability, net of current portion	$ 204

Rent expense, which is included in general and administrative expense, under these leases for the years ended December 31, 2023 and 2022 was $119,000 and $125,000, respectively.

As of December 31, 2023, the lease liability was $280,000 and the current portion is included in accrued expenses and other liabilities and the non-current portion is in operating lease liability, net of current portion in the accompanying balance sheet. Cash paid for amounts included in the measurement of lease liabilities and the operating cash flows from operating leases for the years ended December 31, 2023 and 2022 were $127,000 and $131,000, respectively. The weighted-average remaining lease term for the operating lease as of December 31, 2023 is 3.2 years. The weighted-average discount rate for the operating lease is 7%.

Patent Agreement

In July 2021, ARCA entered into a patent assignment agreement (the "Agreement") with the University Medical Center of Johannes Gutenberg University Mainz, Germany.

Under the terms of the Agreement, ARCA received exclusive world-wide patent rights relating to the use of rNAPc2 as a potential treatment for COVID-19, and other indications, based on the research and discoveries from Univ.-Prof. Dr. Wolfram Ruf, the Scientific Director and Alexander von Humboldt Professor at the Center for Thrombosis and Hemostasis ("CTH") of the University Medical Center Mainz, and his collaborators. ARCA has upfront and potential milestone obligations to the University Medical Center Mainz that could total approximately €1.6 million and royalty obligations in the low single digit range, if rNAPc2 receives regulatory approval and is commercialized. The term of the Agreement extends to the date of expiration of the last to expire of any of the assigned patents.

Gencaro License

ARCA has licensed worldwide rights to all preclinical and clinical data through the BEST trial for development of bucindolol. The patents that were the subject of this license are expired. If the license agreement is deemed enforceable, ARCA would incur milestone and royalty obligations upon the occurrence of certain events, including if the FDA grants marketing approval for Gencaro, upon regulatory marketing approval in Europe and Japan and based on achievement of specified product sales levels.

(7) Equity Financings

At the Market Equity Financing

On July 22, 2020, ARCA entered into a Capital on Demand™ Sales Agreement (the "Sales Agreement") with JonesTrading Institutional Services LLC, as agent ("JonesTrading"), pursuant to which ARCA may offer and sell, from time to time through JonesTrading, shares of ARCA's common stock, par value $0.001 per share ("ARCA common stock"), having an aggregate offering price of up to $54.0 million (the "Shares").

(7) Equity Financings (cont.)

Under the Sales Agreement, JonesTrading may sell the Shares by any method permitted by law and deemed to be an "at the market offering" as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including sales made directly on or through the Nasdaq Capital Market, on any other existing trading market for ARCA common stock or to or through a market maker. In addition, under the amended Sales Agreement, JonesTrading may sell the Shares by any other method permitted by law, including in negotiated transactions. ARCA may instruct JonesTrading not to sell Shares if the sales cannot be effected at or above the price designated by ARCA from time to time.

ARCA is not obligated to make any sales of the Shares under the Sales Agreement. The offering of Shares pursuant to the Sales Agreement will terminate upon the earlier of (a) the sale of all of the Shares subject to the Sales Agreement or (b) the termination of the Sales Agreement by JonesTrading or ARCA, as permitted therein.

ARCA paid JonesTrading a commission rate equal to 3.0% of the aggregate gross proceeds from each sale of Shares and agreed to provide JonesTrading with customary indemnification and contribution rights. ARCA will also reimburse JonesTrading for certain specified expenses in connection with entering into the Sales Agreement.

No sales were made in 2023 or 2022.

In April 2021, ARCA amended the 2020 Sales Agreement and the amount available for the offering under its prospectus to ARCA's registration statement on Form S-3 (No. 333-254585). The amount available for the offering under the prospectus supplement is subject to the limitation of not selling a total value amount of shares exceeding more than one-third of ARCA's public float in any 12-month period.

(8) Share-based Compensation

Stock Plans

ARCA's equity incentive plan, *the 2020 Equity Incentive Plan* (the "Equity Plan"), was approved by stockholders on December 10, 2020. The maximum number of shares issuable under this plan is 1,167,425 shares.

The Equity Plan provides for the granting of stock options (including indexed options), restricted stock units, stock appreciation rights, restricted stock purchase rights, restricted stock bonuses, performance shares, performance units and deferred stock units. Under the Equity Plan, awards may be granted to employees, directors and consultants of ARCA, except for incentive stock options, which may be granted only to employees. As of December 31, 2023, options to purchase 601,900 shares with a weighted average exercise price of $3.45 per share were outstanding under the Equity Plan, and 459,718 shares were reserved for future awards.

In general, the Equity Plan authorizes the grant of stock options that vest at rates set by the Board of Directors or the Compensation Committee thereof. Generally, stock options granted by ARCA under the equity incentive plans become exercisable ratably for a period of three to four years from the date of grant and have a maximum term of ten years. The exercise prices of stock options under the equity incentive plan generally meet the following criteria: the exercise price of incentive stock options must be at least 100% of the fair market value on the grant date and exercise price of options granted to 10% (or greater) stockholders must be at least 110% of the fair market value on the grant date.

In conjunction with the adoption of the Equity Plan, ARCA discontinued grants under the 2013 Plan, effective December 10, 2020. As of December 31, 2023, options to purchase 14,807 shares with a weighted average exercise price of $57.73 per share were outstanding under the 2013 plan.

(8) Share-based Compensation (cont.)

ARCA did not grant options in 2023. ARCA granted options to purchase an aggregate of 60,000 shares of ARCA common stock in the year ended December 31, 2022. The fair values of employee stock options granted in the year ended December 31, 2022 were estimated at the date of grant using the Black-Scholes model with the following assumptions and had the following estimated weighted average grant date fair value per share:

	Year Ended December 31, 2022
Expected term	5.5 years
Expected volatility	107%
Risk-free interest rate	3.56%
Expected dividend yield	0%
Weighted-average grant date fair value per share	$ 1.87

A summary of ARCA's stock option activities for the years ended December 31, 2023 and 2022, and related information as of December 31, 2023, is as follows:

	Options Outstanding			
	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Options outstanding – December 31, 2021	904,123	$ 5.59		
Granted	60,000	2.31		
Exercised	—	—		
Forfeited and cancelled	(259,163)	4.74		
Options outstanding – December 31, 2022	704,960	$ 5.62	8.29	$ 18
Granted	—	—		
Exercised	—	—		
Forfeited and cancelled	(88,253)	11.68		
Options outstanding – December 31, 2023	616,707	$ 4.76	7.35	$ —
Options exercisable – December 31, 2023	463,068	$ 5.28	7.29	$ —
Options vested and expected to vest – December 31, 2023	616,661	$ 4.76	7.35	$ —

The aggregate intrinsic value in the table above represents the total intrinsic value, based on ARCA's closing price as of December 31 of the respective year, which would have been received by the option holders had all the option holders with in-the-money options exercised as of that date. As of December 31, 2023, the unrecognized compensation expense related to unvested options, excluding estimated forfeitures, was $367,000 which is expected to be recognized over a weighted average period of 1.1 years. ARCA recognizes compensation costs for its share-based awards on a straight-line basis over the requisite service period for the entire award, as adjusted for expected forfeitures.

Restricted Stock Units

ARCA granted restricted stock units ("RSUs") under the Equity Plan to employees during 2022. The fair value of RSU awards is the closing price of ARCA common stock on the date of the grant and is recognized as compensation expense on a straight-line basis over the respective vesting period. The stock awards granted had a requisite service period of one year.

(8) Share-based Compensation (cont.)

A summary of RSU activity for the year ended December 31, 2023 is presented below:

	Restricted Stock Units Outstanding	
	Number of Shares	Weighted Average Grant Date Fair Value
RSUs outstanding – December 31, 2021	—	$ —
Granted	91,000	2.21
Vested and released	—	—
Forfeited and cancelled	—	—
RSUs outstanding – December 31, 2022	91,000	$ 2.21
Granted	—	—
Vested and released	(91,000)	2.21
Forfeited and cancelled	—	—
RSUs outstanding – December 31, 2023	—	$ —

As of December 31, 2023, there was no unrecognized compensation cost related to unvested stock awards.

Non-cash Stock-based Compensation

For the years ended December 31, 2023 and 2022, ARCA recognized the following non-cash, share-based compensation expense (in thousands):

	Years Ended December 31,	
	2023	2022
General and administrative	$ 526	$ 423
Research and development	160	133
Total	$ 686	$ 556

ARCA did not recognize any tax benefit related to employee stock-based compensation cost as a result of the full valuation allowance on its net deferred tax assets.

(9) Employee Benefit Plans

ARCA has a 401(k) plan and makes a matching contribution equal to 100% of the employee's first 3% of the employee's contributions and 50% of the employee's next 2% of contributions. ARCA adopted the plan in 2006 and contributed $56,000 and $96,000 for the years ended December 31, 2023 and 2022, respectively.

(10) Income Taxes

Effective June 1, 2005, ARCA changed from an S-Corporation to a C-Corporation. As an S-Corporation, the net operating loss carryforwards were distributed to ARCA's stockholders; such amounts were not significant. As of December 31, 2023, ARCA has net operating loss carryforwards of approximately $208.1 million, and approximately $2.4 million of research and development credits that may be used to offset future taxable income. ARCA's net operating loss carryforwards through December 31, 2017 will expire beginning 2025 through 2037. The net operating loss carryforwards beginning in 2018, have no expiration. Utilization of net operating losses and tax credits, including those acquired as a result of the Merger, will be subject to an annual limitation due to ownership change limitations provided by Internal Revenue Code Section 382. ARCA believes that an ownership change limitation as defined under Section 382 of the U.S. Internal Revenue Code occurred as a result of its various historical financing transactions. Future utilization of the federal net operating losses and tax credit

(10) Income Taxes (cont.)

carryforwards accumulated from June 2005 to the change in ownership date will be subject to annual limitations to offset future taxable income. The annual limitation may result in the expiration of the net operating losses and credits before utilization. As such, a portion of ARCA's net operating loss carryforwards may be limited.

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the period in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income and tax planning strategies in making this assessment. Due primarily to ARCA's history of operating losses, management is unable to conclude that it is more likely than not that ARCA will realize the benefits of these deductible differences, and accordingly has provided a valuation allowance against the entire net deferred tax assets and liabilities of approximately $55.5 million at December 31, 2023, reflecting an increase of approximately $1.2 million from December 31, 2022. The deferred tax assets are primarily comprised of net operating loss carryforwards and research and experimentation credit carryforwards. As of December 31, 2023, ARCA has not performed an Internal Revenue Code Section 382 limitation study. Depending on the outcome of such a study, the gross amount of net operating losses recognizable in future tax periods could be limited. A limitation in the carryforwards would decrease the carrying amount of the gross amount of the net operating loss carryforwards, with a corresponding decrease in the valuation allowance recorded against these gross deferred tax assets.

Income tax benefit attributable to ARCA's loss from operations before income taxes differs from the amounts computed by applying the U.S. federal statutory income tax rate of 21% for 2023 and 2022, as a result of the following (in thousands):

	Years ended December 31,	
	2023	2022
U.S. federal income tax benefit at statutory rates	$ (1,121)	$ (2,085)
State income tax benefit, net of federal benefit	(192)	(357)
Research and experimentation credits	—	—
Deferred tax asset adjustment	47	2
Other	107	186
Change in valuation allowance	1,159	2,254
Income tax benefit	$ —	$ —

(10) Income Taxes (cont.)

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting and the amounts used for income tax purposes, as well as operating loss and tax credit carryforwards. The income tax effects of temporary differences and carryforwards that give rise to significant portions of ARCA's net deferred tax assets and liabilities consisted of the following (in thousands):

	As of December 31,	
	2023	2022
Deferred tax assets:		
Net operating loss carryforwards	$ 51,190	$ 50,008
Charitable contribution carryforwards	371	393
Research and experimentation credits	2,420	2,420
Capitalized research and development costs	951	979
Capitalized intangibles	354	356
Stock-based compensation	232	205
Accrued compensation	7	6
Lease liabilities	69	94
Total deferred tax assets	55,594	54,461
Valuation allowance	(55,531)	(54,372)
Deferred tax assets, net of valuation allowance	63	89
Deferred tax liabilities:		
Right-of-use asset	(61)	(84)
Depreciation and amortization	(2)	(5)
Net deferred tax liability	$ —	$ —

Since ARCA is in a loss carryforward position, it is generally subject to U.S. federal and state income tax examinations by tax authorities for all years for which a loss carryforward is available. Thus, ARCA's open tax years extend back to 2009. ARCA believes that its tax filing positions and deductions related to tax periods subject to examination will be sustained upon audit and does not anticipate any adjustment will result in a material adverse effect on ARCA's financial condition, result of operations, or cash flow. For the years ended December 31, 2023 and 2022, ARCA has no reserve for uncertain tax positions. ARCA does not expect that the total amounts of unrecognized tax benefits will significantly increase or decrease within the subsequent twelve months. In the event ARCA concludes it is subject to interest or penalties arising from uncertain tax positions, it will record interest and penalties as a component of other income and expense. No interest or penalties were recognized in the financial statements for the years ended December 31, 2023 and 2022.

ARCA BIOPHARMA, INC.
BALANCE SHEETS
(Unaudited)

	March 31, 2024	December 31, 2023
	(in thousands, except share and per share amounts)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 35,903	$ 37,431
Other current assets	767	161
Total current assets	36,670	37,592
Right-of-use asset – operating	17	247
Property and equipment, net	7	10
Other assets	12	12
Total assets	$ 36,706	$ 37,861
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 529	$ 362
Accrued compensation and employee benefits	84	100
Accrued expenses and other liabilities	968	175
Total current liabilities	1,581	637
Operating lease liability, net of current portion	—	204
Total liabilities	1,581	841
Commitments and contingencies		
Stockholders' equity:		
Common stock, $0.001 par value; 100 million shares authorized at March 31, 2024 and December 31, 2023; 14,501,143 shares issued and outstanding at March 31, 2024 and December 31, 2023, respectively	14	14
Additional paid-in capital	225,861	225,747
Accumulated deficit	(190,750)	(188,741)
Total stockholders' equity	35,125	37,020
Total liabilities and stockholders' equity	$ 36,706	$ 37,861

See accompanying Notes to Financial Statements

ARCA BIOPHARMA, INC.
STATEMENTS OF OPERATIONS
(Unaudited)

	March 31,	
	2024	**2023**
	(in thousands, except share and per share amounts)	
Costs and expenses:		
General and administrative	$ 2,317	$ 1,406
Research and development (related party – $0 and $108 as of March 31, 2024 and 2023, respectively)	165	390
Total costs and expenses	2,482	1,796
Loss from operations	(2,482)	(1,796)
Interest and other income	473	450
Net loss	$ (2,009)	$ (1,346)
Net loss per share:		
Basic and diluted	$ (0.14)	$ (0.09)
Weighted average shares outstanding:		
Basic and diluted	14,501,143	14,410,143

See accompanying Notes to Financial Statements

ARCA BIOPHARMA, INC.
STATEMENTS OF STOCKHOLDERS' EQUITY
(Unaudited)

	Stockholders' Equity				
	Common stock		Additional Paid-In	Accumulated	
	Shares	Amount	Capital	Deficit	Total
	(in thousands, except share and per share amounts)				
Balance, December 31, 2022	**14,410,143**	**$ 14**	**$ 225,061**	**$ (183,402)**	**$ 41,673**
Share-based compensation	—	—	204	—	204
Net loss	—	—	—	(1,346)	(1,346)
Balance, March 31, 2023	**14,410,143**	**14**	**225,265**	**(184,748)**	**40,531**
Share-based compensation	—	—	187	—	187
Net loss	—	—	—	(1,480)	(1,480)
Balance, June 30, 2023	**14,410,143**	**14**	**225,452**	**(186,228)**	**39,238**
Share-based compensation	—	—	154	—	154
Net loss	—	—	—	(1,424)	(1,424)
Balance, September 30, 2023	**14,410,143**	**14**	**225,606**	**(187,652)**	**37,968**
Issuance of common stock upon vesting of Restricted Stock Units	91,000	—	—	—	—
Share-based compensation	—	—	141	—	141
Net loss	—	—	—	(1,089)	(1,089)
Balance, December 31, 2023	**14,501,143**	**14**	**225,747**	**(188,741)**	**37,020**
Share-based compensation	—	—	114	—	114
Net loss	—	—	—	(2,009)	(2,009)
Balance, March 31, 2024	**14,501,143**	**$ 14**	**$ 225,861**	**$ (190,750)**	**$ 35,125**

See accompanying Notes to Financial Statements

ARCA BIOPHARMA, INC.
STATEMENTS OF CASH FLOWS
(Unaudited)

	Quarter Ended March 31,	
	2024	**2023**
	(in thousands)	
Cash flows from operating activities:		
Net loss	$ (2,009)	$ (1,346)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	3	4
Amortization of right-of-use asset – operating	16	25
Share-based compensation	114	204
Change in operating assets and liabilities:		
Other current assets	(606)	(598)
Accounts payable	167	32
Accrued compensation and employee benefits	(16)	62
Accrued expenses and other liabilities	803	22
Net cash used in operating activities	(1,528)	(1,595)
Cash flows from investing activities:		
Net cash used in investing activities	—	—
Cash flows from financing activities:		
Net cash provided by financing activities	—	—
Net decrease in cash and cash equivalents	(1,528)	(1,595)
Cash and cash equivalents, beginning of year	37,431	42,445
Cash and cash equivalents, end of year	$ 35,903	$ 40,850
Supplemental cash flow information:		
Interest paid	$ —	$ —
Income tax refund received	$ —	$ —
Supplemental disclosure of noncash investing and financing transactions:		
Leased assets and operating lease liabilities – amended lease term	$ 214	$ —

See accompanying Notes to Financial Statements

ARCA BIOPHARMA, INC.
NOTES TO FINANCIAL STATEMENTS
(Unaudited)

(1) ARCA and Summary of Significant Accounting Policies

Description of Business

ARCA biopharma, Inc. ("ARCA"), a Delaware corporation, is headquartered in Westminster, Colorado. ARCA is dedicated to applying a precision medicine approach to the development and commercialization of genetically targeted therapies for cardiovascular diseases. ARCA's lead product candidate is Gencaro™ (bucindolol hydrochloride) for the treatment of atrial fibrillation ("AF") in patients with chronic heart failure ("HF").

In April 2022, ARCA established a Special Committee of the board of directors (the "Board") of ARCA to conduct a comprehensive review of strategic alternatives. As part of the strategic review process, ARCA explored potential strategic alternatives that included, without limitation, an acquisition, merger, business combination or other transactions. ARCA has and is continuing to explore strategic alternatives related to its product candidates and related assets, including, without limitation, licensing transactions and asset sales.

On April 3, 2024, following a comprehensive review of strategic alternatives, ARCA, Atlas Merger Sub Corp., a Delaware corporation and a wholly-owned subsidiary of ARCA ("Merger Sub I"), Atlas Merger Sub II LLC, a Delaware limited liability company and a wholly-owned subsidiary of ARCA ("Merger Sub II") and Oruka Therapeutics, Inc., a Delaware corporation ("Oruka"), entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement"), pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Merger Sub I will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the merger (the "First Merger") and as part of the same overall transaction, the surviving corporation in the First Merger will merge with and into Merger Sub II with Merger Sub II continuing as a wholly owned subsidiary of ARCA and the surviving entity of the merger (the "Second Merger" and together with the First Merger, the "Merger"). The Merger is intended to qualify for federal income tax purposes as a tax-free reorganization under the provisions of Section 368(a) of the Internal Revenue Code of 1986, as amended.

ARCA's future operations are highly dependent on the success of the Merger and there can be no assurances that the Merger will be successfully consummated. In the event that ARCA does not complete the Merger, it may explore strategic alternatives, including, without limitation, another strategic transaction and/or pursue a dissolution and liquidation of ARCA. See Note 10.

Liquidity and Going Concern

ARCA devotes substantially all of its efforts towards obtaining regulatory approval and raising capital necessary to fund its operations and it is subject to a number of risks associated with clinical research and development, including dependence on key individuals, the development of and regulatory approval of commercially viable products, the need to raise adequate additional financing necessary to fund the development and commercialization of its products, and competition from larger companies. ARCA has not generated revenue to date and has incurred substantial losses and negative cash flows from operations since its inception. ARCA has historically funded its operations through issuances of common and preferred stock.

ARCA believes that its current cash and cash equivalents as of March 31, 2024 will be sufficient to fund its operations through the middle of fiscal year 2025. The future viability of ARCA beyond that point is dependent on the results of the strategic review process and its ability to raise additional capital to fund its operations. ARCA expects to continue to incur costs and expenditures in connection with the process of evaluating strategic alternatives. There can be no assurance, however, that ARCA will be able to successfully consummate any particular strategic transaction, including the Merger Agreement. The process of continuing to evaluate these strategic options may be very costly, time-consuming and complex and ARCA has incurred, and may in the future incur, significant costs related to this continued evaluation, such as legal, accounting and advisory fees and expenses and other related charges, see Note 10 regarding the Merger Agreement. Should ARCA pursue additional clinical trials for its product candidates, it will have to raise additional capital for clinical trials of Gencaro. ARCA may not be able to raise sufficient capital on acceptable terms, or at all, to continue development of Gencaro or rNAPc2 or to otherwise continue operations and may not be

(1) ARCA and Summary of Significant Accounting Policies (cont.)

able to execute any strategic transaction. Changing circumstances may cause ARCA to consume capital significantly faster or slower than currently anticipated. ARCA has based these estimates on assumptions that may prove to be wrong, and it could exhaust its available financial resources sooner than it currently anticipates. Depending on the results of the strategic review process, ARCA may have to raise additional capital for clinical trials of Gencaro and to fund its operations. ARCA may not be able to raise sufficient capital on acceptable terms, or at all, to continue development of Gencaro or rNAPc2 or to otherwise continue operations and may not be able to execute any strategic transaction.

ARCA's liquidity, and its ability to raise additional capital or complete any strategic transaction, depends on a number of factors, including, but not limited to, the following:

- the timing and outcome of the strategic review process;
- the consummation of any particular strategic transactions, including the Merger;
- the costs and timing for the potential additional clinical trials in order to gain possible regulatory approval for Gencaro, rNAPc2, or any other product candidate;
- the market price of ARCA's stock and the availability and cost of additional equity capital from existing and potential new investors;
- ARCA's ability to retain the listing of its common stock on the Nasdaq Capital Market;
- general economic and industry conditions affecting the availability and cost of capital, including as a result of deteriorating market conditions due to investor concerns regarding inflation, adverse developments affecting the financial services industry, continued hostilities between Russia and Ukraine and Hamas' attack against Israel and the ensuing conflict;
- ARCA's ability to control costs associated with its operations;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- the terms and conditions of ARCA's existing collaborative and licensing agreements.

The sale of additional equity or convertible debt securities would likely result in substantial additional dilution to ARCA's stockholders. If ARCA raises additional funds through the incurrence of indebtedness, the obligations related to such indebtedness would be senior to rights of holders of ARCA's capital stock and could contain covenants that would restrict ARCA's operations. ARCA also cannot predict what consideration might be available, if any, to it or its stockholders, in connection with any strategic transaction. Should strategic alternatives or additional capital not be available to ARCA, or not be available on acceptable terms, ARCA may be unable to realize value from its assets and discharge its liabilities in the normal course of business which may, among other alternatives, cause ARCA to further delay, substantially reduce or discontinue operational activities to conserve its cash resources.

Basis of Presentation

The accompanying unaudited financial statements of ARCA were prepared in accordance with generally accepted accounting principles for interim financial information and pursuant to Regulation S-X. Accordingly, these financial statements do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America ("GAAP") for complete financial statements. In the opinion of management, these financial statements include all normal and recurring adjustments considered necessary for a fair presentation of these interim financial statements. The results of operations for the three months ended March 31, 2024 are not necessarily indicative of results expected for the full year ending December 31, 2024. ARCA has generated no revenue to date and its activities have consisted of seeking regulatory approval, research and development, exploring

(1) ARCA and Summary of Significant Accounting Policies (cont.)

strategic alternatives for further developing and commercializing Gencaro and rNAPc2, and raising capital. These unaudited financial statements should be read in conjunction with the audited financial statements and footnotes thereto for the year ended December 31, 2023 included elsewhere in this proxy statement/prospectus. Amounts presented are rounded to the nearest thousand, where indicated, except per share data and par values.

Concentrations of Credit Risk

Financial instruments that potentially subject ARCA to significant concentrations of credit risk consist primarily of cash and cash equivalents. ARCA has no off-balance-sheet concentrations of credit risk, such as foreign exchange contracts, option contracts, or foreign currency hedging arrangements. ARCA maintains cash and cash equivalent balances in the form of bank demand deposits and money market fund accounts with financial institutions that management believes are creditworthy. Such balances may at times exceed the insured amount.

Comprehensive Loss

Comprehensive loss is defined as the change in equity during a period from transactions and other events and/or circumstances from non-owner sources. If ARCA had comprehensive gains (losses), they would be reflected in the statement of operations and comprehensive loss and as a separate component in the statement of stockholders' equity. There were no elements of comprehensive loss during the three months ended March 31, 2024 and 2023.

Leases

ARCA determines if an arrangement is a lease at inception. Operating leases are included in right-of-use ("ROU") asset — operating and lease obligations are included in accrued expenses and other liabilities and operating lease liability on ARCA's March 31, 2024 and December 31, 2023 balance sheets.

ROU lease assets represent ARCA's right to use an underlying asset for the lease term and lease obligations represent ARCA's obligation to make lease payments arising from the lease. Operating ROU lease assets are recognized at the commencement date based on the present value of lease payments over the lease term. As ARCA's leases do not provide an implicit rate, ARCA uses its incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. ARCA's lease terms may include options to extend or terminate a lease when it is reasonably certain that ARCA will exercise that option. Lease expense for lease payments is recognized on a straight-line basis over the lease term.

Accrued Outsourcing Expenses

As part of the process of preparing its financial statements, ARCA is required to estimate accrued outsourcing expenses. This process involves identifying services that third parties have performed on ARCA's behalf and estimating the level of service performed and the associated cost incurred for these services as of the balance sheet date. Examples of estimated accrued outsourcing expenses include contract service fees, such as fees payable to contract manufacturers in connection with the production of materials related to ARCA's drug product, and service fees and pass through costs from clinical research organizations. ARCA develops estimates of liabilities using its judgment based upon the facts and circumstances known at the time.

Recent Accounting Pronouncements

ARCA reviewed recently issued accounting pronouncements and concluded that they were either not applicable or not expected to have a significant impact to the financial statements.

(2) Net Loss Per Share

ARCA calculates basic loss per share by dividing net loss by the weighted average common shares outstanding during the period. Diluted loss per share is computed by dividing net loss by the weighted average number of common shares outstanding during the period increased to include, if dilutive, the number of additional common shares that would have been outstanding if the potential common shares had been issued. ARCA's potentially dilutive shares include stock options and restricted stock units.

Because ARCA reported a net loss for the three months ended March 31, 2024 and 2023, all potentially dilutive shares of ARCA common stock have been excluded from the computation of the dilutive net loss per share for all periods presented. Such potentially dilutive shares of ARCA common stock consist of the following:

	March 31,	
	2024	2023
Potentially dilutive securities, excluded:		
Outstanding stock options	645,845	664,857
Unvested restricted stock units	—	91,000
	645,845	755,857

(3) Fair Value Disclosures

There were no marketable securities as of March 31, 2024 or December 31, 2023.

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date ("exit price"). Inputs used to measure fair value are classified into the following hierarchy:

- Level 1 — Unadjusted quoted prices in active markets for identical assets or liabilities. ARCA's Level 1 assets consist of money market investments. ARCA does not have any Level 1 liabilities.
- Level 2 — Unadjusted quoted prices in active markets for similar assets or liabilities; unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active; or inputs other than quoted prices that are observable for the asset or liability. ARCA does not have any Level 2 assets or liabilities.
- Level 3 — Unobservable inputs for the asset or liability. ARCA does not have any Level 3 assets or liabilities.

As of March 31, 2024 and December 31, 2023, ARCA had $35.9 million and $37.4 million, respectively, of cash equivalents consisting of money market funds with original maturities of 90 days or less. ARCA has the ability to liquidate these investments without restriction. ARCA determines fair value for these money market funds with Level 1 inputs through quoted market prices. There were no transfers of assets between fair value hierarchy levels during the three months ended March 31, 2024.

Fair Value of Other Financial Instruments

The carrying amount of other financial instruments, including accounts payable, approximated fair value due to their short maturities.

(4) Property and Equipment

Property and equipment consist of the following (in thousands):

	Estimated Life	March 31, 2024	December 31, 2023
Computer equipment	3 years	$ 39	$ 39
Lab equipment	5 years	130	130
Furniture and fixtures	5 years	37	37
Computer software	3 years	16	16
		222	222
Accumulated depreciation and amortization		(215)	(212)
Property and equipment, net		$ 7	$ 10

For the three months ended March 31, 2024 and 2023, depreciation and amortization expense was $3,000 and $4,000 respectively.

(5) Related Party Arrangements

Transactions with ARCA's Former President and Chief Executive Officer

ARCA has entered into unrestricted research grants with its former President and Chief Executive Officer's academic research laboratory at the University of Colorado. Funding of any unrestricted research grants is contingent upon ARCA's financial condition, and can be deferred or terminated at ARCA's discretion. There was no expense under these arrangements for the three months ended March 31, 2024. Total expense under these arrangements for the three months ended March 31, 2023 was $108,000. In December 2023, ARCA made a payment of $125,000 for the grant period July 2022 through December 2023 under these arrangements. In April 2024, the President and Chief Executive Officer resigned, see Note 10.

(6) Commitments and Contingencies

ARCA has or is subject to the following commitments and contingencies.

Employment Agreements and Reduction of Workforce

ARCA maintains employment agreements with several key executive employees. The agreements may be terminated at any time by ARCA with or without cause upon written notice to the employee, and entitle the employee to wages in lieu of notice for periods not exceeding one calendar year from the date of termination without cause or by the employee for good reason. Certain of these agreements also provide for payments to be made under certain conditions related to a change in control of ARCA.

In December 2022, ARCA's Board of Directors approved retention bonuses for certain employees, subject to continued employment with ARCA through the earlier of a change in control of ARCA or certain clinical development decisions totaling $265,000. In November 2023, the retention bonuses were amended to increase the aggregate amount of the retention bonus by 50% and in order to assist with tax obligations associated with the vesting of certain Company restricted stock unit awards in December 2023, a total of $86,000 was paid in December 2023. As of March 31, 2024, the unpaid retention bonuses totaled $311,000, none of which was accrued as of March 31, 2024, since there had not been a change in control or clinical development decision. In April 2024, the retention bonuses were again amended to increase the aggregate amount of the retention bonus, with the unpaid retention bonus increasing to $444,000. See Note 10.

ARCA and Christopher D. Ozeroff, the former Secretary, Senior Vice President and General Counsel of ARCA mutually agreed to conclude Mr. Ozeroff's employment effective March 31, 2023. Pursuant to Mr. Ozeroff's existing employment agreement, as previously amended, ARCA provided Mr. Ozeroff severance benefits pursuant to the terms

(6) Commitments and Contingencies (cont.)

of his existing employment agreement with ARCA, as previously amended. The severance benefits included severance payments and reimbursement to cover out-of-pocket costs to continue group health insurance benefits under COBRA, whether he elects or is eligible to receive COBRA. During the year ended December 31, 2023, ARCA recorded an expense of $159,000 for these severance benefits, none of which remains unpaid.

ARCA and Dr. Michael Bristow, former President, Chief Executive Officer and a member of the board of directors of ARCA mutually agreed to conclude Dr. Bristow's employment and service as a director, effective April 3, 2024. See Note 10.

Operating Leases

On August 29, 2020 ARCA entered into a lease agreement for approximately 5,200 square feet of office facilities in Westminster, Colorado which serves as its primary business office effective October 1, 2020 ("October 2020 Lease"). The lease term was 42 months beginning October 1, 2020. In March 2024, ARCA entered into an amendment to extend the lease term six (6) months through September 2024. If ARCA elects to stay in the property after September 2024, it will pay rent month to month equal to 125% of the base rent paid in September 2024. In June 2021, ARCA entered into a sublease agreement for approximately 3,000 square feet of additional office facilities in its primary business office ("2021 Lease"). The sublease term was 29 months and terminated in October 2023. The leases include real estate taxes and insurance, which is not a lease component and is not included in the lease obligation. In addition, common area maintenance charges are based on actual costs incurred and are a non-lease component that is not included in the lease obligation.

Future minimum commitments due under the October 2020 Lease agreement, as amended, as of March 31, 2024 are as follows (in thousands):

2024	$ 49
Total remaining lease payments	49
Less: imputed lease interest	(1)
Less: Current portion	(48)
Operating lease liability, net of current portion	$ —

Rent expense, which is included in general and administrative expense, for the three months ended March 31, 2024 and 2023 was $22,000 and $31,000, respectively.

As of March 31, 2024, the lease liability was $48,000, it is all current and is included in accrued expenses and other liabilities in the accompanying balance sheet. Cash paid for amounts included in the measurement of lease liabilities and the operating cash flows from operating leases for the three months ended March 31, 2024 and 2023 were $23,000 and $33,000, respectively. The weighted-average remaining lease term for the operating lease as of March 31, 2024 is 0.5 years. The discount rate for the operating lease is 7%.

Patent Agreement

In July 2021, ARCA entered into a patent assignment agreement (the "Agreement") with the University Medical Center of Johannes Gutenberg University Mainz, Germany.

Under the terms of the Agreement, ARCA received exclusive world-wide patent rights relating to the use of rNAPc2 as a potential treatment for COVID-19, and other indications, based on the research and discoveries from Univ.-Prof. Dr. Wolfram Ruf, the Scientific Director and Alexander von Humboldt Professor at the Center for Thrombosis and Hemostasis ("CTH") of the University Medical Center Mainz, and his collaborators. ARCA has upfront and potential milestone obligations to the University Medical Center Mainz that could total approximately €1.6 million and royalty obligations in the low single digit range, if rNAPc2 receives regulatory approval and is commercialized. The term of the Agreement extends to the date of expiration of the last to expire of any of the assigned patents.

(7) Equity Financings

At the Market Equity Financing

In 2020, ARCA entered into a Capital on Demand™ Sales Agreement (the "Sales Agreement") with JonesTrading Institutional Services LLC, as agent ("JonesTrading"), pursuant to which ARCA may offer and sell, from time to time through JonesTrading, shares of ARCA's common stock, par value $0.001 per share ("ARCA common stock").

In 2021, ARCA amended the 2020 Sales Agreement and the amount available for the offering under its prospectus to ARCA's registration statement on Form S-3 (No. 333-254585), which expired in March 2024. In April 2024, ARCA terminated the Sales Agreement in accordance with its terms.

No sales were made under the Sales Agreement in 2024 or 2023.

Merger Agreement

See "Financing Transaction" discussion in Note 10 below.

(8) Share-based Compensation

For the three months ended March 31, 2024 and 2023, ARCA recognized the following non-cash, share-based compensation expense in the statements of operations (in thousands):

	Three Months Ended March 31,	
	2024	2023
General and administrative	$ 114	$ 163
Research and development	—	41
Total	$ 114	$ 204

Stock option transactions for the three months ended March 31, 2024 under ARCA's stock incentive plans were as follows:

	Options Outstanding		
	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (in years)
Options outstanding – December 31, 2023	616,707	$ 4.76	7.35
Granted	42,000	1.64	
Exercised	—	—	
Forfeited and cancelled	(12,862)	17.45	
Options outstanding – March 31, 2024	645,845	$ 4.30	6.82
Options exercisable – March 31, 2024	502,517	$ 4.71	6.55
Options vested and expected to vest – March 31, 2024	645,816	$ 4.30	6.82

(9) Income Taxes

In accordance with GAAP, a valuation allowance should be provided if it is more likely than not that some or all of ARCA's deferred tax assets will not be realized. ARCA's ability to realize the benefit of its deferred tax assets will depend on the generation of future taxable income. Due to the uncertainty of future profitable operations and taxable income, ARCA has recorded a full valuation allowance against its net deferred tax assets. ARCA believes its tax filing positions and deductions related to tax periods subject to examination will be sustained upon audit and, therefore, has no reserve for uncertain tax positions.

(10) Subsequent Events

Merger Agreement

On April 3, 2024, ARCA, Merger Sub I, Merger Sub II and Oruka, entered into the Merger Agreement, pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Merger Sub I will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the merger and as part of the same overall transaction, the surviving corporation in the First Merger will merge with and into Merger Sub II with Merger Sub II continuing as a wholly owned subsidiary of ARCA and the surviving entity of the merger. The Merger is intended to qualify for federal income tax purposes as a tax-free reorganization under the provisions of Section 368(a) of the Internal Revenue Code of 1986, as amended.

Subject to the terms and conditions of the Merger Agreement, at the closing of the First Merger, (a) each then-outstanding share of Oruka common stock (including shares of Oruka common stock issued in the financing transaction described below) will be converted solely into the right to receive a number of shares of ARCA common stock calculated in accordance with the Merger Agreement (the "Exchange Ratio"), (b) each then-outstanding share of Oruka preferred stock will be converted into the right to receive a number of shares of Series B Preferred Stock (as defined below) of ARCA, calculated in accordance with the Merger Agreement (c) each then-outstanding option to purchase Oruka common stock will be assumed by ARCA, subject to adjustment as set forth in the Merger Agreement and (d) each then-outstanding warrant to purchase shares of Oruka common stock will be converted into a warrant to purchase shares of ARCA common stock, subject to adjustment as set forth in the Merger Agreement and form of warrant. Under the terms of the Merger Agreement, prior to the closing of the transaction, the Board will accelerate the vesting of all equity awards of ARCA then outstanding but not then vested or exercisable, and cancel each option (the "Out of the Money Options") to acquire shares of ARCA common stock with an exercise price per share greater than the volume weighted average closing trading price of a share of ARCA common stock on The Nasdaq Stock Market LLC ("Nasdaq") for the five (5) consecutive trading days ending three (3) days immediately prior to the closing date of the First Merger (the "Parent Closing Price"), in each case, in accordance with the terms of the Merger Agreement. At the closing of the First Merger, each option to acquire shares of ARCA common stock with an exercise price less than or equal to the Parent Closing Price will be cancelled and converted into the right to receive an amount in cash, without interest, equal to the Parent Closing Price less the exercise price of such option.

Under the Exchange Ratio formula in the Merger Agreement, upon the closing of the First Merger, on a pro forma basis and based upon the number of shares of ARCA common stock expected to be issued in the First Merger, pre-First Merger Oruka stockholders (including Oruka stockholders issued shares of Oruka common stock and pre-funded warrants in the financing transaction described below) will own approximately 97.62% of the combined company and pre-First Merger ARCA stockholders will own approximately 2.38% of the combined company. For purposes of calculating the Exchange Ratio, (i) shares of ARCA common stock underlying warrants and other rights to receive shares (other than Options to acquire shares of ARCA common stock, to the extent cancelled at or prior to closing of the First Merger in accordance with the Merger Agreement) outstanding as of immediately prior to the closing of the First Merger will be deemed to be outstanding, and (ii) all shares of Oruka common stock underlying outstanding Oruka stock options and warrants will be deemed to be outstanding. The Exchange Ratio will be

(10) Subsequent Events (cont.)

adjusted to the extent that ARCA's net cash at closing is less than $5.0 million and will be based on the amount of proceeds actually received by Oruka in the financing transaction described below, as further described in the Merger Agreement.

In addition, prior to the closing of the First Merger, ARCA expects to declare a cash dividend to the pre-First Merger ARCA stockholders equal in the aggregate to ARCA's reasonable, good faith approximation of the amount by which ARCA's net cash (as determined pursuant to the Merger Agreement) will exceed $5,000,000.

In connection with the Merger, ARCA is required to seek the approval of its stockholders to, among other things, (a) issue shares of ARCA common stock issuable in connection with the First Merger (including the shares of ARCA common stock issuable under the Series B Preferred Stock) under the rules of Nasdaq, and (b) amend its amended and restated certificate of incorporation, to (i) effect a reverse stock split of ARCA common stock (if deemed necessary by ARCA and Oruka), (ii) increase the number of shares of ARCA common stock that ARCA is authorized to issue, and (iii) such other changes as are mutually agreeable to ARCA and Oruka (the "ARCA Voting Proposals").

Each of ARCA and Oruka has agreed to customary representations, warranties and covenants in the Merger Agreement, including, among others, covenants relating to (1) using commercially reasonable efforts to obtain the requisite approval of its stockholders, (2) non-solicitation of alternative acquisition proposals, (3) the conduct of their respective businesses during the period between the date of signing the Merger Agreement and the closing of the Merger, (4) ARCA using commercially reasonable efforts to maintain the existing listing of the ARCA common stock on Nasdaq and cause the shares of ARCA common stock to be issued in connection with the First Merger to be approved for listing on Nasdaq prior to the closing of the First Merger, and (5) ARCA filing with the U.S. Securities and Exchange Commission (the "SEC") and causing to become effective a registration statement to register shares of ARCA common stock to be issued in connection with the First Merger, except as set forth in the Merger Agreement (the "Registration Statement").

Consummation of the Merger is subject to certain closing conditions, including, among other things, (1) approval by ARCA stockholders of the ARCA Voting Proposals, (2) approval by the requisite Oruka stockholders of the adoption and approval of the Merger Agreement and the transactions contemplated thereby, (3) Nasdaq's approval of the initial listing application to be submitted in connection with the First Merger, (4) the effectiveness of the Registration Statement, (5) the expiration of any applicable waiting periods (or extensions thereof) under the Hart Scott-Rodino Antitrust Improvements Act of 1976, as amended, (6) the subscription agreements (described below) being in full force and effect providing for the receipt of proceeds of not less than $175,000,000 (including in the proceeds any notes contributed as consideration in the financing transaction described below) and (7) to the extent ARCA has declared the cash dividend described above, ARCA delivering the aggregate amount distributable to the pre-First Merger ARCA stockholders to ARCA's transfer agent for further distribution to the pre-First Merger ARCA stockholders. Each party's obligation to consummate the Merger is also subject to other specified customary conditions, including regarding the accuracy of the representations and warranties of the other party, subject to the applicable materiality standard, and the performance in all material respects by the other party of its obligations under the Merger Agreement required to be performed on or prior to the date of the closing of the Merger.

The Merger Agreement contains certain termination rights of each of ARCA and Oruka. Upon termination of the Merger Agreement under specified circumstances, ARCA and Oruka may each be required to pay the other party a termination fee of $440,000.

Pursuant to a Certificate of Designation of Preferences, Rights and Limitations of the Series B Non-Voting Convertible Preferred Stock to be filed by ARCA with the Secretary of State of the State of Delaware (the "Certificate of Designation") in connection with the Merger Agreement and the transactions thereunder, ARCA will establish the terms of a new series of preferred stock of ARCA designated as Series B Non-Voting Convertible Preferred Stock, par value $0.001 per share (the "Series B Preferred Stock"). Holders of the Series B Preferred Stock will be entitled to receive dividends on shares of Series B Preferred Stock equal to, on an as-if-converted-to-ARCA common stock

(10) Subsequent Events (cont.)

basis, and in the same form as dividends actually paid on shares of the ARCA common stock. Except as otherwise required by the Certificate of Designation or law, the Series B Preferred Stock will not have voting rights. However, as long as any shares of Series B Preferred Stock are outstanding, ARCA will not, without the affirmative vote of the holders of a majority of the then outstanding shares of the Series B Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series B Preferred Stock, (b) alter or amend the Certificate of Designation, (c) amend its certificate of incorporation, bylaws or other charter documents in any manner that adversely affects any rights of the holders of the Series B Preferred Stock, (d) file any articles of amendment, certificate of designations, preferences, limitations and relative rights of any series of Preferred Stock (as defined in the Certificate of Designation), if such action would adversely alter or change the preferences, rights, privileges or powers of, or restrictions provided for the benefit of the Series B Preferred Stock, (e) issue further shares of the Series B Preferred Stock or increase or decrease (other than by conversion) the number of authorized shares of the Series B Preferred Stock, (f) at any time while at least 30% of the originally issued Series B Preferred Stock remains issued and outstanding, consummate either (A) a Fundamental Transaction (as defined in the Certificate of Designation) or (B) any merger or consolidation of ARCA or other business combination in which the stockholders of ARCA immediately before such transaction do not hold at least a majority of the capital stock of ARCA immediately after such transaction, or (f) enter into any agreement with respect to any of the foregoing. The Series B Preferred Stock does not have a preference upon any liquidation, dissolution or winding-up of ARCA.

Following the closing of the First Merger, each share of Series B Preferred Stock then outstanding shall be convertible, at any time and from time to time, at the option of the holder of the Series B Preferred Stock, into a number of shares equal to 1,000 shares of ARCA common stock, subject to certain limitations, including that a holder of Series B Preferred Stock is prohibited from converting shares of Series B Preferred Stock into shares of ARCA common stock if, as a result of such conversion, such holder, together with its affiliates, would beneficially own more than a specified percentage (initially set at 9.99%) of the total number of shares of ARCA common stock issued and outstanding immediately after giving effect to such conversion.

At the effective time of the First Merger (the "First Effective Time"), the combined company's board of directors is expected to consist of five (5) members, all of whom will be designated by Oruka. Upon the closing of the transaction, the combined company will be led by Oruka's chief executive officer.

Financing Transaction

Concurrently with the execution and delivery of the Merger Agreement, certain parties have entered into a subscription agreements with Oruka, pursuant to which they have agreed, subject to the terms and conditions of such agreements, to purchase immediately prior to the consummation of the First Merger, shares of Oruka common stock and pre-funded warrants to purchase shares of Oruka common stock (together, the "PIPE Securities") for an aggregate purchase price of approximately $275.0 million. The consummation of the transactions contemplated by such agreements is conditioned on the satisfaction or waiver of the conditions set forth in the Merger Agreement and in the subscription agreement. Shares of Oruka common stock and pre-funded warrants to purchase shares of Oruka common stock issued pursuant to this financing transaction will be converted into shares of ARCA common stock and pre-funded warrants to acquire shares ARCA common stock, in accordance with the Exchange Ratio and the Merger Agreement.

Separation of Michael Bristow, M.D., President, Chief Executive Officer and Director

Effective April 3, 2024, ARCA and Dr. Michael Bristow, President, Chief Executive Officer and a member of the Board mutually agreed to conclude Dr. Bristow's employment and service as a director.

In connection with Dr. Bristow's separation, ARCA and Dr. Bristow entered into a separation agreement (the "Separation Agreement") on April 3, 2024. Pursuant to the terms of the Separation Agreement, ARCA provided to Dr. Bristow a lump sum payment equal to (i) twelve (12) months of Dr. Bristow's base salary as of the last date of his employment and (ii) a cash payment of $25,000, less applicable withholdings. The severance benefits were conditioned on the non-revocation by Dr. Bristow of a legal release of claims.

(10) Subsequent Events (cont.)

ARCA and Dr. Bristow entered into a consulting agreement, effective April 3, 2024 (the "Consulting Agreement"), pursuant to which Dr. Bristow is providing certain consulting services provided for in the Consulting Agreement to ARCA until the earlier of (i) the completion of services under the Consulting Agreement, (ii) a termination in accordance with the terms of the Consulting Agreement, and (iii) upon a Change of Control (as defined in ARCA's 2020 Equity Incentive Plan (the "Plan")). Pursuant to the Consulting Agreement, Dr. Bristow provision of services under the Consulting Agreement are deemed to be a Continuous Service (as defined in the Plan) and, as a result, his equity awards under the Plan continue to vest during the term of the Consulting Agreement.

Appointment of Thomas Keuer as President

Effective as of April 3, 2024, the Board appointed Thomas A. Keuer, ARCA's Chief Operating Officer, to serve as ARCA's President and principal executive officer. Mr. Keuer has been with ARCA since 2006, and as its Chief Operating Officer for the last nine years, a position he will continue to serve in. Mr. Keuer will not receive any additional compensation in connection with his appointment as President and principal executive officer. Mr. Keuer's position will end upon closing of the merger transaction with Oruka Therapeutics, Inc. as previously disclosed on a Current Report on Form 8-K filed with the SEC on April 3, 2024.

Second Amendment to Retention Bonus Letter of Thomas A. Keuer and C. Jeffrey Dekker

On April 20, 2024, the board of directors of ARCA approved the second amendment of certain retention bonus letters between ARCA and each of Thomas A. Keuer and C. Jeffrey Dekker to increase the aggregate amount of the retention bonus with respect to each such executive to $200,000. The remaining portion of the retention bonus with respect to Thomas A. Keuer and C. Jeffrey Dekker, consisting of $165,000, will become payable consistent with the original terms of the applicable retention bonus letter and first amendment to retention bonus letter. Any payment related to the retention bonuses of Thomas A. Keuer and C. Jeffrey Dekker will be paid by ARCA via payroll within 30 business days of the date of occurrence of the applicable "Payment Event Date" (as such term is otherwise defined in the applicable second amendment to the retention bonus letter). Each such retention bonus letter and first amendment to retention bonus letter will otherwise remain subject to their original terms and conditions.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of Oruka Therapeutics, Inc.

Opinion on the Financial Statement — Balance Sheet

We have audited the accompanying balance sheet of Oruka Therapeutics, Inc. (the "Company") as of February 6, 2024, including the related notes (collectively referred to as the "financial statement"). In our opinion, the financial statement presents fairly, in all material respects, the financial position of the Company as of February 6, 2024 in conformity with accounting principles generally accepted in the United States of America.

Substantial Doubt about the Company's Ability to Continue as a Going Concern

The accompanying financial statement has been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statement, the Company has not generated any revenue from product sales or other sources and has incurred significant operating losses and negative cash flows from operations since inception, which raises substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The financial statement does not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

The financial statement is the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statement based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of this financial statement in accordance with the standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statement is free of material misstatement, whether due to error or fraud.

Our audit included performing procedures to assess the risks of material misstatement of the financial statement, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statement. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statement. We believe that our audit provides a reasonable basis for our opinion.

Critical Audit Matters

Critical audit matters are matters arising from the current period audit of the financial statement that were communicated or required to be communicated to the audit committee and that (i) relate to accounts or disclosures that are material to the financial statement and (ii) involved our especially challenging, subjective, or complex judgments. We determined there are no critical audit matters.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts
May 13, 2024

We have served as the Company's auditor since 2024.

ORUKA THERAPEUTICS, INC.
BALANCE SHEET
(In thousands, except share amounts)

	February 6, 2024
ASSETS	
Current Assets	
Subscription receivable	$ 1
Total assets	**$ 1**
Commitments and contingencies (Note 5)	
STOCKHOLDERS' EQUITY	
Series A convertible preferred stock, $0.0001 par value, 20,000,000 shares authorized, no shares issued and outstanding as of February 6, 2024	$ —
Common stock, $0.0001 par value, 65,000,000 shares authorized, 5,596,658 issued and outstanding as of February 6, 2024	1
Total stockholders' equity	**$ 1**

The accompanying notes are an integral part of this financial statement.

ORUKA THERAPEUTICS, INC.
NOTES TO FINANCIAL STATEMENT

1. Nature of the Business and Basis of Presentation

Background and Basis of Presentation

Oruka Therapeutics, Inc. ("Oruka" or the "Company") was established and incorporated under the laws of the state of Delaware on February 6, 2024. Oruka was founded by Paragon Therapeutics, Inc. ("Paragon"). The Company currently operates as a virtual company, and thus, does not maintain a corporate headquarters or other significant facilities. Oruka was formed to develop biologics to optimize the treatment of inflammatory skin diseases.

The Company is subject to risks and uncertainties common to early-stage companies in the biopharmaceutical industry, including, but not limited to, completing preclinical and clinical trials, obtaining regulatory approval for product candidates, development by competitors of new technological innovations, dependence on key personnel, the ability to attract and retain qualified employees, reliance on third-party organizations, protection of proprietary technology, compliance with government regulations, product liability, uncertainty of market acceptance of products and the ability to raise additional capital to fund operations.

The Company's potential products will require approval from the U.S. Food and Drug Administration or comparable foreign authorities prior to the commencement of commercial sales. There can be no assurance that the Company's potential products will receive all the required approvals. In addition, there can be no assurance that the Company's potential products, if approved, will be accepted in the marketplace, nor can there be any assurance that any future products can be developed or manufactured at an acceptable cost and with appropriate performance characteristics, or that such products will be successfully marketed, if at all.

The financial statement and accompanying notes have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP").

Liquidity

The accompanying financial statement has been prepared on the basis that the Company is a going concern, which contemplates, among other things, the realization of assets and satisfaction of liabilities in the normal course of business. As of February 6, 2024, the Company had no cash.

The Company will devote substantially all of its resources to advancing the development of its portfolio of programs, organizing and staffing the Company, business planning, raising capital, and providing general and administrative support for these operations. Current and future programs will require significant research and development efforts, including preclinical and clinical trials and regulatory approvals to commercialization. These efforts require significant amounts of additional capital, adequate personnel, and infrastructure. Even if the Company's development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales. If the Company obtains regulatory approval for any of its product candidates and starts to generate revenue, it expects to incur significant expenses related to developing its internal commercialization capability to support product sales, marketing, and distribution.

As a result, the Company will need substantial additional funding to support its operating activities as it advances its potential product candidates through development, seeks regulatory approval and prepares for and, if any of its product candidates are approved, proceeds to commercialization. Until such time as the Company can generate significant revenue from product sales, if ever, the Company expects to finance its operating activities through a combination of equity offerings and debt financings. Adequate funding may not be available to the Company on acceptable terms, or at all.

If the Company is unable to obtain additional funding, the Company will assess its capital resources and may be required to delay, reduce the scope of or eliminate some or all of its planned operations, which may have a material adverse effect on the Company's business, financial condition, results of operations and ability to operate as a going concern. The financial statement does not include any adjustments that may result if the Company is not able to continue as a going concern.

The Company has not generated any revenue from product sales or other sources and has incurred significant operating losses and negative cash flows from operations since inception.

In March 2024, the Company received $3.0 million in proceeds from the sale of Series A convertible preferred stock and $25.0 million in proceeds from the sale of an unsecured convertible promissory note, both of which were related party transactions (see Note 7 *Subsequent Events*).

ARCA biopharma, Inc., a Delaware corporation ("ARCA"), and the Company entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement") on April 3, 2024, pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Atlas Merger Sub Corp, a Delaware corporation ("First Merger Sub"), will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the merger (the "First Merger"), and Oruka will merge with and into Atlas Merger Sub II, LLC, a Delaware limited liability company ("Second Merger Sub" and together with First Merger Sub, "Merger Subs"), with Second Merger Sub being the surviving entity of the merger (the "Second Merger" and, together with the First Merger, the "Merger"). In connection with the Merger, Second Merger Sub will change its corporate name to "Oruka Therapeutics Operating Company, LLC" and ARCA will change its name to "Oruka Therapeutics, Inc." ARCA following the Merger is referred to herein as the "combined company." The combined company will be led by Oruka's management team and will remain focused on developing biologics to optimize the treatment of inflammatory skin diseases.

Concurrent with the execution of the Merger Agreement, the Company entered into a subscription agreement with certain investors to which the Company agreed to issue and sell to investors in a private placement financing (the "Private Placement") shares and pre-funded warrants of the Company's common stock at an estimated purchase price of $5.80 per share of common stock and $5.79 per warrant for gross proceeds of approximately $275.0 million, which will precede the closing of the Merger Agreement transaction. Shares of the Company's common stock and pre-funded warrants to purchase shares of the Company's common stock issued pursuant to the Private Placement will be converted into the right to receive shares of ARCA common stock and pre-funded warrants to purchase ARCA common stock, respectively, in accordance with the exchange ratio at the effective time of the close of the transaction. The proceeds from the Private Placement are expected to advance the Company's pipeline, business development activities, working capital, and other general corporate purposes.

However, the agreements are subject to the satisfaction of customary closing conditions, and there are no assurances that such conditions will be achieved nor that such financing or other strategic transactions will be available on acceptable terms, or at all. If the Merger Agreement is terminated under certain circumstances, ARCA could be required to pay Oruka a termination fee of $0.4 million or Oruka could be required to pay ARCA a termination fee of $0.4 million. Based on its expectation of continuing operating losses for the foreseeable future, as of May 13, 2024, the date the Company's financial statement is available to be issued, the Company has concluded there is substantial doubt about its ability to continue as a going concern for at least twelve months from the date the financial statement is available to be issued.

2. Summary of Significant Accounting Policies

Subscription receivable

The Company accounts for any notes received in exchange for common stock as a subscription receivable, provided the note underlying the receivable is paid prior to the date the financial statement is available to be issued.

3. Common Stock

As of February 6, 2024, the Company has the authority to issue a total of 65,000,000 shares of common stock at a par value of $0.0001. As of February 6, 2024, 5,596,658 shares of common stock were issued and outstanding for a nominal consideration, which was received in March 2024, prior to the date the financial statement is available to be issued. Each share of common stock entitles the holder to one vote for each share of common stock held of record by such holder on all matters on which stockholders generally are entitled to vote. The holders of common stock are entitled to receive dividends, if any, as declared by the Company's Board of Directors. Upon dissolution, liquidation or winding up of the Company, the holders of shares of common stock, subject to the rights of the holders of any outstanding series of preferred stock, shall be entitled to receive the assets of the Company available for distribution to its stockholders ratably in proportion to the number of shares held.

4. Related Party Transactions

The Company issued 5,596,658 shares of common stock, through a series of contribution agreements, to Paragon, Paruka Holding, LLC ("Paruka"), an entity formed by Paragon as a vehicle to hold equity in the Company, and Oruka Advisors LLC ("Oruka Advisors"), an entity formed by Paragon as a vehicle to hold equity in the Company, as part of its common stock subscription agreement with such entities. As of February 6, 2024, Paragon, Paruka and Oruka Advisors each beneficially own approximately 44.7%, 44.7% and 10.6%, respectively, of the Company through their common stock holdings.

5. Commitments and Contingencies

The Company may be subject to legal proceedings that arise in the ordinary course of business. As of February 6, 2024, there were no material proceedings to which the Company was a party, nor did the Company have knowledge of any proceedings threatened against it.

6. Stock-Based Compensation

On February 6, 2024, the Company's Board of Directors approved the 2024 Equity Incentive Plan (the "2024 Plan"), under which the Company may grant stock options, restricted stock awards, restricted stock units, or other stock-based awards to its employees, officers, directors, consultants, and advisors. The Company reserved 372,912 shares of its common stock for issuance under the 2024 Plan. As of February 6, 2024, no awards had been issued under the plan.

7. Subsequent Events

The Company evaluated all events subsequent to February 6, 2024, through May 13, 2024, the date on which the financial statement was available to be issued.

Stock-Based Compensation

In February 2024, the Company's Board of Directors authorized and granted 2,073,387 restricted stock awards at a price of $0.0001 per share to employees of the Company.

In March 2024, the Company's Board of Directors authorized and granted 1,789,974 restricted stock awards at a price of $0.0001 per share to consultants and a director of the Company.

On March 5, 2024, the Company's Board of Directors approved an amendment to the 2024 Plan to increase the number of shares of common stock available for issuance under the 2024 Plan from 372,912 to 872,912.

On March 22, 2024, the Company granted options for the purchase of an aggregate 698,669 shares of common stock, at an exercise price of $2.90 per share.

On May 7, 2024, the Company's Board of Directors approved an amendment to the 2024 Plan to increase the number of shares of common stock available for issuance under the 2024 Plan from 872,912 to 2,063,669.

On May 7, 2024, the Company granted options for the purchase of an aggregate 1,365,000 shares of common stock, at an exercise price of $3.89 per share.

Antibody Discovery and Option Agreements

On March 6, 2024, the Company entered into an Antibody Discovery and Option Agreement with Paragon and Paruka, which was subsequently amended and restated on March 28, 2024, whereby the Company was granted an exclusive, worldwide option, on a research program-by-research program basis, to all of Paragon's right, title and interest in and to the intellectual property ("ORKA-001") resulting from the applicable research program to develop, manufacture and commercialize products directed at the selected target ("IL-23"), with the exception of pursuing ORKA-001 for the treatment of inflammatory bowel disease. Upon signing of the Antibody Discovery and Option Agreement for ORKA-001, a one-time, non-refundable research initiation fee of $0.8 million was due to Paragon. This amount was recognized as a research and development expense during the period ended March 31, 2024, and paid to Paragon in April 2024. The Company is also responsible for 50% of the development costs incurred prior to

March 31, 2024, provided that the Company receives rights to at least one selected IL-23 antibody. As of the date this financial statement is available to be issued, the Company has not received rights to a selected IL-23 antibody and has not paid or accrued the $5.9 million of development costs incurred prior to March 31, 2024. The Company will be responsible for 50% of the ORKA-001 development costs incurred from and after March 31, 2024, through the completion of the IL-23 selection process.

On March 6, 2024, the Company also entered into an Antibody Discovery and Option Agreement with Paragon and Paruka, which was subsequently amended and restated on March 28, 2024, whereby the Company was granted an exclusive, worldwide option, on a research program-by-research program basis, to all of Paragon's right, title and interest in and to the intellectual property ("ORKA-002") resulting from the applicable research program to develop, manufacture and commercialize products directed at the selected target ("IL-17"). The Company was also required to reimburse Paragon $3.3 million for development costs related to ORKA-002 incurred by Paragon through December 31, 2023 and certain other development costs related to ORKA-002 incurred by Paragon between January 1, 2024 and March 6, 2024. This amount was recognized as a research and development expenses during the period from February 6 (inception) to March 31, 2024 and accounts payable as of March 31, 2024. The Company paid $3.3 million to Paragon in April 2024. The Company is also responsible for the development costs incurred by Paragon from January 1, 2024 to March 31, 2024 of $0.9 million, which was recognized as a research and development expense in the period from February 6 (inception) to March 31, 2024. The Company will be required to pay Paragon $0.8 million for the research initiation fee related to ORKA-002 within 30 days following finalization of the ORKA-002 research plan as well as for subsequent development costs related to ORKA-002.

As of the date of issuance of the Company's financial statement, the Company has not exercised its options with respect to ORKA-001 or ORKA-002. For each of these agreements, if the Company exercises its options, it will be required to make non-refundable milestone payments to Paragon of up to $12.0 million upon the achievement of certain clinical development milestones, up to $10.0 million upon the achievement of certain regulatory milestones, as well as tiered royalty payments in the low-to-mid single-digits beginning on the first commercial sale.

Additionally, as part of the Antibody Discovery and Option Agreements, on each of December 31, 2024 and December 31, 2025, the Company will grant Paruka warrants to purchase a number of shares equal to 1.00% of the then outstanding shares of the Company's common stock as of the date of the grant on a fully-diluted basis, with an exercise price equal to the fair market value of the underlying shares on the grant date.

Series A Preferred Stock

On March 6, 2024, the Company issued 20,000,000 shares of Series A convertible preferred stock to Fairmount Healthcare Fund II, L.P. ("Fairmount"), a related party of the Company, at a purchase price of $0.15 per share for gross proceeds of $3.0 million. The Company incurred less than $0.1 million of issuance costs in connection with this transaction.

The holders of Series A convertible preferred stock are entitled to vote, together with the holders of common stock, on all matters submitted to stockholders for a vote. Each holder of outstanding shares of Series A convertible preferred stock is entitled to the number of votes equal to the number of shares of common stock into which the shares of preferred stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter.

Each share of Series A convertible preferred stock is convertible at the option of the holder, at any time, and without the payment of additional consideration by the holder. In addition, each share of Series A convertible preferred stock will be automatically converted into shares of common stock at the applicable conversion ratio then in effect upon either (i) the closing of a firm-commitment underwritten public offering of the Company's common stock at a price of at least $1.00 per share resulting in at least $50.0 million of gross proceeds to the Company, or (ii) the vote or written consent of the holders of a majority of the Preferred Stock, voting as a single class.

The conversion ratio of Series A convertible preferred stock is determined by dividing the Original Issue Price by the Conversion Price in effect at the time of conversion. The Original Issue Price is $0.15 per share for Series A convertible preferred stock (in each case subject to appropriate adjustment in the event of any stock split, stock dividend, combination or other similar recapitalization and other adjustments as set forth in the Company's certificate of incorporation, as amended and restated). The Conversion Price is $0.15 per share for Series A convertible preferred stock.

The Company may not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Company (other than dividends on shares of common stock) unless the holders of the Series A convertible preferred stock then outstanding first receive, or simultaneously receive, a dividend on each outstanding share of Series A convertible preferred stock in an amount at least equal to (i) in the case of a dividend being distributed to common stock or any class or series that is convertible into common stock, the equivalent dividend on an as-converted basis or (ii) in the case of a dividend on any class or series that is not convertible into common stock, a dividend equal to a dividend rate on Series A convertible preferred stock calculated based on the respective Original Issue Price of Series A convertible preferred stock.

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company, or upon the occurrence of a Deemed Liquidation Event (as defined below), the holders of shares of Series A convertible preferred stock then outstanding are entitled to be paid out of the assets or funds of the Company available for distribution to stockholders before any payment is made to the holders of common stock. The holders of Series A convertible preferred stock are entitled to an amount equal to the greater of (i) the applicable Original Issue Price per share of Series A convertible preferred stock, plus any declared but unpaid dividends thereon, or (ii) the amount per share that would have been payable had all shares of Series A convertible preferred stock been converted into common stock immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event. If upon any such liquidation event, the assets or funds of the Company available for distribution to stockholders are insufficient to pay the full amount to which they are entitled, then the holders of shares of Series A convertible preferred stock will share ratably in any distribution of the assets or funds available for distribution in proportion to the respective amounts which would otherwise be payable if it were paid in full.

Unless the holders of a majority in voting power of the then outstanding shares of Series A convertible preferred stock elect otherwise, a Deemed Liquidation Event shall include a merger or consolidation (other than one in which stockholders of the Company own a majority by voting power of the outstanding shares of the surviving or acquiring corporation) or sale, lease, transfer, exclusive license or other disposition of all or substantially all of the Company's assets.

Series A convertible preferred stock does not have redemption rights, except for the contingent redemption upon the occurrence of a Deemed Liquidation Event.

Convertible Notes

On March 6, 2024, the Company entered into a Series A Preferred Stock and Convertible Note Purchase Agreement (the "Purchase Agreement") with Fairmount, whereby the Company issued a convertible note (the "Convertible Note"), with an initial principal amount of $25.0 million, that can be converted into Series A preferred stock (or a Series of preferred shares that is identical in respect to the shares of preferred shares issued in its next equity financing) or shares of the Company's common stock in exchange for proceeds of $25.0 million. The Convertible Note will automatically convert into shares of the Company's common stock upon the closing of a corporate transaction, including the reverse recapitalization transaction, and is otherwise due and payable at the request of the holder at any time. The Convertible Note accrues interest at a rate of 12.0% per annum. All unpaid interest and principal are scheduled to mature on December 31, 2025. Prepayment is not permitted without prior written consent of Fairmount. Pursuant to the Purchase Agreement, the Company has the right to sell and issue additional convertible notes up to an aggregate principal amount equal to $30.0 million, in addition to the $25.0 million of initial principal amount of the Convertible Note.

Oak Grove Lease

On April 12, 2024, the Company entered into a lease agreement with Oak Grove LP ("Oak Grove Lease") for office space located in Menlo Park, California. The lease commencement date is June 15, 2024 with an initial term of 39.5 months. The total lease payment is expected to be $1.4 million over the initial lease term.

ORUKA THERAPEUTICS, INC.
CONDENSED BALANCE SHEETS
(UNAUDITED)
(In thousands, except share and per share amounts)

	March 31, 2024	February 6, 2024
ASSETS		
Current assets		
Cash	$ 27,743	$ —
Subscription receivable	—	1
Total current assets	27,743	1
Other assets	488	—
Total assets	$ 28,231	$ 1
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities		
Accounts payable	$ 4	$ —
Accrued expenses and other current liabilities	1,262	—
Related party accounts payable and other current liabilities	5,899	—
Total current liabilities	7,165	—
Long term liabilities		
Accrued interest payable, related party	214	—
Note payable to related party, noncurrent	24,980	—
Total liabilities	32,359	—
Commitments and contingencies (Note 10)		
Series A convertible preferred stock, $0.0001 par value; 20,000,000 shares authorized as of March 31, 2024 and February 6, 2024; 20,000,000 and no shares issued and outstanding as of March 31, 2024 and February 6, 2024, respectively; liquidation preference of $3,000 and $0 as of March 31, 2024 and February 6, 2024, respectively	2,931	—
Stockholders' deficit:		
Common stock, $0.0001 par value; 65,000,000 shares authorized, 9,460,019 and 5,596,658 shares issued and outstanding as of March 31, 2024 and February 6, 2024, respectively	1	1
Additional paid-in capital	17	—
Accumulated deficit	(7,077)	—
Total stockholders' deficit	(7,059)	1
Total liabilities, convertible preferred stock and stockholders' deficit	$ 28,231	$ 1

The accompanying notes are an integral part of these condensed financial statements.

ORUKA THERAPEUTICS, INC.
CONDENSED STATEMENT OF OPERATIONS AND COMPREHENSIVE LOSS
(UNAUDITED)
(In thousands, except share and per share amounts)

	Period from February 6, 2024 (Inception) to March 31, 2024
Operating expenses	
Research and development[1]	$ 5,193
General and administrative[2]	1,670
Total operating expenses	6,863
Loss from operations	(6,863)
Other expense	
Interest expense[3]	(214)
Total other expense	(214)
Net loss and comprehensive loss	$ (7,077)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.26)
Weighted-average common shares outstanding, basic and diluted	5,596,658

(1) Includes related party amount of $5,051 (see Note 12)
(2) Includes related party amount of $848 (see Note 12)
(3) Includes related party amount of $214 (see Note 12)

The accompanying notes are an integral part of these condensed financial statements.

ORUKA THERAPEUTICS, INC.
CONDENSED STATEMENT OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(UNAUDITED)
(In thousands)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balances as of February 6, 2024 (inception)	—	$ —	5,596,658	$ 1	$ —	$ —	$ 1
Issuance of common stock[(1)]	—	—	3,863,361	—	—	—	—
Issuance of Series A convertible preferred stock, net of issuance costs of $69	20,000,000	2,931	—	—	—	—	—
Stock-based compensation expense	—	—	—	—	17	—	17
Net loss	—	—	—	—	—	(7,077)	(7,077)
Balances as of March 31, 2024	20,000,000	$ 2,931	9,460,019	$ 1	$ 17	$ (7,077)	$ (7,059)

(1) Includes issuance of 3,863,361 restricted stock awards (see Note 7)

The accompanying notes are an integral part of these condensed financial statements.

ORUKA THERAPEUTICS, INC.
CONDENSED STATEMENT OF CASH FLOWS
(UNAUDITED)
(In thousands)

	Period from February 6, 2024 (Inception) to March 31, 2024
Cash flows from operating activities:	
Net loss	$ (7,077)
Adjustments to reconcile net loss to net cash used in operating activities:	
Stock-based compensation expense	85
Non-cash interest expense	1
Changes in operating assets and liabilities:	
Subscription receivable	1
Accounts payable	4
Accrued expenses and other current liabilities	773
Related party accounts payable and other current liabilities	5,831
Accrued interest payable, related party	214
Net cash used in operating activities	(168)
Cash flows from financing activities:	
Proceeds from issuance of Series A convertible preferred stock, net of issuance costs paid	2,931
Proceeds from issuance of notes payable to related parties, net of issuance costs paid	24,980
Net cash provided by financing activities	27,911
Net increase in cash	27,743
Cash at beginning of period	—
Cash at end of period	$ 27,743
Supplemental disclosure of non-cash financing activities:	
Deferred offering costs in accrued expenses and other current liabilities	$ 488

The accompanying notes are an integral part of these condensed financial statements.

ORUKA THERAPEUTICS, INC.
NOTES TO CONDENSED FINANCIAL STATEMENTS
(UNAUDITED)

1. Nature of the Business and Basis of Presentation

Background and Basis of Presentation

Oruka Therapeutics, Inc. ("Oruka" or the "Company") was established and incorporated under the laws of the state of Delaware on February 6, 2024. Oruka was founded by Paragon Therapeutics, Inc. ("Paragon"). The Company currently operates as a virtual company, and thus, does not maintain a corporate headquarters or other significant facilities. Oruka was formed to develop biologics to optimize the treatment of inflammatory skin diseases.

The Company is subject to risks and uncertainties common to early stage companies in biopharmaceutical industry, including, but not limited to, completing preclinical and clinical trials, obtaining regulatory approval for product candidates, development by competitors of new technological innovations, dependence on key personnel, the ability to attract and retain qualified employees, reliance on third-party organizations, protection of proprietary technology, compliance with government regulations, product liability, uncertainty of market acceptance of products and the ability to raise additional capital to fund operations.

The Company's potential products require approval from the U.S. Food and Drug Administration or comparable foreign authorities prior to the commencement of commercial sales. There can be no assurance that the Company's potential products will receive all the required approvals. In addition, there can be no assurance that the Company's potential products, if approved, will be accepted in the marketplace, nor can there be any assurance that any future products can be developed or manufactured at an acceptable cost and with appropriate performance characteristics, or that such products will be successfully marketed, if at all.

The accompanying unaudited interim condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America ("U.S. GAAP") and pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC") regarding interim financial information. Accordingly, they do not include all of the information and notes required by U.S. GAAP for complete financial statements. These unaudited condensed financial statements include only normal and recurring adjustments the Company believes are necessary to fairly state the Company's financial position and the results of its operations and cash flows. The results for the period from February 6, 2024 (inception) to March 31, 2024 are not necessarily indicative of results expected for the full fiscal year or any subsequent interim period.

Going Concern

The accompanying condensed financial statements have been prepared on the basis that the Company is a going concern, which contemplates, among other things, the realization of assets and satisfaction of liabilities in the normal course of business. As of March 31, 2024, the Company had $27.7 million in cash.

Since inception, the Company has devoted substantially all of its resources to advancing the development of its portfolio of programs, organizing and staffing the Company, business planning, raising capital, and providing general and administrative support for these operations. Current and future programs will require significant research and development efforts, including preclinical and clinical trials, and regulatory approvals to commercialization. These efforts require significant amounts of additional capital, adequate personnel, and infrastructure. Even if the Company's development efforts are successful, it is uncertain when, if ever, the Company will realize significant revenue from product sales. If the Company obtains regulatory approval for any of its product candidates and starts to generate revenue, it expects to incur significant expenses related to developing its internal commercialization capability to support product sales, marketing, and distribution.

As a result, the Company will need substantial additional funding to support its operating activities as it advances its potential product candidates through development, seeks regulatory approval and prepares for and, if any of its product candidates are approved, proceeds to commercialization. Until such time as the Company can generate significant revenue from product sales, if ever, the Company expects to finance its operating activities through a combination of equity offerings and debt financings. Adequate funding may not be available to the Company on acceptable terms, or at all.

If the Company is unable to obtain additional funding, the Company will assess its capital resources and may be required to delay, reduce the scope of or eliminate some or all of its planned operations, which may have a material adverse effect on the Company's business, financial condition, results of operations and ability to operate as a going concern.

The Company has not generated any revenue from product sales or other sources and has incurred significant operating losses and negative cash flows from operations since inception. The Company has incurred a net loss of $7.1 million during the period from February 6, 2024 (inception) to March 31, 2024. As of March 31, 2024, the Company had an accumulated deficit of $7.1 million.

In March 2024, the Company received $3.0 million in gross proceeds from the issuance of Series A convertible preferred stock ("Series A Preferred Stock") and $25.0 million in gross proceeds from the issuance of a convertible note, both of which were related party transactions (see Note 12).

ARCA biopharma, Inc., a Delaware corporation ("ARCA"), and the Company entered into an Agreement and Plan of Merger and Reorganization (the "Merger Agreement") on April 3, 2024, pursuant to which, among other matters, and subject to the satisfaction or waiver of the conditions set forth in the Merger Agreement, Atlas Merger Sub Corp, a Delaware corporation ("First Merger Sub"), will merge with and into Oruka, with Oruka continuing as a wholly owned subsidiary of ARCA and the surviving corporation of the merger (the "First Merger"), and Oruka will merge with and into Atlas Merger Sub II, LLC, a Delaware limited liability company ("Second Merger Sub" and together with First Merger Sub, "Merger Subs"), with Second Merger Sub being the surviving entity of the merger (the "Second Merger" and, together with the First Merger, the "Merger"). In connection with the Merger, Second Merger Sub will change its corporate name to "Oruka Therapeutics Operating Company, LLC" and ARCA will change its name to "Oruka Therapeutics, Inc." ARCA following the Merger is referred to herein as the "combined company." The combined company will be led by Oruka's management team and will remain focused on developing biologics to optimize the treatment of inflammatory skin diseases.

Concurrent with the execution of the Merger Agreement, the Company entered into a subscription agreement with certain investors pursuant to which the Company agreed to issue and sell to investors in a private placement financing (the "Private Placement") shares of the Company's common stock and pre-funded warrants to purchase shares of the Company's common stock at an estimated purchase price of $5.80 per share of common stock and $5.79 per warrant for gross proceeds of approximately $275.0 million, inclusive of $25.0 million proceeds received as of March 31, 2024 from the issuance of the Company's convertible note, which will precede the closing of the Merger. Shares of the Company's common stock and warrants to purchase shares of the Company's common stock issued pursuant to the Private Placement will be converted into the right to receive shares of ARCA common stock and warrants to purchase shares of ARCA common stock, respectively, in accordance with the exchange ratio at the effective time of the close of the transaction. The proceeds from the Private Placement are expected to advance the Company's pipeline, as well as for general corporate purposes, which may include capital expenditure, working capital and general and administrative expenses.

However, the agreements are subject to the satisfaction of customary closing conditions, and there are no assurances that such conditions will be achieved nor that such financing or other strategic transactions will be available on acceptable terms, or at all. If the Merger Agreement is terminated under certain circumstances, ARCA could be required to pay Oruka a termination fee of $0.4 million or Oruka could be required to pay ARCA a termination fee of $0.4 million. Based on its expectation of continuing operating losses for the foreseeable future, and the need to raise future capital, as of May 13, 2024, the date the Company's condensed financial statements are available to be issued, the Company has concluded there is substantial doubt about its ability to continue as a going concern for one year from the date that these condensed financial statements are available to be issued.

The accompanying condensed financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or the amounts and classification of liabilities that might result from the outcome of this uncertainty. Accordingly, the condensed financial statements have been prepared on a basis that assumes the Company will continue as a going concern and which contemplates the realization of assets and satisfaction of liabilities and commitments in the ordinary course of business.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of the Company's condensed financial statements in conformity with U.S. GAAP requires management to make estimates, assumptions, and judgements that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the condensed financial statements and the reported amounts of expenses during the reporting periods. Significant estimates and assumptions reflected within these condensed financial statements include but are not limited to research and development expenses and related prepaid or accrued costs and the valuation of stock-based compensation awards and related expenses. The Company bases its estimates on known trends and other market-specific or other relevant factors that it believes to be reasonable under the circumstances. On an ongoing basis, management evaluates its estimates, as there are changes in circumstances, facts, and experience. Actual results may differ materially from those estimates or assumptions.

Concentrations of Credit Risk

Financial instruments that potentially expose the Company to concentrations of credit risk primarily consist of cash. The Company maintains its cash balances at an accredited financial institution in amounts that, at times, may exceed federally insured limits. However, the Company has not experienced any losses on its deposits of cash.

The Company is dependent on third-party organizations to research, develop, manufacture, and process its product candidates for its development programs, including its two most advanced programs, ORKA-001 and ORKA-002. The Company expects to continue to be dependent on a small number of manufacturers to supply it with its requirements for all products. The Company's research and development programs could be adversely affected by a significant interruption in the supply of the necessary materials. A significant amount of the Company's research and development activities are performed under its agreements with Paragon (see Note 9).

Deferred Offering Costs

The Company capitalizes certain legal, professional, accounting, and other third-party fees that are directly associated with in-process equity financings as deferred offering costs until such financings are consummated. After the consummation of equity financing, these costs are recorded as a reduction of the proceeds from the offering, either as a reduction of the carrying value of the preferred stock or in stockholders' deficit as a reduction of additional paid-in capital generated as a result of the offering. Should the in-process equity financing (see Note 1) be abandoned, the deferred offering costs would be expensed immediately as a charge to operating expenses in the statement of operations and comprehensive loss. As of March 31, 2024, deferred offering costs of $0.5 million were recorded as Other assets in the condensed balance sheet.

Debt Issuance Costs

Debt issuance costs incurred in connection with the Company's convertible note (see Note 4) are recorded as a reduction of the carrying value of the notes payable liability on the Company's balance sheet and are amortized to interest expense over the term of the loan using the effective interest method.

Subscription receivable

The Company accounts for any notes received in exchange for common stock as a subscription receivable, provided the note underlying the receivable is paid prior to the date the financial statement is available to be issued.

Fair Value Measurements

Certain assets and liabilities are carried at fair value under U.S. GAAP. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the

measurement date. Valuation techniques used to measure fair value must maximize the use of observable inputs and minimize the use of unobservable inputs. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three levels of the fair value hierarchy, of which the first two are considered observable and the last is considered unobservable:

- Level 1 — Quoted prices in active markets that are identical assets or liabilities.
- Level 2 — Observable inputs (other than Level 1 quoted prices), such as quoted prices in active markets for similar assets or liabilities, quoted prices in markets that are not active for identical or similar assets or liabilities, or other inputs that are observable or can be corroborated by observable market data.
- Level 3 — Unobservable inputs that are supported by little or no market activity that are significant to determining the fair value of the assets or liabilities, including pricing models, discounted cash flow methodologies, and similar techniques.

The carrying values of the Company's prepaid expenses and other current assets, accounts payable and accrued expenses and other current liabilities approximate their fair values due to their relatively short maturity period. The Company accounts for its convertible note at amortized cost.

Classification of Convertible Preferred Stock

The Company has classified the convertible preferred stock outside of stockholders' deficit on the Company's condensed balance sheet because the holders of such stock have certain liquidation rights in the event of a deemed liquidation event that, in certain situations, is not solely within the control of the Company and would require the redemption of the then-outstanding convertible preferred stock.

The Company's Series A Preferred Stock is not redeemable, except in the event of deemed liquidation (see Note 5). Because the occurrence of a deemed liquidation event is not currently probable, the carrying values of the convertible preferred stock are not being accreted to their redemption values. Subsequent adjustments to the carrying values of the convertible preferred stock would be made only when a deemed liquidation event becomes probable.

Note Payable to Related Party

The Company accounts for its convertible note at amortized cost. The Company considers if optional conversion features are required to be bifurcated and separately accounted for as a derivative. Costs related to the issuance of the convertible note are recorded as a debt discount, amortized over the term of the convertible note (see Note 4) and are accounted as interest expense in other expenses within the condensed statements of operations and comprehensive loss using the effective interest method.

Research and Development Contract Costs Accruals

The Company records the costs associated with research studies and manufacturing development as incurred. These costs are a significant component of the Company's research and development expenses, with a substantial portion of the Company's ongoing research and development activities conducted by third-party service providers, including contract research organizations ("CROs") and contract manufacturing organizations ("CMOs"), and the Company's related-party Paragon (see Note 9).

The Company accrues for expenses resulting from obligations under its two antibody discovery and option agreements (the "Option Agreements") between Paragon, Paruka Holding LLC ("Paruka"), an entity formed by Paragon as a vehicle to hold equity in the Company, and the Company and agreements with CROs, CMOs, and other outside service providers for which payment flows do not match the periods over which materials or services are provided to the Company. Accruals are recorded based on estimates of services received and efforts expended pursuant to agreements established with Paragon, CROs, CMOs, and other outside service providers. These estimates are typically based on contracted amounts applied to the proportion of work performed and determined through analysis with internal personnel and external service providers as to the progress or stage of completion of

the services. The Company makes significant judgments and estimates in determining the accrual balance in each reporting period. In the event advance payments are made to Paragon, a CRO, CMO, or outside service provider, the payments will be recorded as a prepaid asset which will be expensed as the contracted services are performed. Changes in these estimates that result in material changes to the Company's accruals could materially affect the Company's results of operations. As of March 31, 2024, the Company has not experienced any material deviations between accrued and actual research and development expenses.

Segment Information

The Company operates and manages its business as a single segment for the purposes of assessing performance and making operating decisions. The Company's chief executive officer, who is the chief operating decision maker (the "CODM"), reviews the Company's financial information on an aggregated basis for purposes of evaluating financial performance and allocating resources.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs include salaries and bonuses, stock-based compensation, employee benefits, and external costs of vendors and consultants engaged to conduct research and development activities.

Nonrefundable advance payments for goods or services to be received in the future for use in research and development activities are recorded as prepaid expenses on the accompanying condensed balance sheet. The prepaid amounts are expensed as the related goods are delivered or the services are performed, or when it is no longer expected that the goods will be delivered, or the services rendered. If nonrefundable advance payments represent a one-time cost for obtaining goods or services, with anticipated benefits to be utilized within a year of period end, the payment is expensed immediately.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and bonuses, stock-based compensation, employee benefits, finance and administration costs, human resources costs, information technology costs, professional service fees, and other general overhead costs to support the Company's operations.

Commitments and Contingencies

The Company is subject to contingent liabilities, such as legal proceedings and claims, that arise in the ordinary course of business activities. The Company accrues for loss contingencies when losses become probable and are reasonably estimable. If the reasonable estimate of the loss is a range and no amount within the range is a better estimate, the minimum amount of the range is recorded as a liability on the balance sheet. The Company does not accrue for contingent losses that, in its judgment, are considered to be reasonably possible, but not probable; however, it discloses the range of reasonably possible losses. As of March 31, 2024, no liabilities were recorded for loss contingencies (see Note 10).

Stock-Based Compensation

The Company measures all stock-based awards granted to employees, directors, and non-employees in the form of stock options to purchase shares of its common stock, based on the fair value of the awards on the date of grant using the Black-Scholes option-pricing model. The Company measures restricted common stock awards ("RSAs") using the difference, if any, between the purchase price per share of the award and the fair value of the Company's common stock at the date of grant.

The Company grants stock options and restricted stock awards that are subject to either service or performance-based vesting conditions. Compensation expense for awards to employees and directors with service-based vesting conditions is recognized using the straight-line method over the requisite service period, which is generally the

vesting period of the respective award. Compensation expense for awards to non-employees with service-based vesting conditions is recognized in the same manner as if the Company had paid cash in exchange for the goods or services, which is generally over the vesting period of the award. Forfeitures are accounted for as they occur. As of each reporting date, the Company estimates the probability that specified performance criteria will be met and does not recognize compensation expense until it is probable that the performance-based vesting condition will be achieved.

The Company has issued stock options and RSAs with service-based vesting conditions.

The Company classifies stock-based compensation expense in its condensed statement of operations and comprehensive loss in the same manner in which the award recipient's payroll costs are classified or in which the award recipient's service payments are classified.

Net Loss per Share Attributable to Common Stockholders

The Company applies the two-class method when computing net loss per share attributable to the Company's common stockholders as the Company has issued shares that meet the definition of participating securities. The two-class method determines net loss per share for each class of common and participating securities according to dividends declared or accumulated and participation rights in undistributed earnings. The two-class method requires loss available to common stockholders for the period to be allocated between common and participating securities based upon their respective rights to share in the undistributed earnings as if all loss for the period had been distributed. The Company considers its convertible preferred stock to be participating securities as, in the event a dividend is paid on common stock, the holders of convertible preferred stock would be entitled to receive dividends on a basis consistent with the Company's common stockholders. There is no allocation required under the two-class method during periods of loss since the participating securities do not have a contractual obligation to share in the losses of the Company.

Basic net loss per share attributable to common stockholders is computed by dividing the net loss attributable to the Company's common stockholders by the weighted average number of common shares outstanding for the period, excluding potentially dilutive common shares. Diluted net loss per share attributable to common stockholders is computed by adjusting net loss attributable to common stockholders to reallocate undistributed earnings based on the potential impact of dilutive securities. Diluted net loss per share attributable to common stockholders is computed by dividing the diluted net loss by the weighted average number of common shares outstanding for the period, including potential dilutive common shares. For purposes of this calculation, the Company's outstanding convertible preferred stock, stock options to purchase common stock and unvested RSAs are considered potential dilutive common shares.

The Company generated a net loss for the period presented. Accordingly, basic and diluted net loss per share is the same because the inclusion of the potentially dilutive securities would be anti-dilutive.

Income Taxes

The Company accounts for income taxes using the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the financial statements or in the Company's tax returns. Deferred tax assets and liabilities are determined based on the differences between the financial statement basis and tax basis of assets and liabilities using enacted tax rates in effect for the years in which the differences are expected to reverse. Changes in deferred tax assets and liabilities are recorded in the provision for income taxes. The Company assesses the likelihood that its deferred tax assets will be recovered from future taxable income and, to the extent it believes, based upon the weight of available evidence, that it is more likely than not that all or a portion of the deferred tax assets will not be realized, a valuation allowance is established through a charge to income tax expense. The potential for recovery of deferred tax assets is evaluated by estimating the future taxable profits expected and considering prudent and feasible tax planning strategies.

The Company accounts for uncertainty in income taxes recognized in the condensed financial statements by applying a two-step process to determine the amount of tax benefit to be recognized. First, the tax position must be evaluated to determine the likelihood that it will be sustained upon external examination by the taxing authorities. If the tax position is deemed more likely than not to be sustained, the tax position is then assessed to determine

the amount of benefit to recognize in the condensed financial statements. The amount of the benefit that may be recognized is the largest amount that has a greater than 50% likelihood of being realized upon ultimate settlement. The provision for income taxes includes the effects of any resulting tax reserves, or unrecognized tax benefits, that are considered appropriate as well as the related net interest and penalties. The Company had accrued no amounts for interest or penalties related to uncertain tax positions as of March 31, 2024.

Recently Issued Accounting Pronouncements

In November 2023, the FASB issued ASU No. 2023-07, *Segment Reporting* (*Topic 280*) ("ASU 2023-07"), which enhances the segment disclosure requirements for public entities on an annual and interim basis. Under this proposal, public entities will be required to disclose significant segment expenses that are regularly provided to the CODM and included within each reported measure of segment profit or loss. Additionally, current annual disclosures about a reportable segment's profit or loss and assets will be required on an interim basis. Entities will also be required to disclose information about the CODM's title and position at the Company along with an explanation of how the CODM uses the reported measures of segment profit or loss in their assessment of segment performance and deciding how to allocate resources. Finally, ASU 2023-07 requires all segment disclosures for public entities that have only a single reportable segment. The amendments in ASU 2023-07 are effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. Early adoption is permitted. The Company is currently evaluating the impact of this standard on its condensed financial statements.

In December 2023, the FASB issued ASU 2023-09, *Income Taxes (Topic 740): Improvements to Income Tax Disclosures*. This ASU expands disclosures in an entity's income tax rate reconciliation table and disclosures regarding taxes paid both in the U.S. and foreign jurisdictions. This update is effective beginning with the Company's 2025 fiscal year annual reporting period. The Company is currently evaluating the impact of this standard on its condensed financial statements.

3. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities consisted of the following (in thousands):

	March 31, 2024
Accrued professional and consulting fees	$ 1,040
Accrued recruiting fees	88
Accrued employee compensation and benefits	78
Other	56
	$ 1,262

4. Note Payable with Related Party

In March 2024, the Company entered into a Series A Preferred Stock and Convertible Note Purchase Agreement (the "Purchase Agreement") with Fairmount Healthcare Fund II, L.P. ("Fairmount"), whereby the Company issued a convertible note (the "Convertible Note"), with an initial principal amount of $25.0 million, that can be converted into Series A Preferred Stock (or a Series of preferred shares that is identical in respect to the shares of preferred shares issued in its next equity financing) or shares of the Company's common stock in exchange for aggregate proceeds of $25.0 million. The Convertible Note will automatically convert into shares of the Company's common stock upon the closing of a corporate transaction, including the Private Placement, and is otherwise due and payable at the request of the holder at any time. The Convertible Note accrues interest at a rate of 12.0% per annum. All unpaid interest and principal are scheduled to mature on December 31, 2025 (the "Maturity Date"). Prepayment is not permitted without prior written consent of Fairmount. Pursuant to the Purchase Agreement, the Company has the right to sell and issue additional convertible notes up to an aggregate principal amount equal to $30.0 million, in addition to the $25.0 million of initial principal amount of the Convertible

Note. The principal payment along with the accrued interest on the Convertible Note is due in full on the Maturity Date. As of March 31, 2024, the Company had outstanding borrowings of $25.0 million from Fairmount under its Convertible Note.

In connection with the proposed reverse recapitalization transaction, the Convertible Note will convert into a number of shares of common stock based on the aggregate principal amount, plus any unpaid accrued interest, divided by the conversion price, which is an amount to be determined based upon the Company's fully-diluted capitalization immediately prior to the reverse recapitalization transaction. In the event the proposed reverse recapitalization transaction or any other proposed corporate transactions do not close prior to the Company's next equity financing, the Convertible Note will convert into the next series of issued convertible preferred stock.

The Company assessed all terms and features of the Convertible Note in order to identify any potential embedded features that would require bifurcation. As part of this analysis, the Company assessed the economic characteristics and risks of the embedded features. The Company determined that the share settled redemption feature was clearly and closely related to the debt host and did not require separate accounting. The Company determined that the conversion options of the Convertible Note were not clearly and closely associated with a debt host. However, these features did not meet the definition of a derivative under ASC 815, *Derivatives and Hedging*, and as a result did not require separate accounting as a derivative liability.

The Company paid debt issuance costs of less than $0.1 million in relation to the Convertible Note. The debt issuance costs are reflected as a reduction of the carrying value of Convertible Note on the condensed balance sheet and are being amortized as interest expense over the term of the Convertible Note using the effective interest method. For the period from February 6, 2024 (inception) to March 31, 2024, the Company recognized interest expense related to the Convertible Note of $0.2 million, which includes non-cash interest expense related to the amortization of debt issuance costs of less than $0.1 million. For the period from February 6, 2024 (inception) to March 31, 2024, the weighted average effective interest rate of the Convertible Note was approximately 12.0%.

5. Convertible Preferred Stock

In March 2024, the Company issued and sold an aggregate of 20,000,000 shares of Series A Preferred Stock to Fairmount, at a purchase price of $0.15 per share, for gross proceeds of $3.0 million. The Company incurred less than $0.1 million of issuance costs in connection with this transaction.

Upon the issuance of the Series A Preferred Stock, the Company assessed the embedded conversion and liquidation features of the securities as described below and determined that such features did not require the Company to separately account for these features.

As of March 31, 2024, convertible preferred stock consisted of the following (in thousands, except share amounts):

	March 31, 2024				
	Preferred Stock Authorized	Preferred Stock Issued and Outstanding	Carrying Value	Liquidation Preference	Common Stock Issuable Upon Conversion
Series A Preferred Stock. . . .	20,000,000	20,000,000	$ 2,931	$ 3,000	20,000,000
	20,000,000	20,000,000	$ 2,931	$ 3,000	20,000,000

The holders of the Series A Preferred Stock have the following rights and preferences:

Voting

The holders of Series A Preferred Stock are entitled to vote, together with the holders of common stock, on all matters submitted to stockholders for a vote. Each holder of outstanding shares of Series A Preferred Stock is entitled to the number of votes equal to the number of shares of common stock into which the shares of preferred stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such

matter. A majority vote of the holders of Series A Preferred Stock is required to liquidate or dissolve the Company, amend the certificate of incorporation or bylaws, reclassify common stock or establish another class of capital stock, create shares that would rank senior to or authorize additional shares of Preferred Stock, declare a dividend or make a distribution.

In addition, the holders of shares of Series A Preferred Stock are entitled to elect one director of the Company. The holders of shares of common stock and any other class or series of voting stock (including Series A convertible preferred stock), exclusively and voting together as a single class, are entitled to elect the balance of the total number of directors of the Company. The Company controls the Board of Directors.

Conversion

Each share of Series A Preferred Stock is convertible at the option of the holder, at any time, and without the payment of additional consideration by the holder. In addition, each share of Series A Preferred Stock will be automatically converted into shares of common stock at the applicable conversion ratio then in effect upon either (i) the closing of a firm-commitment underwritten public offering of the Company's common stock at a price of at least $1.00 per share resulting in at least $50.0 million of gross proceeds to the Company, net of the underwriting discount and commissions, or (ii) the vote or written consent of the holders of a majority of the outstanding shares of preferred stock, voting as a single class.

The conversion ratio of Series A Preferred Stock is determined by dividing the original issue price by the conversion price in effect at the time of conversion. The original issue price is $0.15 per share for Series A Preferred Stock (in each case subject to appropriate adjustment in the event of any stock split, stock dividend, combination or other similar recapitalization and other adjustments as set forth in the Company's certificate of incorporation, as amended and restated). The Conversion Price is $0.15 per share for Series A convertible preferred stock. As of March 31, 2024, each outstanding share of Series A Preferred Stock was convertible into common stock on a one-for-one basis.

Dividends

The Company may not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Company (other than dividends on shares of common stock) unless the holders of the Series A Preferred Stock then outstanding first receive, or simultaneously receive, a dividend on each outstanding share of Series A Preferred Stock in an amount at least equal to (i) in the case of a dividend being distributed to common stock or any class or series that is convertible into common stock, the equivalent dividend on an as-converted basis or (ii) in the case of a dividend on any class or series that is not convertible into common stock, a dividend equal to a dividend rate on Series A Preferred Stock calculated based on the respective original issue price of Series A Preferred Stock. For the period from February 6, 2024 (inception) through March 31, 2024, no cash dividends had been declared or paid by the Company.

Liquidation

In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company, or upon the occurrence of a Deemed Liquidation Event (as defined below), the holders of shares of Series A Preferred Stock then outstanding are entitled to be paid out of the assets or funds of the Company available for distribution to stockholders before any payment is made to the holders of common stock. The holders of Series A Preferred Stock are entitled to an amount equal to the greater of (i) the applicable original issue price per share of Series A Preferred Stock, plus any declared but unpaid dividends thereon, or (ii) the amount per share that would have been payable had all shares of Series A Preferred Stock been converted into common stock immediately prior to such liquidation, dissolution, winding up or Deemed Liquidation Event. If upon any such liquidation event, the assets or funds of the Company available for distribution to stockholders are insufficient to pay the full amount to which they are entitled, then the holders of shares of Series A Preferred Stock will share ratably in any distribution of the assets or funds available for distribution in proportion to the respective amounts which would otherwise be payable if it were paid in full.

Unless the holders of a majority in voting power of the then outstanding shares of Series A Preferred Stock elect otherwise, a Deemed Liquidation Event shall include a merger or consolidation (other than one in which stockholders of the Company own a majority by voting power of the outstanding shares of the surviving or acquiring corporation) or sale, lease, transfer, exclusive license or other disposition of all or substantially all of the Company's assets.

Redemption

Series A Preferred Stock does not have redemption rights, except for the contingent redemption upon the occurrence of a Deemed Liquidation Event.

6. Common Stock

As of March 31, 2024, the Board of Directors authorized up to 65,000,000 shares of common stock at a $0.0001 par value. As of March 31, 2024, 5,596,658 shares of common stock were issued and outstanding and 3,863,361 shares of RSAs were issued and outstanding. The voting, dividend and liquidation rights of the holders of the Company's common stock and RSAs are subject to and qualified by the rights, powers and preferences of the holders of Series A Preferred Stock set forth above. Each share of common stock entitles the holder to one vote, together with the holders of Series A Preferred Stock, on all matters submitted to the stockholders for a vote. The holders of common stock are entitled to receive dividends, if any, as declared by the Company's Board of Directors, subject to the preferential dividend rights of Series A Preferred Stock.

As of March 31, 2024, there are 20,698,669 shares of common stock reserved for issuance for the potential conversion of shares of Series A preferred stock into common stock, the exercise of outstanding stock options for common stock under the Company's 2024 Equity Incentive Plan (the "2024 Plan").

7. Stock-Based Compensation

2024 Equity Incentive Plan

The 2024 Plan was adopted by the Company's Board of Directors on February 6, 2024. The 2024 Plan provides for the Company to grant stock options, restricted stock awards, restricted stock units, and other stock-based awards to employees, officers, directors, consultants, and advisors. The 2024 Plan is administered by the Board of Directors, or at the discretion of the Board of Directors, by a committee of the Board of Directors. The exercise prices, vesting and other restrictions are determined at the discretion of the Board of Directors, or its committee, if so delegated. Stock options granted under the 2024 Plan generally vest over four years, subject to the participant's continued service, and expire after ten years, although stock options have been granted with vesting terms less than four years. Upon adoption, the 2024 Plan authorized 372,912 shares of common stock reserved for issuance under the plan. On March 5, 2024, the 2024 Plan was amended to increase the number of shares of common stock reserved for issuance by 500,000 shares. As of March 31, 2024, the total number of shares of common stock reserved for issuance under the 2024 Plan was 872,912, with 174,243 shares available for future grants.

Stock Option Valuation

The fair value of each stock option grant is estimated on the grant date using the Black-Scholes option-pricing model. The Company is a private company and lacks company-specific historical and implied volatility information. Therefore, it estimates its expected stock volatility based on the historical volatility of a publicly traded set of peer companies and expects to continue to do so until such time as it has adequate historical data regarding the volatility of its own traded stock price. For stock options with service-based vesting conditions, the expected term of the Company's stock options has been determined utilizing the "simplified" method for awards that qualify as "plain-vanilla" stock options. The risk-free interest rate is determined by reference to the U.S. Treasury yield curve in effect at the time of grant of the award for time periods approximately equal to the expected term of the award. The expected dividend yield is based on the fact that the Company has never paid cash dividends on common stock and does not expect to pay any cash dividends in the foreseeable future.

The following table summarizes the weighted-average assumptions used in calculating the fair value of the awards from February 6, 2024 (inception) to March 31, 2024:

	Period from February 6, 2024 (Inception) to March 31, 2024
Expected volatility	103.0%
Expected term (in years)	6.0
Risk-free interest rate	4.2%
Expected dividend yield	—%

Stock Options

The following table summarizes the stock option activity for the period of February 6, 2024 (inception) through March 31, 2024:

	Number of Options	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Balance as of February 6, 2024 (inception)	—	$ —	—	$ —
Granted	698,669	$ 2.90		
Exercised	—	$ —		
Forfeited	—	$ —		
Balance as of March 31, 2024	698,669	$ 2.90	10.0	$ —
Vested and expected to vest, March 31, 2024	698,669	$ 2.90	10.0	$ —
Exercisable, March 31, 2024	—	$ —	—	$ —

The weighted average grant-date fair value of stock options granted from February 6, 2024 (inception) to March 31, 2024 was $2.37. As of March 31, 2024, there was no aggregate intrinsic value for the outstanding options. The aggregate intrinsic value of stock options is calculated as the difference between the exercise price of the stock options and the fair value of the Company's common stock for those stock options that had an exercise price lower than the fair value of the Company's common stock.

Restricted Stock Awards

In February 2024 and March 2024, the Company issued 3,863,361 shares of RSAs to certain employees, directors, and consultants at a price of $0.0001 per share, the par value of the common stock. Such RSAs have service-based vesting conditions only and vest over a four-year period, during which time all unvested shares are subject to forfeiture by the Company in the event the holder's service with the Company voluntarily or involuntarily terminates.

The following table summarizes the RSAs activity for the period from February 6, 2024 (inception) through March 31, 2024:

	Number of RSAs	Weighted Average Grant Date Fair Value
Unvested balance as of February 6, 2024 (inception)	—	$ —
Granted	3,863,361	—
Unvested balance as of March 31, 2024	3,863,361	$ —

Paruka Warrant Obligation

In March 2024, the Company entered into the Option Agreements with Paragon and Paruka. Under the terms of the Option Agreements, Paruka will be entitled to grants of warrants to purchase a number of shares equal to 1.00% of then outstanding shares of the Company's stock, on a fully diluted basis, on December 31, 2024 and December 31, 2025, at the fair market value determined by the Board of Directors of the Company (the "Paruka Warrant Obligation"). The grant dates for the issuance of warrants are expected to be December 31, 2024 and December 31, 2025 as all terms of the award, including number of shares and exercise price, will be known by all parties. The service inception period for the grant precedes the grant date, with the full award being vested as of the grant date with no post-grant date service requirement. As of March 31, 2024, the pro-rated estimated fair value of warrants to be granted on December 31, 2024 was $0.7 million. For the period February 6, 2024 (inception) to March 31, 2024, $0.1 million was recognized as stock-based compensation expense related to the Paruka Warrant Obligation. The warrants expected to be granted to Paruka are liability-classified and after the initial recognition, the liability is adjusted to fair value at the end of each reporting period, with changes in fair value recorded in the statement of operations and comprehensive loss.

Stock-Based Compensation Expense

The following table summarizes the classification of the Company's stock-based compensation expense in the condensed statement of operations and comprehensive loss (in thousands):

	Period from February 6, 2024 (Inception) to March 31, 2024
Research and development	$ 70
General and administrative	15
	$ 85

As of March 31, 2024, total unrecognized compensation cost related to the unvested stock options was $1.6 million, which is expected to be recognized over a weighted average period of approximately 3.40 years. As of March 31, 2024, total unrecognized compensation cost related to the unvested RSAs was less than $0.1 million, which is expected to be recognized over a weighted average period of 3.92 years. As of March 31, 2024, the unrecognized compensation cost related to the Paruka Warrant Obligation was $0.6 million, which is expected to be recognized over a weighted average period of 0.8 years.

The following table summarizes the award types of the Company's stock-based compensation expense in the condensed statement of operations and comprehensive loss (in thousands):

	Period from February 6, 2024 (Inception) to March 31, 2024
Paruka warrant obligation	$ 68
Stock options	17
	$ 85

8. Income Taxes

No provision for income taxes was recorded for the period of February 6, 2024 (inception) through March 31, 2024. Deferred tax assets generated from the Company's net operating losses have been fully reserved, as the Company believes it is not more likely than not that the benefit will be realized due to the Company's cumulative losses generated to date.

9. Paragon Option Agreements

In March 2024, the Company entered into the Option Agreements with Paragon and Paruka. Under the terms of the Option Agreements, Paragon identifies, evaluates and develops antibodies directed against certain mutually agreed therapeutic targets of interest to the Company. The Option Agreements includes two selected targets, IL-23 (ORKA-001) and IL-17 A/F (ORKA-002). Under the Option Agreements, the Company has the exclusive options to, on a research program-by-research program basis, be granted an exclusive, worldwide license to all of Paragon's right, title and interest in and to the intellectual property resulting from the applicable research program to develop, manufacture and commercialize the antibodies and products directed to the selected targets (each, an "Option"), with the exception of pursuing ORKA-001 for the treatment of inflammatory bowel disease. If the Company exercises its options, it will be required to make non-refundable milestone payments to Paragon of up to $12.0 million under each respective agreement upon the achievement of certain clinical development milestones, up to $10.0 million under each respective agreement upon the achievement of certain regulatory milestones, as well as tiered royalty payments in the low-to-mid single-digits beginning on the first commercial sale. From time to time, the Company can choose to add additional targets to the collaboration by mutual agreement with Paragon.

Pursuant to the terms of the Option Agreements, the parties initiated certain research programs that generally focus on a particular target (each, a "Research Program"). Each Research Program is aimed at discovering, generating, identifying and/or characterizing antibodies directed to the respective target. For each Research Program, the parties will establish a research plan that sets forth the activities that will be conducted, and the associated research budget (each, a "Research Plan"). The Company and Paragon will agree on initial Research Plans that outline the services that will be performed commencing at the inception of the arrangement related to ORKA-001 and ORKA-002. The Company's exclusive Option with respect to each Research Program is exercisable at its sole discretion at any time during the period beginning on the initiation of activities under the associated Research Program and ending a specified number of days following (i) with respect to any Research Program other than ORKA-001, the delivery of the data package from Paragon related to the results of the Research Plan activities, or (ii) with respect to ORKA-001, the completion of the IL-23 antibody selection process described in the agreement (the "Option Period"). There is no payment due upon exercise of an Option pursuant to the Option Agreements.

Unless terminated earlier, the Option Agreements shall continue in force on a Research Program-by-Research Program basis until the earlier of: (i) the end of the Option Period for such Research Program, as applicable, if such Option is not exercised by the Company; (ii) the expiration of the 30-day period after Oruka exercises its Option with respect to such Research Program, subject to mutually agreed extension, during the Option Period and the parties are unable to finalize and execute a license agreement, and (iii) the expiration of the applicable research term (the "Term"). Upon the expiration of the Term for all then-existing Research Programs, under the Option Agreements, the Option Agreements will automatically expire in its entirety. The Company may terminate the Option Agreements or any Research Program at any time for any or no reason upon 30 days' prior written notice to Paragon, provided that the Company must pay certain unpaid fees due to Paragon upon such termination, as well as any non-cancellable obligations reasonably incurred by Paragon in connection with its activities under any terminated Research Program. Each party has the right to terminate the Option Agreements or any Research Program upon (i) 30 days' prior written notice of the other party's material breach that remains uncured for the 30-day period and (ii) the other party's bankruptcy.

Pursuant to the Option Agreements, on a research program-by-research program basis following the finalization of the research plan for each respective research program, the Company was required to pay Paragon a one-time, nonrefundable research initiation fee of $0.8 million. This amount was recognized as a research and development expense during the period from February 6 (inception) to March 31, 2024 and accounts payable as of March 31, 2024, and paid to Paragon in April 2024. The Company is also responsible for 50% of the development costs incurred prior to March 31, 2024, provided that the Company receives rights to at least one selected IL-23 antibody. Oruka's share of development costs incurred prior to March 31, 2024 is $5.9 million. As of the date these condensed financial statements are available to be issued, the Company has not received rights to a selected IL-23 antibody and has not paid or accrued the $5.9 million of development costs incurred prior to March 31, 2024. The Company will be responsible for 50% of the ORKA-001 development costs incurred from and after March 31, 2024, through the completion of the IL-23 selection process.

The Company was also required to reimburse Paragon $3.3 million for development costs related to ORKA-002 incurred by Paragon through December 31, 2023 and certain other development costs incurred by Paragon between January 1, 2024 and March 6, 2024. This amount was recognized as a research and development expense during the period from February 6 (inception) to March 31, 2024, and accounts payable as of March 31, 2024. The Company paid $3.3 million to Paragon in April 2024. The Company is also responsible for the development costs incurred by Paragon from January 1, 2024 to March 31, 2024 of $0.9 million, which was recognized as a research and development expense in the period from February 6 (inception) to March 31, 2024. The Company will be required to pay Paragon $0.8 million for the research initiation fee related to ORKA-002 within 30 days following finalization of the ORKA-002 research plan as well as for subsequent development costs related to ORKA-002. The Company will be responsible for ORKA-002 development costs incurred from and after March 31, 2024, through the completion of the IL-17 selection process.

Furthermore, the Paragon Agreement provides for an annual equity grant of warrants to Paruka to purchase 1.00% of the then outstanding shares of the Company's common stock, on a fully diluted basis, on December 31, 2024 and December 31, 2025, during the term of the Paragon Agreement, at the fair market value determined by the Board of Directors of the Company. The warrants are liability-classified and after the initial recognition, the liability is adjusted to fair value at the end of each reporting period, with changes in fair value recorded in the statement of operations and comprehensive loss (see Note 7).

The Company expenses the service fees as the associated costs are incurred when the underlying services are rendered. Such amounts are classified within research and development expenses in the accompanying statement of operations and comprehensive loss.

The Company concluded that the rights obtained under the Option Agreements represent an asset acquisition whereby the underlying assets comprise in-process research and development assets with no alternative future use. The Option Agreements did not qualify as a business combination because substantially all of the fair value of the assets acquired was concentrated in the exclusive license options, which represent a group of similar identifiable assets. The research initiation fee represents a one-time cost on a research program-by research program basis for accessing research services or resources with benefits that are expected to be consumed in the near term, therefore the amounts paid are expensed as part of research and development costs immediately. Amounts paid as reimbursements of on-going development cost, monthly development cost fee and additional development expenses incurred by Paragon due to work completed for selected targets prior to the effective date of the Option Agreement that associated with services being rendered under the related Research Programs is recognized as research and development expense when incurred.

For the period from February 6, 2024 (inception) to March 31, 2024 the Company recognized $5.0 million of expenses in connection with services provided by Paragon under the Option Agreements, including nonrefundable research and development expense fees following the finalization of a Research Plan.

10. Commitments and Contingencies

401(k) Plan

The Company maintains a defined-contribution plan under Section 401(k) of the Internal Revenue Code of 1986 (the "401(k) Plan"). The 401(k) Plan covers all employees who meet defined minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pre-tax basis. Matching contributions to the 401(k) Plan may be made at the discretion of management. For the period from February 6, 2024 (inception) to March 31, 2024, the Company has not recorded any expense related to 401(k) match contributions.

Indemnification Agreements

In the ordinary course of business, the Company may provide indemnification of varying scope and terms to vendors, lessors, business partners and other parties with respect to certain matters including, but not limited to, losses arising out of breach of such agreements or from intellectual property infringement claims made by

third parties. In addition, the Company has entered into indemnification agreements with each of its directors and executive officers that will require the Company, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or executive officers. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is, in many cases, unlimited. To date, the Company has not incurred any material costs as a result of such indemnifications. The Company is not aware of any indemnification arrangements that could have a material effect on its financial position, results of operations or cash flows, and it has not accrued any liabilities related to such obligations in its condensed financial statements as of March 31, 2024.

Legal Proceedings

From time to time, the Company may become involved in legal proceedings or other litigation relating to claims arising in the ordinary course of business. The Company accrues a liability for such matters when it is probable that future expenditures will be made and that such expenditures can be reasonably estimated. Significant judgment is required to determine both probability and estimated exposure amount. Legal fees and other costs associated with such proceedings are expensed as incurred. As of March 31, 2024, the Company was not a party to any material legal proceedings or claims.

11. Net Loss per Share

Basic and diluted net loss per share attributable to common stockholders was calculated as follows (in thousands, except share and per share amounts):

	Period from February 6, 2024 (Inception) to March 31, 2024
Numerator:	
Net loss	$ (7,077)
Denominator:	
Weighted-average common shares outstanding, basic and diluted	5,596,658
Net loss attributable to common stockholders, basic and diluted	$ (1.26)

For the computation of basic net loss per share attributable to common stockholders, the amount of weighted-average common shares outstanding excludes all shares of unvested restricted common stock as such shares are not considered outstanding for accounting purposes until vested.

The Company's potential dilutive securities have been excluded from the computation of diluted net loss per share as the effect would be to reduce the net loss per share. Therefore, the weighted-average number of common shares outstanding used to calculate both basic and diluted net loss per share attributable to common stockholders is the same. The Company excluded potential common shares from the computation of diluted net loss per share attributable to common stockholders for the period presented because including them would have had an anti-dilutive effect:

	Period from February 6, 2024 (Inception) to March 31, 2024
Convertible preferred stock (as converted to common stock)	20,000,000
Unvested restricted stock awards	3,863,361
Stock options to purchase common stock	698,669
	24,562,030

12. Related Party Transactions

Paragon and Paruka each currently beneficially own more than 5% of the Company's capital stock through its common stock holdings. For the period from February 6, 2024 (inception) to March 31, 2024 the Company recognized $5.0 million of expenses, in connection with services provided by Paragon and Paruka under the Option Agreements, including nonrefundable research and development expense fees following the finalization of a Research Plan on its condensed statement of operations and comprehensive loss. As of March 31, 2024, the Company had $5.8 million in amounts due to related parties pertaining to services provided by Paragon and Paruka under the Option Agreements and reimbursements of recruiting and start-up fees on its condensed balance sheet. In addition, under the terms of the Option Agreements, Paruka will be entitled to grants of warrants to purchase a number of shares equal to 1.00% of outstanding shares of the Company's common stock, on a fully diluted basis, as of the date of the grants (see Note 7). If the Company exercises its options, it will be required to make non-refundable milestone payments to Paragon of up to $12.0 million under each respective agreement upon the achievement of certain clinical development milestones, up to $10.0 million under each respective agreement upon the achievement of certain regulatory milestones, as well as tiered royalty payments in the low-to-mid single-digits beginning on the first commercial sale.

Fairmount Funds Management LLC ("Fairmount Funds Management") beneficially owns more than 5% of the Company's capital, currently has one representative appointed to the Company's Board of Directors, and beneficially owns more than 5% of Paragon. In March 2024, the Company issued and sold an aggregate of 20,000,000 shares of Series A Preferred Stock to Fairmount, an affiliated fund of Fairmount Funds Management, at a purchase price of $0.15 per share, for gross proceeds of $3.0 million (see Note 4). In March 2024, Fairmount entered into the Purchase Agreement with the Company and holds a convertible note with an initial principal amount of $25.0 million (see Note 4). As of March 31, 2024, the Company had $0.2 million in amounts due to related parties pertaining to accrued interest related to the Company's outstanding borrowings of $25.0 million under the Purchase Agreement with Fairmount.

The following is a summary of related party accounts payable and other current liabilities (in thousands):

	March 31, 2024
Paragon reimbursable Option Agreement fees	$ 4,983
Paragon reimbursable recruiting and start-up fees	848
Paruka Warrant Obligation	68
	$ 5,899

The following is a summary of noncurrent liability, related party (in thousands):

	March 31, 2024
Accrued interest payable	$ 214
Note payable	24,980
	$ 25,194

13. Subsequent Events

The Company has evaluated events and transactions occurring subsequent to March 31, 2024 through May 13, 2024, the date at which the condensed financial statements were available to be issued. In connection with the reissuance of the condensed financial statements, the Company has evaluated subsequent events through July 22, 2024, the date these condensed financial statements were available to be reissued.

Oak Grove Lease

On April 12, 2024, the Company entered into a lease agreement with Oak Grove LP ("Oak Grove Lease") for office space located in Menlo Park, California. The lease commencement date is June 15, 2024 with an initial term of 39.5 months. The total lease payment is expected to be $1.4 million over the initial lease term.

Amended 2024 Stock Plan

On May 7, 2024, the Company's Board of Directors approved an amendment to the 2024 Plan to increase the number of shares of common stock available for issuance under the 2024 Plan from 872,912 to 2,063,669. On May 7, 2024, the Company granted options for the purchase of an aggregate 1,365,000 stock options, at an exercise price of $3.89 per share.

Other events

In June 2024, pursuant to the Option Agreements with Paragon, the Company completed the selection process of its development candidate for IL-23 antibody for ORKA-001 program. The Company is responsible for 50% of the development costs incurred through the completion of the IL-23 selection process, provided that the Company receives rights to at least one selected IL-23 antibody. Oruka's share of development costs incurred prior to March 31, 2024 is $5.9 million, which was recorded as a research and development expense during the quarter ended June 30, 2024 and accounts payable as of June 30, 2024. Amounts related to development cost incurred subsequent to March 31, 2024, have not been determined as of the reissuance date of these condensed financial statements.

On July 3, 2024, the Private Placement agreement was amended and restated (the "A&R Private Placement agreement") to provide for, among other things, warrants to be issued to certain of Oruka's employees, directors and service providers. On July 15, 2024, the Company's Board of Directors approved the issuance of 5,145,336 warrants at an exercise price of $4.44 per share to certain employees, directors and service providers pursuant to the A&R Private Placement agreement, with such issuances to occur immediately prior to the closing of the Merger.

The price per share for the shares of the Company's common stock and pre-funded warrants to purchase shares of the Company's common stock in the original Private Placement agreement decreased from $5.80 and $5.79 per share, respectively, to $5.55 and $5.54 per share, respectively, for the shares of common stock and the pre-funded warrants pursuant to the A&R Private Placement Agreement due to the May 7, 2024 option grants described above.

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Annex A

AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

among:

ARCA BIOPHARMA, INC.;

ATLAS MERGER SUB CORP.;

ATLAS MERGER SUB II, LLC; and

ORUKA THERAPEUTICS, INC.

Dated as of April 3, 2024

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Table of Contents

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AGREEMENT AND PLAN OF MERGER AND REORGANIZATION

This Agreement and Plan of Merger and Reorganization (this "**Agreement**") is made and entered into as of April 3, 2024, by and among **ARCA biopharma, Inc.**, a Delaware corporation ("**Parent**"), **Atlas Merger Sub Corp.**, a Delaware corporation and wholly owned subsidiary of Parent ("**First Merger Sub**"), **Atlas Merger Sub II, LLC**, a Delaware limited liability company and wholly owned subsidiary of Parent ("**Second Merger Sub**" and, together with First Merger Sub, "**Merger Subs**"), and **Oruka Therapeutics, Inc.**, a Delaware corporation (the "**Company**"). Certain capitalized terms used in this Agreement are defined Section 1.

Recitals

A. Parent and the Company intend to effect a merger of First Merger Sub with and into the Company (the "**First Merger**") in accordance with this Agreement and the DGCL. Upon consummation of the First Merger, First Merger Sub will cease to exist and the Company will become a wholly owned subsidiary of Parent.

B. Immediately following the First Merger and as part of the same overall transaction as the First Merger, the Company will merge with and into Second Merger Sub (the "**Second Merger**" and, together with the First Merger, the "**Merger**"), with Second Merger Sub being the surviving entity of the Second Merger.

C. The Parties intend that, (i) the First Merger and the Second Merger, taken together, will constitute an integrated transaction described in Rev. Rul. 2001-46, 2001-2 C.B. 321 that qualifies as a "reorganization" within the meaning of Section 368(a) of the Code, and (ii) this Agreement will constitute, and is hereby adopted as, a plan of reorganization within the meaning of Treasury Regulations Sections 1.368-2(g) and 1.368-3(a).

D. The Transaction Committee of the Parent Board has (i) determined that the Contemplated Transactions are fair to, advisable and in the best interests of Parent and its stockholders and (ii) recommended that the Parent Board approve and adopt this Agreement.

E. The Parent Board has (i) determined that the Contemplated Transactions are fair to, advisable and in the best interests of Parent and its stockholders, (ii) approved and declared advisable this Agreement and the Contemplated Transactions, including the issuance of shares of Parent Capital Stock to the stockholders of the Company pursuant to the terms of this Agreement and the constructive issuance by the Company of shares of Company Common Stock to stockholders of Parent (as reflected in Rule 145(a) of the Securities Act) (the "**Constructive Issuance**") and (iii) determined to recommend, upon the terms and subject to the conditions set forth in this Agreement, that the stockholders of Parent vote to approve this Agreement and thereby approve the Contemplated Transactions, including the issuance of shares of Parent Capital Stock to the stockholders of the Company pursuant to the terms of this Agreement, the Constructive Issuance, and, if deemed necessary by the Parties, an amendment to Parent's certificate of incorporation to effect the Nasdaq Reverse Split.

F. The First Merger Sub Board has (i) determined that the Contemplated Transactions are fair to, advisable, and in the best interests of First Merger Sub and its sole stockholder, (ii) approved and declared advisable this Agreement and the Contemplated Transactions and (iii) determined to recommend, upon the terms and subject to the conditions set forth in this Agreement, that the stockholder of First Merger Sub votes to adopt this Agreement and thereby approve the Contemplated Transactions.

G. The sole member of the Second Merger Sub has (i) determined that the Contemplated Transactions are fair to, advisable, and in the best interests of Second Merger Sub and its sole member, (ii) approved and declared advisable this Agreement and the Contemplated Transactions and (iii) determined to recommend, upon the terms and subject to the conditions set forth in this Agreement, that the sole member of Second Merger Sub votes to adopt this Agreement and thereby approve the Contemplated Transactions.

H. The Company Board has (i) determined that the Contemplated Transactions are fair to, advisable and in the best interests of the Company and its stockholders, (ii) approved and declared advisable this Agreement and the Contemplated Transactions and (iii) determined to recommend, upon the terms and subject to the conditions set forth in this Agreement, that the stockholders of the Company vote to adopt this Agreement and thereby approve the Contemplated Transactions.

I. Concurrently with the execution and delivery of this Agreement and as a condition and inducement to the Company's willingness to enter into this Agreement, each of the officers, directors and stockholders set forth on Section A of the Parent Disclosure Letter (solely in their capacity as stockholders of Parent) are executing support agreements in favor of the Company in substantially the form attached hereto as Exhibit A-1 (the "**Parent Stockholder Support Agreement**"), pursuant to which such Persons have, subject to the terms and conditions set forth therein, agreed to vote all of their shares of capital stock of Parent in favor of the approval of this Agreement and thereby approve the Contemplated Transactions, and, if deemed necessary by Parent, an amendment to Parent's certificate of incorporation to effect the Nasdaq Reverse Split, and against any competing proposals.

J. Concurrently with the execution and delivery of this Agreement and as a condition and inducement to Parent's willingness to enter into this Agreement, each of the officers, directors and stockholders of the Company listed on Section A of the Company Disclosure Letter (solely in their capacity as stockholders of the Company) are executing support agreements in favor of Parent in substantially the form attached hereto as Exhibit A-2 (the "**Company Stockholder Support Agreement**"), pursuant to which such Persons have, subject to the terms and conditions set forth therein, agreed to vote all of their shares of Company Capital Stock in favor of the adoption of this Agreement and thereby approve the Contemplated Transactions and against any competing proposals.

K. Concurrently with the execution and delivery of this Agreement and as a condition and inducement to Parent's and the Company's willingness to enter into this Agreement, all of the stockholders of the Company or Parent listed on Section B of the Company Disclosure Letter are executing lock-up agreements in substantially the form attached hereto as Exhibit B (the "**Lock-Up Agreement**," and collectively, the "**Lock-Up Agreements**").

L. It is expected that within two (2) Business Days after the Registration Statement is declared effective under the Securities Act, the holders of shares of Company Capital Stock sufficient to adopt and approve this Agreement and the Merger as required under the DGCL and the Company's certificate of incorporation and bylaws will execute and deliver an action by written consent adopting this Agreement, in form and substance reasonably acceptable to Parent, in order to obtain the Required Company Stockholder Vote.

M. Concurrently with the execution and delivery of this Agreement, certain investors have executed a Subscription Agreement in the form attached hereto as Exhibit C among the Company and the Persons named therein (the "**Subscription Agreement**"), pursuant to which such Persons will have agreed to purchase in the amounts set forth therein (including by contribution of Company Notes) (i) shares of Company Common Stock and (ii) pre-funded Company Warrants, in each case, immediately prior to the First Effective Time (the "**Company Pre-Closing Financing**").

AGREEMENT

The Parties, intending to be legally bound, agree as follows:

Section 1. Definitions and Interpretative Provisions.

1.1 Definitions.

(a) For purposes of this Agreement (including this Section 1):

"**Acceptable Confidentiality Agreement**" means a confidentiality agreement containing terms not materially less restrictive in the aggregate to the counterparty thereto than the terms of the Confidentiality Agreement, except such confidentiality agreement need not contain any standstill, non-solicitation or no hire provisions. Notwithstanding the foregoing, a Person who has previously entered into a confidentiality agreement with Parent relating to a potential Acquisition Proposal on terms that are not materially less restrictive than the Confidentiality Agreement with respect to the scope of coverage and restrictions on disclosure and use shall not be required to enter into a new or revised confidentiality agreement, and such existing confidentiality agreement shall be deemed to be an Acceptable Confidentiality Agreement.

"**Acquisition Inquiry**" means, with respect to a Party, an inquiry, indication of interest or request for non-public information (other than an inquiry, indication of interest or request for information made or submitted by the Company, on the one hand, or Parent, on the other hand, to the other Party) that would reasonably be expected to lead to an Acquisition Proposal.

"**Acquisition Proposal**" means, with respect to a Party, any offer or proposal, whether written or oral (other than an offer or proposal made or submitted by or on behalf of the Company or any of its Affiliates, on the one hand, or by or on behalf of Parent or any of its Affiliates, on the other hand, to the other Party) contemplating or otherwise relating to any Acquisition Transaction with such Party.

"**Acquisition Transaction**" means any transaction or series of related transactions (other than any Parent Legacy Transaction, the issuance of Company Notes, or the Company Pre-Closing Financing) involving:

(a) any merger, consolidation, amalgamation, share exchange, business combination, issuance of securities, acquisition of securities, reorganization, recapitalization, tender offer, exchange offer or other similar transaction: (i) in which a Person or "group" (as defined in the Exchange Act and the rules promulgated thereunder) of Persons directly or indirectly acquires beneficial or record ownership of securities representing more than 20% of the outstanding securities of any class of voting securities of a Party or any of its Subsidiaries or (ii) in which a Party or any of its Subsidiaries issues securities representing more than 20% of the outstanding securities of any class of voting securities of such Party or any of its Subsidiaries, or issues securities convertible into more than 20% of the outstanding securities of any class of voting securities of such Party or any of its Subsidiaries; or

(b) any sale, lease, exchange, transfer, license, acquisition or disposition of any business or businesses or assets that constitute or account for 20% or more of the consolidated book value or the fair market value of the assets of a Party and its Subsidiaries, taken as a whole.

"**Affiliate**" shall have the meaning given to such term in Rule 145 under the Securities Act.

"**Affordable Care Act**" means the Patient Protection and Affordable Care Act.

"**Anticipated Closing Date**" means the anticipated Closing Date, as agreed upon by Parent and the Company.

"**Business Day**" means any day other than a day on which banks in the State of New York are authorized or obligated to be closed.

"**Certificate of Designation**" means the Certificate of Designation of Preferences, Rights and Limitations of Parent Convertible Preferred Stock in the form attached hereto as Exhibit E.

"**COBRA**" means the Consolidated Omnibus Budget Reconciliation Act of 1985, as set forth in Section 4980B of the Code and Section 6 of Title I of ERISA.

"**Code**" means the Internal Revenue Code of 1986, as amended.

"**Company Associate**" means any current employee, independent contractor, officer or director of the Company or any of its Subsidiaries.

"**Company Board**" means the board of directors of the Company.

"**Company Capital Stock**" means the Company Common Stock and the Company Preferred Stock.

"**Company Capitalization Representations**" means the representations and warranties of the Company set forth in Sections 3.6(a) and 3.6(d).

"**Company Common Stock**" means the common stock, $0.0001 par value per share, of the Company.

"**Company Contract**" means any Contract: (a) to which the Company or any of its Subsidiaries is a Party, (b) by which the Company or any of its Subsidiaries is or may become bound or under which the Company or any of its Subsidiaries has, or may become subject to, any obligation or (c) under which the Company or any of its Subsidiaries has or may acquire any right or interest.

"**Company Employee Plan**" means any Employee Plan that the Company or any of its Subsidiaries (i) sponsors, maintains, administers, or contributes to, or (ii) provides benefits under or through, or (iii) has any obligation to contribute to or provide benefits under or through, or (iv) may reasonably be expected to have any Liability, or (v) utilizes to provide benefits to or otherwise cover any current or former employee, officer, director or other service provider of the Company or any of its Subsidiaries (or their spouses, dependents, or beneficiaries).

"**Company Fundamental Representations**" means the representations and warranties of the Company set forth in Sections 3.1(a), 3.2, 3.3, 3.4, 3.5(a)(i) and 3.20.

"**Company IP Rights**" means all Intellectual Property rights that are owned or purported to be owned by, assigned to, exclusively licensed to, or controlled by the Company or its Subsidiaries that are necessary for, or used or held for use in, the operation of the business of the Company and its Subsidiaries as presently conducted.

"**Company IP Rights Agreement**" means any Contract governing, related to or pertaining to any Company IP Rights other than any confidential information provided under confidentiality agreements.

"**Company Key Employee**" means any executive officer of the Company or any of its Subsidiaries.

"**Company Material Adverse Effect**" means any Effect that, considered together with all other Effects that have occurred prior to the date of determination of the occurrence of a Company Material Adverse Effect, has or would reasonably be expected to have a material adverse effect on the business, financial condition, assets, liabilities or results of operations of the Company or its Subsidiaries, taken as a whole; provided, however, that Effects arising or resulting from the following shall not be taken into account in determining whether there has been a Company Material Adverse Effect: (a) the announcement of this Agreement or the pendency of the Contemplated Transactions, (b) the taking of any action, or the failure to take any action, by the Company that is required to comply with the terms of this Agreement, (c) any natural disaster, calamity or epidemics, pandemics or other force majeure events, or any act or threat of terrorism or war, any armed hostilities or terrorist activities (including any escalation or general worsening of any of the foregoing) anywhere in the world or any governmental or other response or reaction to any of the foregoing, (d) any change in GAAP or applicable Law or the interpretation thereof, (e) general economic or political conditions or conditions generally affecting the industries in which the Company and its Subsidiaries operate or (f) any change in the cash position of the Company and its Subsidiaries which results from operations in the Ordinary Course of Business; except in each case with respect to clauses (c), (d) and (e), to the extent disproportionately affecting the Company and its Subsidiaries, taken as a whole, relative to other similarly situated companies in the industries in which the Company and its Subsidiaries operate.

"**Company Merger Shares**" means the product determined by *multiplying* (i) the Post-Closing Parent Shares *by* (ii) the Company Allocation Percentage, in which:

- "**Aggregate Valuation**" means the sum of (i) the Company Valuation, *plus* (ii) the Parent Valuation.
- "**Company Allocation Percentage**" means the percentage (rounded to four decimal places) determined by *subtracting* (i) the Parent Allocation Percentage *from* (ii) 100 percent.
- "**Company Equity Value**" means $175,000,000.
- "**Company Outstanding Shares**" means, without duplication, the total number of shares of Company Capital Stock outstanding immediately prior to the First Effective Time (including any shares of Company Common Stock or Company Preferred Stock that are issued in, or issuable upon the exercise or conversion of securities issued in, the Company Pre-Closing Financing), expressed on a fully diluted and as-converted-to-Company Common Stock basis assuming, without limitation or duplication the exercise of all Company Options, Company Warrants or other rights or commitments to receive shares of Company Common Stock or Company Preferred Stock (or securities convertible or exercisable into shares of Company Common Stock or Company Preferred Stock, including the Company Notes), whether conditional or unconditional, that are outstanding as of immediately prior to the First Effective Time. For the avoidance of doubt, Company Outstanding Shares shall (a) exclude, to avoid the double-counting of, any shares of Company Common Stock or Company Preferred Stock (or securities convertible or exercisable into shares of Company Common Stock or Company Preferred Stock, including any Company Notes) to the extent such shares or securities are contributed as consideration in the Company Pre-Closing Financing and (b) include (i) to the extent not already issued prior to the First Effective Time, any shares of Company Common Stock or Company Preferred Stock (or securities convertible or exercisable into shares of Company Common Stock or Company Preferred Stock) issuable to the Paragon Entities (as such term is defined in the Company's Organizational Documents) as a result of the Contemplated Transactions pursuant to the

Company's Organizational Documents and (ii) to the extent not already issued prior to the First Effective Time, any shares of Company Common Stock or Company Preferred Stock (or securities convertible or exercisable into shares of Company Common Stock or Company Preferred Stock) issuable pursuant to the offer letter set forth in Section 3.6(d) of the Company Disclosure Letter.

- "**Company Valuation**" means the (i) Company Equity Value plus (ii) the amount of proceeds actually received by the Company from the Company Pre-Closing Financing (including in the proceeds actually received from any Company Notes, and any interest thereon, contributed as consideration in the Company Pre-Closing Financing).

- "**Exchange Ratio**" means the ratio (rounded to four decimal places) equal to the quotient obtained by dividing (i) the Company Merger Shares by (ii) the Company Outstanding Shares.

- "**Parent Allocation Percentage**" means the quotient (expressed as a percentage and rounded to four decimal places) determined by *dividing* (i) the Parent Valuation *by* (ii) the Aggregate Valuation.

- "**Parent Outstanding Shares**" means, without duplication, (including, without limitation, the effects of the Nasdaq Reverse Split, if completed) the total number of shares of Parent Common Stock outstanding immediately prior to the First Effective Time expressed on a fully-diluted basis, and assuming, without limitation or duplication, the issuance of shares of Parent Common Stock in respect of all Parent Options, warrants or other rights or commitments to receive shares of Parent Common Stock or Parent Preferred Stock (or securities convertible or exercisable into shares of Parent Common Stock or Parent Preferred Stock, but excluding any Parent Convertible Preferred Stock issuable in accordance herewith), whether conditional or unconditional, that are outstanding as of immediately prior to the First Effective Time. Notwithstanding any of the foregoing, no Parent Options, if any, shall be included in the total number of shares of Parent Common Stock outstanding for purposes of determining the Parent Outstanding Shares to the extent cancelled at or prior to Closing under Section 6.6(c).

- "**Parent Valuation**" means (i) $11,000,000, *minus* (ii) the amount by which Parent Net Cash is less than $5,000,000 (if any).

- "**Post-Closing Parent Shares**" mean the quotient determined by *dividing* (i) the Parent Outstanding Shares *by* (ii) the Parent Allocation Percentage.

"**Company Notes**" means the convertible notes issued pursuant to that certain Series A Preferred Stock and Convertible Note Purchase Agreement among the Company and the purchasers party thereto, dated as of March 6, 2024, or any additional convertible promissory notes that may be issued from time to time prior to the Closing.

"**Company Options**" means options or other rights to purchase shares of Company Capital Stock issued by the Company.

"**Company Preferred Stock**" means the shares of the Company's capital stock designated as preferred stock, including the Company Series A Preferred Stock.

"**Company Registered IP**" means all Company IP Rights that are owned or exclusively licensed by the Company that are registered, filed or issued under the authority of, with or by any Governmental Authority, including all patents, registered copyrights and registered trademarks and all applications and registrations for any of the foregoing.

"**Company Series A Preferred Stock**" means a series of the Company's preferred stock designated as Series A Preferred Stock, $0.0001 par value per share.

"**Company Stock Plans**" means the Company's Amended and Restated 2024 Equity Incentive Plan.

"**Company Triggering Event**" shall be deemed to have occurred if, at any time prior to the adoption of this Agreement and the approval of the Contemplated Transactions by the Required Company Stockholder Vote: (a) the Company Board shall have made a Company Board Adverse Recommendation Change; (b) the Company Board or

any committee thereof shall have publicly proposed, endorsed or recommended any Acquisition Proposal; or (c) the Company shall have entered into any letter of intent or similar document or any Contract relating to any Acquisition Proposal.

"**Company Warrants**" means warrants to purchase shares of Company Capital Stock issued by the Company.

"**Confidentiality Agreement**" means the letter agreement dated as of February 9, 2024, between the Company and Parent.

"**Consent**" means any approval, consent, ratification, permission, waiver or authorization (including any Governmental Authorization).

"**Contemplated Transactions**" means the Merger, the Constructive Issuance and the other transactions contemplated by this Agreement (other than the Parent Legacy Transaction and Parent Charter Amendment), the Company Pre-Closing Financing and the Nasdaq Reverse Split (to the extent applicable and deemed necessary by Parent and the Company).

"**Contract**" means, with respect to any Person, any written agreement, contract, subcontract, lease (whether for real or personal property), mortgage, license, or other legally binding commitment or undertaking of any nature to which such Person is a party or by which such Person or any of its assets are bound or affected under applicable Law.

"**DGCL**" means the General Corporation Law of the State of Delaware.

"**DLLCA**" means the Delaware Limited Liability Company Act.

"**Effect**" means any effect, change, event, circumstance, or development.

"**Employee Plan**" means (A) an "employee benefit plan" within the meaning of Section 3(3) of ERISA whether or not subject to ERISA; (B) other plan, program, policy or arrangement providing for stock options, stock purchases, equity-based compensation, bonuses (including any annual bonuses and retention bonuses) or other incentives, severance pay, deferred compensation, employment, compensation, change in control or transaction bonuses, supplemental, vacation, retirement benefits (including post-retirement health and welfare benefits), pension benefits, profit-sharing benefits, fringe benefits, life insurance benefits, perquisites, health benefits, medical benefits, dental benefits, vision benefits, and all other employee benefit plans, agreements, and arrangements, not described in (A) above; and (C) all other plans, programs, policies or arrangements providing compensation to employees, consultants and non-employee directors.

"**Encumbrance**" means any lien, pledge, hypothecation, charge, mortgage, security interest, lease, exclusive license, option, easement, reservation, servitude, adverse title, claim, infringement, interference, option, right of first refusal, preemptive right, community property interest or restriction or encumbrance of any nature (including any restriction on the voting of any security, any restriction on the transfer of any security or other asset, any restriction on the receipt of any income derived from any asset, any restriction on the use of any asset and any restriction on the possession, exercise or transfer of any other attribute of ownership of any asset).

"**Enforceability Exceptions**" means the (a) Laws of general application relating to bankruptcy, insolvency and the relief of debtors and (b) rules of law governing specific performance, injunctive relief and other equitable remedies.

"**Entity**" means any corporation (including any nonprofit corporation), partnership (including any general partnership, limited partnership or limited liability partnership), joint venture, estate, trust, company (including any company limited by shares, limited liability company or joint stock company), firm, society or other enterprise, association, organization or entity, and each of its successors.

"**Environmental Law**" means any federal, state, local or foreign Law relating to pollution or protection of human health or the environment (including ambient air, surface water, ground water, land surface or subsurface strata), including any law or regulation relating to emissions, discharges, releases or threatened releases of Hazardous Materials, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials.

"**ERISA Affiliate**" means, with respect to any Entity, any other Person that would be treated as a single employer with such Entity or part of the same "controlled group" as such Entity under Sections 414(b),(c),(m) or (o) of the Code.

"**ERISA**" means the Employee Retirement Income Security Act of 1974, as amended.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

"**First Merger Sub Board**" means the board of directors of First Merger Sub.

"**Governmental Authority**" means any: (a) nation, state, commonwealth, province, territory, county, municipality, district or other jurisdiction of any nature, (b) federal, state, local, municipal, foreign, supra-national or other government, (c) governmental or quasi-governmental authority of any nature (including any governmental division, department, agency, commission, bureau, instrumentality, official, ministry, fund, foundation, center, organization, unit, body or Entity and any court or other tribunal, and for the avoidance of doubt, any taxing authority) or (d) self-regulatory organization (including Nasdaq).

"**Governmental Authorization**" means any: (a) permit, license, certificate, franchise, permission, variance, exception, order, approval, clearance, registration, qualification or authorization issued, granted, given or otherwise made available by or under the authority of any Governmental Authority or pursuant to any Law or (b) right under any Contract with any Governmental Authority.

"**Hazardous Materials**" means any pollutant, chemical, substance and any toxic, infectious, carcinogenic, reactive, corrosive, ignitable or flammable chemical, or chemical compound, or hazardous substance, material or waste, whether solid, liquid or gas, that is subject to regulation, control or remediation under any Environmental Law, including without limitation, crude oil or any fraction thereof, and petroleum products or by-products.

"**HSR Act**" means the U.S. Hart Scott-Rodino Antitrust Improvements Act of 1976, as amended.

"**In the Money Parent Option**" shall mean Parent Options with an exercise price equal to or less than the Parent Closing Price.

"**Intellectual Property**" means: (a) United States, foreign and international patents, patent applications, including all provisionals, nonprovisionals, substitutions, divisionals, continuations, continuations-in-part, reissues, extensions, supplementary protection certificates, reexaminations, term extensions, certificates of invention and the equivalents of any of the foregoing, statutory invention registrations, invention disclosures and inventions (collectively, "**Patents**"), (b) trademarks, service marks, trade names, domain names, corporate names, brand names, URLs, trade dress, logos and other source identifiers, including registrations and applications for registration thereof and goodwill associated therewith, (c) copyrights, including registrations and applications for registration thereof, (d) software, including all source code, object code and related documentation, (e) formulae, customer lists, trade secrets, know-how, confidential information and other proprietary rights and intellectual property, whether patentable or not, and (f) all United States and foreign rights arising under or associated with any of the foregoing.

"**IRS**" means the United States Internal Revenue Service.

"**Knowledge**" means, (i) with respect to an individual, that such individual is actually aware of the relevant fact or such individual would reasonably be expected to know such fact in the ordinary course of the performance of such individual's employment responsibilities, (ii) with respect Parent, the Knowledge of the individuals listed on Schedule A of the Parent Disclosure Letter as of the date of such knowledge is imputed and (iii) with respect to any Person that is an Entity (other than Parent) the Knowledge of any executive officer of such Person as of the date such knowledge is imputed. With respect to any matters relating to Intellectual Property, such awareness or reasonable expectation to have knowledge does not require any such individual to conduct or have conducted or obtain or have obtained any freedom to operate opinions of counsel or any Intellectual Property rights clearance searches.

"**Law**" means any federal, state, national, supra-national, foreign, local or municipal or other law, statute, constitution, principle of common law, resolution, ordinance, code, edict, decree, rule, regulation, ruling or requirement issued, enacted, adopted, promulgated, implemented or otherwise put into effect by or under the authority of any Governmental Authority (including under the authority of Nasdaq or the Financial Industry Regulatory Authority).

"**Legal Proceeding**" means any action, suit, litigation, arbitration, proceeding (including any civil, criminal, administrative, investigative or appellate proceeding), hearing, inquiry, audit, examination or investigation commenced, brought, conducted or heard by or before any court or other Governmental Authority or any arbitrator or arbitration panel.

"**Multiemployer Plan**" means a "multiemployer plan," as defined in Section 3(37) or 4001(a)(3) of ERISA.

"**Multiple Employer Plan**" means a "multiple employer plan" within the meaning of Section 413(c) of the Code or Section 3(40) of ERISA.

"**Multiple Employer Welfare Arrangement**" means a "multiple employer welfare arrangement" within the meaning of Section 3(40) of ERISA.

"**Nasdaq Reverse Split**" means a reverse stock split of all outstanding shares of Parent Common Stock effected by Parent for the purpose of maintaining compliance with Nasdaq listing standards.

"**Nasdaq**" means The Nasdaq Stock Market.

"**Order**" means any judgment, order, writ, injunction, ruling, decision or decree of (that is binding on a Party), or any plea agreement, corporate integrity agreement, resolution agreement or deferred prosecution agreement with, or any settlement under the jurisdiction of, any court or Governmental Authority.

"**Ordinary Course of Business**" means, in the case of each of the Company and Parent, such actions taken in the ordinary course of its business and consistent with its past practice or, with respect to the Company, the customary practices of a recently formed company at a similar stage of development; provided, however, that during the Pre-Closing Period, the Ordinary Course of Business of Parent shall also include actions required to effect and effecting any Parent Legacy Transaction.

"**Organizational Documents**" means, with respect to any Person (other than an individual), (a) the certificate or articles of association or incorporation or organization or limited partnership or limited liability company, and any joint venture, limited liability company, operating or partnership agreement and other similar documents adopted or filed in connection with the creation, formation or organization of such Person and (b) all bylaws, regulations and similar documents or agreements relating to the organization or governance of such Person, in each case, as amended or supplemented.

"**Out of the Money Parent Options**" shall mean Parent Options with an exercise price greater than the Parent Closing Price.

"**Parent Associate**" means any current employee, independent contractor, officer or director of Parent or any of its Subsidiaries.

"**Parent Balance Sheet**" means the audited balance sheet of Parent as of December 31, 2023, included in Parent's Report on Form 10-K for the year ended December 31, 2023, as filed with the SEC.

"**Parent Board**" means the board of directors of Parent.

"**Parent Capital Stock**" means the Parent Common Stock and the Parent Preferred Stock.

"**Parent Capitalization Representations**" means the representations and warranties of Parent and Merger Subs set forth in Sections 4.6(a) and 4.6(d).

"**Parent Closing Price**" means the volume weighted average closing trading price of a share of Parent Common Stock on Nasdaq for the five (5) consecutive trading days ending three (3) trading days immediately prior to the Closing Date as reported by Bloomberg L.P.

"**Parent Common Stock**" means the common stock, $0.001 par value per share, of Parent.

"**Parent Contract**" means any Contract: (a) to which Parent is a party, (b) by which Parent or any Parent IP Rights or any other asset of Parent is or may become bound or under which Parent has, or may become subject to, any obligation or (c) under which Parent has or may acquire any right or interest.

"**Parent Convertible Preferred Stock**" means Parent's non-voting convertible preferred stock, par value $0.001 per share, with the rights, preferences, powers and privileges specified in the Certificate of Designation.

"**Parent Employee Plan**" means any Employee Plan that Parent or any of its Subsidiaries (i) sponsors, maintains, administers, or contributes to, or (ii) provides benefits under or through, or (iii) has any obligation to contribute to or provide benefits under or through, or (iv) may reasonably be expected to have any Liability, or (v) utilizes to provide benefits to or otherwise cover any current or former employee, officer, director or other service provider of Parent or any of its Subsidiaries (or their spouses, dependents, or beneficiaries).

"**Parent Fundamental Representations**" means the representations and warranties of Parent and Merger Subs set forth in Sections 4.1(a), 4.2, 4.3, 4.4, 4.5(a)(i) and 4.21.

"**Parent IP Rights Agreement**" means any Contract governing, related or pertaining to any Parent IP Rights.

"**Parent IP Rights**" means all Intellectual Property owned, licensed or controlled by Parent that is necessary for, or used or held for use in, the operation of the business of Parent.

"**Parent Key Employee**" means (i) an executive officer of Parent; and (ii) any employee of Parent that reports directly to the Parent Board or to an executive officer of Parent.

"**Parent Legacy Business**" means the business of Parent as conducted at any time prior to the date of this Agreement, including but not limited to business related to the assets listed on Section 1.1(a) of the Parent Disclosure Letter.

"**Parent Material Adverse Effect**" means any Effect that, considered together with all other Effects that have occurred prior to the date of determination of the occurrence of the Parent Material Adverse Effect, has or would reasonably be expected to have a material adverse effect on the business, financial condition, assets, liabilities or results of operations of Parent and its Subsidiaries, taken as a whole; provided, however, that Effects arising or resulting from the following shall not be taken into account in determining whether there has been a Parent Material Adverse Effect: (a) the announcement of this Agreement or the pendency of the Contemplated Transactions, (b) any change in the stock price or trading volume of Parent Common Stock (it being understood, however, that any Effect causing or contributing to any change in stock price or trading volume of Parent Common Stock may be taken into account in determining whether a Parent Material Adverse Effect has occurred, unless such Effects are otherwise excepted from this definition), (c) the taking of any action, or the failure to take any action, by Parent that is required to comply with the terms of this Agreement, (d) any natural disaster, calamity or epidemics, pandemics or other force majeure events, or any act or threat of terrorism or war, any armed hostilities or terrorist activities (including any escalation or general worsening of any of the foregoing) anywhere in the world, or any governmental or other response or reaction to any of the foregoing, (e) any change in GAAP or applicable Law or the interpretation thereof or (f) general economic or political conditions or conditions generally affecting the industries in which Parent or any of its Subsidiaries operates; except, in each case with respect to clauses (d), (e) and (f), to the extent materially and disproportionately affecting Parent or any of its Subsidiaries, taken as a whole, relative to other similarly situated companies in the industries in which Parent or any of its Subsidiaries operates. Notwithstanding the above, a delisting of Parent Common Stock on Nasdaq shall constitute a Parent Material Adverse Effect, provided that the Company has not refused or unreasonably delayed its consent to reasonable actions by Parent to maintain the listing of Parent Common Stock on Nasdaq.

"**Parent Net Cash**" means without duplication, (i) Parent's unrestricted cash and cash equivalents and marketable securities determined, to the extent in accordance with GAAP, in a manner consistent with the manner in which such items were historically determined and in accordance with the financial statements (including any related notes) contained or incorporated by reference in the Parent SEC Documents and the Parent Balance Sheet, *plus* (ii) all prepaid expenses set forth on Section 1.1(b) of the Parent Disclosure Letter, plus (iii) all receivables which the parties may mutually agree (each in their sole discretion) are recoverable by or provide benefit to Parent after the First Effective Time (if any), *minus* (iv) the sum of Parent's consolidated short-term and long-term contractual obligations and liabilities accrued at the Closing Date, in each case determined in accordance with GAAP and, to the extent in accordance with GAAP, in a manner consistent with the manner in which such items were historically determined and in accordance with the financial statements (including any related notes) contained or incorporated by reference in the Parent SEC Documents and the Parent Balance Sheet, *minus* (v) the aggregate amount (without duplication)

of all fees and expenses incurred by Parent prior to the First Effective Time in connection with the Contemplated Transactions or the Parent Legacy Transaction, including: (a) any fees and expenses of legal counsel, accountants, financial advisors, investment bankers, brokers, consultants, tax advisors, and other professional advisors of Parent in connection with the Contemplated Transactions or the Parent Legacy Transaction; (b) 50% of the fees paid to the SEC in connection with filing the Registration Statement and any amendments and supplements thereto, with the SEC; (c) 50% of the fees and expenses in connection with the printing, mailing and distribution of the Proxy Statement and any amendments and supplements thereto; (d) 50% of the Nasdaq Fees; (e) any bonus, retention payments, severance, change-in-control payments or similar payment obligations (including payments with "single-trigger" provisions triggered at and as of the consummation of the transactions contemplated hereby) that become due or payable to any director, officer, employee or consultant in connection with the consummation of the Contemplated Transactions or any Parent Legacy Transaction, together with any payroll Taxes associated therewith; (f) the dividend of any excess Parent Net Cash (but only to the extent declared and unpaid) and all costs and expenses associated therewith; and (g) the costs associated with obtaining the "D&O tail policy" pursuant to Section 6.7, in each case, to the extent unpaid as of the First Effective Time, *minus* (vi) all remaining rent payments and any other Liabilities under Parent's lease obligations, *minus* (vii) any unpaid Taxes of Parent and its Subsidiaries for Tax periods (or portions thereof) ending on or before the Closing Date, *minus* (viii) all costs and expenses to be mutually agreed by Parent and the Company relating to the winding down of Parent Legacy Business, including the sale, license or other disposition of any or all of the Parent Legacy Business to the extent unpaid as of the Closing, including any costs incurred costs incurred by Parent following the Closing pursuant to Section 6.17 and *minus* (ix) the amounts due and payable to holders of Parent Options pursuant to Section 6.6(c) to the extent unpaid as of the First Effective Time; *provided, however,* that if any portion of the fees and expenses described in subclauses (b), (c), and (d) of clause (v) have been paid by Parent prior to the First Effective Time in an amount greater than Parent's share of such fee and expense described in subclauses (b), (c), and (d), then (x) such portion in excess of Parent's shares of such fee and expense described in subclauses (b), (c), and (d) shall not be deducted by reason of subclauses (b), (c), and (d) of clause (v) and (y) such portion shall be added to the calculation of Parent Net Cash.

"**Parent Options**" means options or other rights to purchase shares of Parent Common Stock granted by Parent, including pursuant to any Parent Stock Plan.

"**Parent Preferred Stock**" means the shares of Parent's capital stock designated as preferred stock, par value $0.001 per share of Parent, including the Parent Convertible Preferred Stock.

"**Parent Registered IP**" means all Parent IP Rights that are owned or exclusively licensed by Parent that are registered, filed or issued under the authority of, with or by any Governmental Authority, including all patents, registered copyrights and registered trademarks and all applications for any of the foregoing.

"**Parent Restricted Stock Units**" means any equity award with respect to Parent Common Stock that represents the right to receive in the future shares of Parent Common Stock pursuant to any Parent Stock Plan.

"**Parent Triggering Event**" shall be deemed to have occurred if, prior to the approval of this Agreement and the Contemplated Transactions by Parent's stockholders and subject to Section 6.3(c): (a) Parent shall have failed to include in the Proxy Statement the Parent Board Recommendation, (b) the Parent Board or any committee thereof shall have made a Parent Board Adverse Recommendation Change or subject to Section 6.3(e), publicly proposed, endorsed or recommended any Acquisition Proposal or (c) Parent shall have entered into any letter of intent or similar document or any Contract relating to any Acquisition Proposal (other than an Acceptable Confidentiality Agreement permitted pursuant to Section 5.4).

"**Party**" or "**Parties**" means the Company, Merger Subs and Parent.

"**Permitted Alternative Agreement**" means a definitive agreement that contemplates or otherwise relates to an Acquisition Transaction that constitutes a Superior Offer.

"**Permitted Encumbrance**" means (a) any statutory liens for current Taxes not yet due and payable or for Taxes that are being contested in good faith by the appropriate proceedings and for which adequate reserves have been made on the Company Budget or the Parent Balance Sheet, as applicable, in accordance with GAAP, (b) minor non-monetary liens that have arisen in the Ordinary Course of Business and that do not (in any case or in the aggregate) materially detract from the value of the assets subject thereto or materially impair the operations of the Company or Parent, as applicable, (c) statutory liens to secure obligations to landlords, lessors or renters under

leases or rental agreements, (d) deposits or pledges made in connection with, or to secure payment of, workers' compensation, unemployment insurance or similar programs mandated by Law, (e) statutory liens in favor of carriers, warehousemen, mechanics and materialmen, to secure claims for labor, materials or supplies for amounts that are not yet due and payable and (f) liens arising under applicable securities Law.

"**Person**" means any individual, Entity or Governmental Authority.

"**Personal Information**" means any data or information that constitutes "personal information," "personal data," "personally identifiable information," "protected health information," or any analogous term under applicable Law, including any such information that identifies, relates to, describes, is linked to, is reasonably capable of being associated with, or could reasonably be linked, directly or indirectly, with any identified or identifiable individual or household.

"**Privacy Laws**" mean, collectively, (i) all Laws governing privacy, data protection, data security, trans-border data flow, data loss, data theft, breach notification, data localization, sending solicited or unsolicited electronic mail or text messages, cookies or other tracking technology, or the collection, handling, use, maintenance, storage, disclosure, transfer, or other processing of Personal Information, including any such legally binding requirements set forth in regulations and agreements containing consent orders published by regulatory authorities of competent jurisdiction such as the U.S. Federal Trade Commission, U.S. Federal Communications Commission, and state data protection authorities, including HIPAA, Section 5 of the Federal Trade Commission Act, the Telephone Consumer Protection Act and U.S. state consumer protection and data breach notification Laws, and (ii) any legally binding requirements of any self-regulatory organizations governing data privacy, data protection, data security, trans-border data flow, data loss, data theft, breach notification, data localization, sending solicited or unsolicited electronic mail or text messages, cookies or other tracking technology, or the collection, handling, use, maintenance, storage, disclosure, transfer, or other processing of Personal Information.

"**Representatives**" means with respect to a Person, such Person's directors, officers, employees, agents, attorneys, accountants, investment bankers, advisors and other representatives.

"**Sarbanes-Oxley Act**" means the Sarbanes-Oxley Act of 2002.

"**SEC**" means the United States Securities and Exchange Commission.

"**Securities Act**" means the Securities Act of 1933, as amended.

"**Subsequent Transaction**" means any Acquisition Transaction (with all references to 20% in the definition of Acquisition Transaction being treated as references to 50% for these purposes).

"**Subsidiary**" means, with respect to an Entity, a Person if such Person directly or indirectly owns or purports to own, beneficially or of record, (a) an amount of voting securities or other interests in such Entity that is sufficient to enable such Person to elect at least a majority of the members of such entity's board of directors or other governing body or (b) at least 50% of the outstanding equity, voting, beneficial or financial interests in such Entity.

"**Superior Offer**" means an unsolicited bona fide written Acquisition Proposal (with all references to 20% in the definition of Acquisition Transaction being treated as references to 50% for these purposes) that: (a) was not obtained or made as a direct or indirect result of a breach of this Agreement, (b) is on terms and conditions that the Parent Board or the Company Board, as applicable, determines in good faith, based on such matters that it deems relevant (including the likelihood of consummation thereof and the financing terms thereof), as well as any written offer by the other Party to this Agreement to amend the terms of this Agreement, and following consultation with its outside legal counsel and financial advisors, if any, are more favorable, from a financial point of view, to Parent's stockholders or the Company's stockholders, as applicable, than the terms of the Contemplated Transactions, (c) is not subject to any financing conditions (and if financing is required, such financing is then fully committed to the third party) and (d) is reasonably capable of being completed on the terms proposed.

"**Tax Return**" means any return (including any information return), report, statement, declaration, claim or refund, estimate, schedule, notice, notification, form, election, certificate or other document or information, and any amendment or supplement to any of the foregoing, filed or required to be filed with any Governmental Authority (or provided to a payee) in connection with the determination, assessment, collection or payment of any Tax or in connection with the administration, implementation or enforcement of or compliance with any Law relating to any Tax.

"**Tax**" means any U.S. federal, state, local, foreign or other tax, including any income tax, franchise tax, capital gains tax, gross receipts tax, value-added tax, surtax, estimated tax, employment tax, unemployment tax, national health insurance tax, environmental tax, excise tax, ad valorem tax, transfer tax, conveyance tax, stamp tax, sales tax, use tax, property tax, business tax, withholding tax, payroll tax, social security tax, customs duty, licenses tax, alternative or add-on minimum or other tax or similar charge, duty, levy, fee, tariff, impost, obligation or assessment in the nature of a tax (whether imposed directly or through withholding and whether or not disputed), and including any fine, penalty, addition to tax, interest or additional amount imposed by a Governmental Authority with respect thereto (or attributable to the nonpayment thereof).

"**Treasury Regulations**" means the United States Treasury regulations promulgated under the Code.

(b) Each of the following terms is defined in the Section set forth opposite such term:

Terms	Section
AAA	2.8(i)
Accounting Firm	2.8(i)
Agreement	Preamble
Allocation Certificate	6.15
Assumed Option	6.5(a)
Assumed Warrant	6.5(b)
Capitalization Date	4.6(a)
Cash Determination Time	2.8(a)
Certificate of Merger	2.3
Certifications	4.7(a)
Closing Date	2.3
Closing	2.3
Company 409A Plan	3.17(j)
Company Audited Financial Statements	6.1(e)
Company Board Adverse Recommendation Change	6.2(d)
Company Board Recommendation	6.2(c)
Company Budget	3.7(a)
Company Disclosure Letter	Section 3
Company Interim Financial Statements	6.1(e)
Company Intervening Event	6.2(d)
Company Material Contract	3.13(a)
Company Material Contracts	3.13(a)
Company Permits	3.14(b)
Company Product Candidates	3.14(d)
Company Real Estate Leases	3.11
Company Regulatory Permits	3.14(d)
Company Required S-4 Information	6.1(d)
Company Stockholder Support Agreement	Recital
Company Stockholder Written Consents	6.2(a)
Company Termination Fee	10.3(b)
Company Valuation Calculation	2.8(b)
Company Valuation Delivery Date	2.8(b)
Company Valuation Determination Time	2.8(b)
Company Valuation Dispute Notice	2.8(d)
Company Valuation Response Date	2.8(d)
Company Valuation Schedule	2.8(b)
Company	Preamble
Concurrent Investment	Preamble
Costs	6.7(a)

Terms	Section
D&O Indemnified Parties	6.7(a)
Dispute Notice	2.8(c)
Dissenting Shares	2.12(a)
Drug/Device Regulatory Agency	3.14(b)
Employment-Related Laws	3.17(k)
End Date	10.1(b)
Exchange Agent	2.7(a)
FDA	3.14(b)
FDCA	3.14(c)
First Certificate of Merger	2.3
First Effective Time	2.3
First Merger	Recital
First Step Surviving Corporation	2.1
Form S-4	6.1(a)
GAAP	3.7(a)
Intended Tax Treatment	2.10
Liability	3.9
Lock-Up Agreement	Recital
Lock-Up Agreements	Recital
Merger Consideration	2.5(a)(ii)
Merger Subs	Preamble
Merger	Recital
Nasdaq Fees	6.9
Nasdaq Listing Application	6.9
Notice Period	6.2(d)
Ordinary Course Agreement	3.16(g)
Parent 409A Plan	4.17(j)
Parent Board Adverse Recommendation Change	6.3(c)
Parent Board Recommendation	6.3(b)
Parent Charter Amendment	2.4(b)(ii)
Parent Disclosure Letter	Section 4
Parent Intervening Event	6.3(c)
Parent Legacy Transaction	5.1(c)
Parent Material Contract	4.13(a)
Parent Material Contracts	4.13(a)
Parent Net Cash Calculation	2.8(a)
Parent Net Cash Schedule	2.8(a)
Parent Notice Period	6.3(c)
Parent Permits	4.14(b)
Parent Pre-Closing Dividend	5.1(c)(ii)
Parent Pre-Closing Dividend Amount	5.1(c)(ii)
Parent Product Candidates	4.14(d)
Parent Real Estate Leases	4.11
Parent Regulatory Permits	4.14(d)
Parent SEC Documents	4.7(a)
Parent Stock Plans	4.6(c)
Parent Stockholder Matters	6.3(a)
Parent Stockholder Meeting	6.3(a)
Parent Stockholder Support Agreement	Recital
Parent	Preamble

Terms	Section
PHSA	3.14(c)
Post-Closing Welfare Plan	6.6(b)
Pre-Closing Period	5.1(a)
Privacy Policies	3.22
Proxy Statement	6.1(a)
Registration Statement	6.1(a)
Required Company Stockholder Vote	3.4
Required Parent Stockholder Vote	4.4
Response Date	2.8(c)
SEC Documents	6.16
Second Certificate of Merger	2.3
Second Effective Time	2.3
Second Merger	Recital
Stockholder Notice	6.2(b)
Subscription Agreement	Recital
Surviving Entity	2.1
Tax Certificates	6.10(c)
Transaction Litigation	6.4(c)
WARN Act	3.17(k)

1.2 Other Definitional and Interpretative Provisions. The words "hereof," "herein" and "hereunder" and words of like import used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement. The captions herein are included for convenience of reference only and shall be ignored in the construction or interpretation hereof. References to Sections, Exhibits and Schedules are to Sections, Exhibits and Schedules of this Agreement unless otherwise specified. Any capitalized terms used in any Exhibit or Schedule but not otherwise defined therein shall have the meaning as defined in this Agreement. Any singular term in this Agreement shall be deemed to include the plural, and any plural term the singular, the masculine gender shall include the feminine and neuter genders; the feminine gender shall include the masculine and neuter genders; and the neuter gender shall include masculine and feminine gender. Whenever the words "include," "includes" or "including" are used in this Agreement, they shall be deemed to be followed by the words "without limitation," whether or not they are in fact followed by those words or words of like import. The word "or" is not exclusive. "Writing," "written" and comparable terms refer to printing, typing and other means of reproducing words (including electronic media) in a visible form. References to any agreement or Contract (except for references to any agreements or Contracts listed on the Parent Disclosure Letter or Company Disclosure Letter) are to that agreement or Contract as amended, modified or supplemented from time to time in accordance with the terms hereof and thereof. The Exhibits to this Agreement, the Parent Disclosure Letter and the Company Disclosure Letter are integral parts of the interpretation of this Agreement, but only Exhibit D-1 (including Exhibit A to such Exhibit) and Exhibit D-2 is incorporated by reference and made a part hereof for purposes of Section 251 of the DGCL. References to any Person include the successors and permitted assigns of that Person. References to any statute are to that statute and to the rules and regulations promulgated thereunder, in each case as amended, modified, re-enacted thereof, substituted, from time to time. References to "$" and "dollars" are to the currency of the United States. All accounting terms used herein will be interpreted, and all accounting determinations hereunder will be made, in accordance with GAAP unless otherwise expressly specified. References from or through any date shall mean, unless otherwise specified, from and including or through and including, respectively. All references to "days" shall be to calendar days unless otherwise indicated as a "Business Day." Except as otherwise specifically indicated, for purposes of measuring the beginning and ending of time periods in this Agreement (including for purposes of "Business Day" and for hours in a day or Business Day), the time at which a thing, occurrence or event shall begin or end shall be deemed to occur in the Eastern time zone of the United States. The Parties agree that any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in the construction or interpretation of this Agreement. The Parties agree that the Company Disclosure Letter or Parent Disclosure Letter shall be arranged in sections and subsections corresponding to the numbered and lettered sections and subsections contained in Section 3 or Section 4, respectively. The disclosures in any section or subsection of the Company Disclosure Letter or the Parent Disclosure Letter shall qualify other sections and subsections in Section 3 or Section 4, respectively, to the extent it is readily apparent from a reading of the disclosure that such disclosure is

applicable to such other sections and subsections. The words "delivered" or "made available" mean, with respect to any documentation, that prior to 5:00 p.m. (New York City time) on the date that is the day prior to the date of this Agreement, a copy of such material has been (a) posted to and continuously made available by a Party to the other Party and its Representatives in the electronic data room maintained by such disclosing Party for the purposes of the Contemplated Transactions or (b) delivered by or on behalf of a Party or its Representatives to the other Party or its Representatives via electronic mail or in hard copy form prior to the execution of this Agreement.

Section 2. Description of Transaction

2.1 The Merger. Upon the terms and subject to the conditions set forth in this Agreement, at the First Effective Time, First Merger Sub shall be merged with and into the Company, and the separate existence of First Merger Sub shall cease. The Company will continue as the surviving corporation in the First Merger (the "**First Step Surviving Corporation**"). Upon the terms and subject to the conditions set forth in this Agreement, at the Second Effective Time, the First Step Surviving Corporation will merge with and into Second Merger Sub, and the separate existence of the First Step Surviving Corporation shall cease. As a result of the Second Merger, Second Merger Sub will continue as the surviving entity in the Second Merger (the "**Surviving Entity**").

2.2 Effects of the Merger. The First Merger shall have the effects set forth in this Agreement and in the applicable provisions of the DGCL. As a result of the First Merger, the Company will become a wholly owned subsidiary of Parent. The Second Merger shall have the effects set forth in this Agreement and in the applicable provisions of the DGCL and the DLLCA.

2.3 Closing; First Effective Time; Second Effective Time. Unless this Agreement is earlier terminated pursuant to the provisions of Section 10.1, and subject to the satisfaction or waiver of the conditions set forth in Section 6, Section 7 and Section 8, the consummation of the Merger (the "**Closing**") shall take place remotely, as promptly as practicable (but in no event later than the second Business Day following the satisfaction or waiver of the last to be satisfied or waived of the conditions set forth in Section 7, Section 8 and Section 9, other than those conditions that by their nature are to be satisfied at the Closing, but subject to the satisfaction or waiver of each of such conditions), or at such other time, date and place as Parent and the Company may mutually agree in writing. The date on which the Closing actually takes place is referred to as the "**Closing Date**." Immediately prior to the Closing on the Closing Date, Parent shall file the Certificate of Designation with the office of the Secretary of State of the State of Delaware. At the Closing, (i) the Parties shall cause the First Merger to be consummated by executing and filing with the Secretary of State of the State of Delaware a certificate of merger with respect to the Merger, satisfying the applicable requirements of the DGCL and in form and substance attached hereto as Exhibit D-1 and incorporated herein by reference (the "**First Certificate of Merger**") and (ii) the Parties shall cause the Second Merger to be consummated by executing and filing with the Secretary of State of the State of Delaware a certificate of merger with respect to the Second Merger, satisfying the applicable requirements of the DGCL and the DLLCA and in form and substance attached hereto as Exhibit D-2 and incorporated herein by reference (the "**Second Certificate of Merger**" and together with the First Certificate of Merger, the "**Certificate of Merger**"). The First Merger shall become effective at the time of the filing of such Certificate of Merger with the Secretary of State of the State of Delaware or at such later time as may be specified in such Certificate of Merger with the consent of Parent and the Company (the time as of which the Merger becomes effective being referred to as the "**First Effective Time**"). The Second Merger shall become effective at the time of the filing of such Second Certificate of Merger with the Secretary of State of the State of Delaware or at such later time as may be specified in such Second Certificate of Merger with the consent of Parent and the Company (the time as of which the Second Merger becomes effective being referred to as the "**Second Effective Time**").

2.4 Organizational Documents; Directors and Officers.

(a) At the First Effective Time:

(i) The certificate of incorporation of the First Step Surviving Corporation shall be amended and restated in the Merger to read as set forth on Exhibit A to the Certificate of Merger, until thereafter amended as provided by the DGCL and such certificate of incorporation;

(ii) The bylaws of the First Step Surviving Corporation shall be identical to the bylaws of the Company as in effect immediately prior to the First Effective Time, until thereafter amended as provided by the DGCL and such bylaws; and

(iii) the directors and officers of the First Step Surviving Corporation, each to hold office in accordance with the certificate of incorporation and bylaws of the First Step Surviving Corporation, shall be such persons as shall be mutually agreed upon by Parent and the Company.

(b) At the Second Effective Time:

(i) The certificate of formation of the Surviving Entity shall be the certificate of formation of Second Merger Sub as in effect immediately prior to the Second Effective Time, until thereafter amended as provided by the DLLCA and such certificate of formation; provided, however, that at the Second Effective Time (as part of the Second Certificate of Merger), the certificate of formation shall be amended to (A) change the name of the Surviving Entity to "Oruka Therapeutics Operating Company, LLC," and (B) make such other changes as are mutually agreed to by Parent and the Company;

(ii) The limited liability company agreement of the Surviving Entity shall be amended and restated in its entirety to read identically to the limited liability company agreement of Second Merger Sub as in effect immediately prior to the Second Effective Time, until thereafter amended as provided by the DLLCA and such limited liability company agreement; provided, however, that following the Second Effective Time (but as soon thereafter as practicable), the limited liability company agreement shall be amended to change the name of the Surviving Entity to "Oruka Therapeutics Operating Company, LLC";

(iii) The certificate of incorporation of Parent shall be identical to the certificate of incorporation of Parent immediately prior to the Second Effective Time, until thereafter amended as provided by the DGCL and such certificate of incorporation; provided, however, that at the Second Effective Time, Parent shall file an amendment to its certificate of incorporation to (i) change the name of Parent to "Oruka Therapeutics, Inc.", (ii) effect the Nasdaq Reverse Split (to the extent applicable and necessary), (iii) increase the number of shares of Parent Common Stock that Parent is authorized to issue to a number mutually agreed between Parent and the Company, and (iv) make such other changes as are mutually agreeable to Parent and the Company (such amendment, the "**Parent Charter Amendment**");

(iv) The directors and officers of Parent, each to hold office in accordance with the certificate of incorporation and bylaws of Parent, shall be as set forth in Section 6.12; and

(v) The directors and officers of Surviving Entity, each to hold office in accordance with the certificate of formation and limited liability company agreement of Second Merger Sub, shall be as set forth in Section 6.12 after giving effect to the provisions of Section 6.12, or such other persons as shall be mutually agreed upon by Parent and the Company.

2.5 Conversion of Company, First Merger Sub and Second Merger Sub Equity Securities.

(a) At the First Effective Time, by virtue of the Merger and without any further action on the part of Parent, Merger Subs, the Company or any stockholder of the Company or Parent:

(i) any shares of Company Capital Stock held as treasury stock immediately prior to the First Effective Time shall be canceled and retired and shall cease to exist, and no consideration shall be delivered in exchange therefor; and

(ii) subject to Section 2.5(c), (A) each share of Company Common Stock (including any shares of Company Common Stock issued pursuant to the Company Pre-Closing Financing) outstanding immediately prior to the First Effective Time (excluding shares of Company Capital Stock to be canceled pursuant to Section 2.5(a)(i) and excluding Dissenting Shares) shall be converted solely into the right to receive a number of shares of Parent Common Stock equal to the Exchange Ratio, and (B) each share of Company Preferred Stock outstanding immediately prior to the First Effective Time (excluding shares of Company Capital Stock to be canceled pursuant to Section 2.5(a)(i) and excluding Dissenting Shares) shall be converted solely into the right to receive a number of shares of Parent Convertible Preferred Stock equal to (x) the Exchange Ratio *divided by* (y) 1,000 (collectively, the "**Merger Consideration**").

(b) If any shares of Company Capital Stock outstanding immediately prior to the First Effective Time are unvested or are subject to a repurchase option or a risk of forfeiture under any applicable restricted stock purchase agreement or other similar agreement with the Company, then the shares of Parent Capital Stock issued in exchange for such shares of Company Capital Stock will to the same extent be unvested and subject to the same repurchase option or risk of forfeiture, and such shares of Parent Capital Stock shall accordingly be marked with appropriate legends. The Company shall take all actions that may be necessary to ensure that, from and after the First Effective Time, Parent is entitled to exercise any such repurchase option or other right set forth in any such restricted stock purchase agreement or other agreement.

(c) No fractional shares of Parent Capital Stock shall be issued in connection with the Merger, and no certificates or scrip for any such fractional shares shall be issued. Any holder of Company Common Stock who would otherwise be entitled to receive a fraction of a share of Parent Common Stock (after aggregating all fractional shares of Parent Common Stock issuable to such holder) shall receive from Parent, in lieu of such fractional share and upon surrender by such holder of a letter of transmittal in accordance with Section 2.8 and any accompanying documents as required therein: (i) one share of Parent Common Stock if the aggregate amount of fractional shares of Parent Common Stock such holder of Company Common Stock would otherwise be entitled to is equal to or exceeds 0.50; or (ii) no shares of Parent Common Stock if the aggregate amount of fractional shares of Parent Common Stock such holder of Company Common Stock would otherwise be entitled to is less than 0.50, with no cash being paid for any fractional share eliminated by such rounding. Any fractional shares of Parent Preferred Stock that a holder of Company Preferred Stock would otherwise be entitled to receive shall be aggregated with all fractional shares of Parent Preferred Stock issuable to such and any remaining fractional shares shall be, in lieu of such fractional share and upon surrender by such holder of a letter of transmittal in accordance with Section 2.8 and any accompanying documents as required therein, rounded up to the nearest whole share of Parent Preferred Stock.

(d) All Company Options outstanding immediately prior to the First Effective Time shall be treated in accordance with Section 6.5(a). All Company Warrants outstanding immediately prior to the First Effective Time shall be treated in accordance with Section 6.5(b).

(e) Each share of common stock, $0.001 par value per share, of First Merger Sub issued and outstanding immediately prior to the First Effective Time shall be converted into and exchanged for one validly issued, fully paid and nonassessable share of common stock, $0.001 par value per share, of the First Step Surviving Corporation. Each book entry share of First Merger Sub evidencing ownership of any such shares shall, as of the First Effective Time, evidence ownership of such shares of common stock of the First Step Surviving Corporation.

(f) If, between the date of this Agreement and the First Effective Time, the outstanding Company Capital Stock or Parent Capital Stock shall have been changed into, or exchanged for, a different number of shares or a different class, by reason of any stock dividend, subdivision, reclassification, recapitalization, split (including the Nasdaq Reverse Split to the extent such split has not previously been taken into account in calculating the Exchange Ratio), combination or exchange of shares or other like change, the Exchange Ratio shall, to the extent necessary, be equitably adjusted to reflect such change to the extent necessary to provide the holders of Company Capital Stock, Company Options, Company Warrants and Parent Capital Stock with the same economic effect as contemplated by this Agreement prior to such stock dividend, subdivision, reclassification, recapitalization, split, combination or exchange of shares or other like change; provided, however, that nothing herein will be construed to permit the Company or Parent to take any action with respect to Company Capital Stock or Parent Capital Stock, respectively, that is prohibited or not expressly permitted by the terms of this Agreement.

(g) At the Second Effective Time, by virtue of the Second Merger and without any action on the part of Parent, the First Step Surviving Corporation, Second Merger Sub or their respective stockholders, each share of the First Step Surviving Corporation issued and outstanding immediately prior to the Second Effective Time shall be canceled and extinguished without any conversion thereof and no payment or distribution shall be made with respect thereto.

2.6 Closing of the Company's Transfer Books. At the First Effective Time: (a) all Company Capital Stock outstanding immediately prior to the First Effective Time shall be treated in accordance with Section 2.5(a), and all holders of certificates representing Company Capital Stock that were outstanding immediately prior to the First Effective Time shall cease to have any rights as stockholders of the Company and (b) the stock

transfer books of the Company shall be closed with respect to all Company Capital Stock outstanding immediately prior to the First Effective Time. No further transfer of any such Company Capital Stock shall be made on such stock transfer books after the First Effective Time.

2.7 Surrender of Company Capital Stock.

(a) On or prior to the Closing Date, Parent and the Company shall jointly select a reputable bank, transfer agent or trust company to act as exchange agent in the Merger (the "**Exchange Agent**"). At the First Effective Time, Parent shall deposit with the Exchange Agent evidence of book-entry shares representing the shares of Parent Capital Stock issuable pursuant to Section 2.5(a) in exchange for Company Capital Stock.

(b) Promptly after the First Effective Time, the Parties shall cause the Exchange Agent to mail to the Persons who were record holders of shares of Company Capital Stock that were converted into the right to receive the Merger Consideration: (i) a letter of transmittal in customary form and containing such provisions as Parent may reasonably specify (including a provision confirming that delivery of physical stock certificates representing shares of Company Capital Stock, (the "**Company Stock Certificates**") shall be effected, and risk of loss and title shall pass, only upon delivery of such Company Stock Certificates to the Exchange Agent) and (ii) instructions for effecting the surrender of Company Stock Certificates, or uncertificated shares of Company Capital Stock, in exchange for book-entry shares of Parent Capital Stock. Upon surrender of a Company Stock Certificate or other reasonable evidence of the ownership of uncertificated Company Capital Stock to the Exchange Agent for exchange, together with a duly executed letter of transmittal and such other documents as may be reasonably required by the Exchange Agent or Parent: (A) the holder of such Company Stock Certificate or uncertificated shares of Company Capital Stock shall be entitled to receive in exchange therefor book-entry shares representing the Merger Consideration (in a number of whole shares of Parent Capital Stock) that such holder has the right to receive pursuant to the provisions of Section 2.5(a) and Section 2.5(c) and (B) the Company Stock Certificate or uncertificated shares of Company Capital Stock so surrendered shall be canceled. Until surrendered as contemplated by this Section 2.7(b), each Company Stock Certificate or uncertificated shares of Company Capital Stock shall be deemed, from and after the First Effective Time, to represent only the right to receive book-entry shares of Parent Capital Stock representing the Merger Consideration. If any Company Stock Certificate shall have been lost, stolen or destroyed, Parent may, in its discretion and as a condition precedent to the delivery of any shares of Parent Capital Stock, require the owner of such lost, stolen or destroyed Company Stock Certificate to provide an applicable affidavit with respect to such Company Stock Certificate and post a bond indemnifying Parent against any claim suffered by Parent related to the lost, stolen or destroyed Company Stock Certificate or any Parent Capital Stock issued in exchange therefor as Parent may reasonably request.

(c) No dividends or other distributions declared or made with respect to Parent Capital Stock with a record date after the First Effective Time shall be paid to the holder of any unsurrendered Company Stock Certificate with respect to the shares of Parent Capital Stock that such holder has the right to receive in the Merger until such holder surrenders such Company Stock Certificate or uncertificated shares of Company Capital Stock or provides an affidavit of loss or destruction in lieu thereof in accordance with this Section 2.7 (at which time such holder shall be entitled, subject to the effect of applicable abandoned property, escheat or similar Laws, to receive all such dividends and distributions, without interest).

(d) Any shares of Parent Capital Stock deposited with the Exchange Agent that remain undistributed to holders of Company Stock Certificates as of the date that is 180 days after the Closing Date shall be delivered to Parent upon demand, and any holders of Company Stock Certificates who have not theretofore surrendered their Company Stock Certificates or uncertificated shares of Company Capital Stock in accordance with this Section 2.7 shall thereafter look only to Parent for satisfaction of their claims for Parent Capital Stock and any dividends or distributions with respect to shares of Parent Capital Stock.

(e) No Person shall be liable to any holder of any Company Stock Certificate or uncertificated shares of Company Capital Stock or to any other Person with respect to any shares of Parent Capital Stock (or dividends or distributions with respect thereto) or for any cash amounts delivered to any public official pursuant to any applicable abandoned property Law, escheat Law or similar Law.

2.8 Calculation of Net Cash and Company Valuation.

(a) No later than five (5) Business Days before the Closing, Parent will deliver to the Company a schedule (the "**Parent Net Cash Schedule**") setting forth, in reasonable detail, Parent's good faith, estimated calculation of Parent Net Cash (the "**Parent Net Cash Calculation**") as of 11:59 p.m. on the Business Day prior to the Anticipated Closing Date (the "**Cash Determination Time**") prepared and certified by Parent's chief financial officer (or if there is no chief financial officer at such time, the principal financial and accounting officer for Parent). Parent shall make available to the Company (electronically to the greatest extent possible) as reasonably requested by the Company, the work papers and back-up materials used or useful in preparing the Parent Net Cash Schedule and, if reasonably requested by the Company, Parent's internal finance personnel and its accountants and counsel at reasonable times and upon reasonable notice. The Parent Net Cash Calculation shall include Parent's determination, as of the Cash Determination Time, of the defined terms in Section 1.1(a) necessary to calculate the Exchange Ratio.

(b) No later than five (5) Business Days before the Closing, the Company will deliver to Parent a schedule (the "**Company Valuation Schedule**") setting forth, in reasonable detail, the Company's good faith, estimated calculations of the components of the Company Valuation (the "**Company Valuation Calculation**") and the date of delivery of such schedule being (the "**Company Valuation Delivery Date**") as of 11:59 p.m. on the last Business Day prior to the Anticipated Closing Date (the "**Company Valuation Determination Time**") prepared and certified by the Company's chief financial officer (or if there is no chief financial officer at such time, the principal financial and accounting officer for the Company). The Company shall make available to Parent, as reasonably requested by Parent, the work papers and back-up materials used or useful in preparing the Company Valuation Schedule and, if reasonably requested by Parent, the Company's accountants and counsel at reasonable times and upon reasonable notice.

(c) No later than three (3) Business Days after the Cash Determination Time (the last day of such period, the "**Response Date**"), the Company shall have the right to dispute any part of the Parent Net Cash Calculation by delivering a written notice to that effect to Parent (a "**Dispute Notice**"). Any Dispute Notice shall identify in reasonable detail and to the extent known the nature and amounts of any proposed revisions to the Parent Net Cash Calculation and will be accompanied by reasonably detailed materials supporting the basis for such revisions.

(d) No later than three (3) Business Days after the Company Valuation Delivery Date (the last day of such period, the "**Company Valuation Response Date**"), Parent shall have the right to dispute any part of the Company Valuation Calculation by delivering a written notice to that effect to the Company (a "**Company Valuation Dispute Notice**"). Any Company Valuation Dispute Notice shall identify in reasonable detail and to the extent known the nature and amounts of any proposed revisions to the Company Valuation Calculation and will be accompanied by reasonably detailed materials supporting the basis for such revisions.

(e) If, on or prior to the Response Date, the Company notifies Parent in writing that it has no objections to the Parent Net Cash Calculation or, if on the Response Date, the Company fails to deliver a Dispute Notice as provided in Section 2.8(c), then the Parent Net Cash Calculation as set forth in the Parent Net Cash Schedule shall be deemed to have been finally determined for purposes of this Agreement and to represent the Parent Net Cash at the Cash Determination Time for purposes of this Agreement.

(f) If, on or prior to the Company Valuation Response Date, Parent notifies the Company in writing that it has no objections to the Company Valuation Calculation or, if on the Company Valuation Response Date, Parent fails to deliver a Company Valuation Dispute Notice as provided in Section 2.8(d), then the Company Valuation Calculation as set forth in the Company Valuation Schedule shall be deemed to have been finally determined for purposes of this Agreement and to represent the Company Valuation at the Company Valuation Determination Time for purposes of this Agreement.

(g) If the Company delivers a Dispute Notice on or prior to the Response Date, then Representatives of Parent and the Company shall promptly meet and attempt in good faith to resolve the disputed item(s) and negotiate an agreed-upon determination of Parent Net Cash, which agreed upon the Parent Net Cash amount shall be deemed to have been finally determined for purposes of this Agreement and to represent the Parent Net Cash at the Cash Determination Time for purposes of this Agreement.

(h) If Parent delivers a Company Valuation Dispute Notice on or prior to the Company Valuation Response Date, then Representatives of Parent and the Company shall promptly meet and attempt in good faith to resolve the disputed item(s) and negotiate an agreed-upon determination of the components of the Company Valuation, which agreed upon Company Valuation amount shall be deemed to have been finally determined for purposes of this Agreement and to represent the Company Valuation at the Company Valuation Determination Time for purposes of this Agreement.

(i) If Representatives of Parent and the Company are unable to negotiate an agreed-upon determination of Parent Net Cash as of the Cash Determination Time pursuant to Section 2.8(g) or the components of Company Valuation as of the Company Valuation Determination Time pursuant to Section 2.8(h) within three days after delivery of the Dispute Notice or the Company Valuation Dispute Notice, as applicable, (or such other period as Parent and the Company may mutually agree upon), then any remaining disagreements as to the calculation of Parent Net Cash or Company Valuation shall be referred to an independent auditor of recognized national standing jointly selected by Parent and the Company. If the parties are unable to select an independent auditor within five (5) days, then either Parent or the Company may thereafter request that the Boston, Massachusetts Office of the American Arbitration Association ("**AAA**") make such selection (either the independent auditor jointly selected by both parties or such independent auditor selected by the AAA, the "**Accounting Firm**"). Parent and the Company shall promptly deliver to the Accounting Firm the work papers and back-up materials used in preparing the Parent Net Cash Schedule and the Dispute Notice and the Company Valuation Schedule and the Company Valuation Dispute Notice, and Parent and the Company shall use commercially reasonable efforts to cause the Accounting Firm to make its determination within five (5) Business Days of accepting its selection. Parent and the Company shall be afforded the opportunity to present to the Accounting Firm any material related to the unresolved disputes and to discuss the issues with the Accounting Firm; provided, however, that no such presentation or discussion shall occur without the presence of a Representative of each of Parent and the Company. The determination of the Accounting Firm shall be limited to the disagreements submitted to the Accounting Firm. The determination of the amount of Parent Net Cash or the components of the Company Valuation made by the Accounting Firm shall be made in writing delivered to each of Parent and the Company, shall be final and binding on Parent and the Company and shall (absent manifest error) be deemed to have been finally determined for purposes of this Agreement and to represent the Parent Net Cash at the Cash Determination Time or the components of the Company Valuation at the Company Valuation Determination Time for purposes of this Agreement. The Parties shall delay the Closing until the resolution of the matters described in this Section 2.8(i). The fees and expenses of the Accounting Firm shall be allocated between Parent and the Company in the same proportion that the disputed amount of the Parent Net Cash or the Company Valuation that was unsuccessfully disputed by such Party (as finally determined by the Accounting Firm) bears to the total disputed amount of the Parent Net Cash amount or the components of the Company Valuation. If this Section 2.8(i) applies as to the determination of the Parent Net Cash at the Cash Determination Time or to the determination of the components of the Company Valuation at the Company Valuation Determination Time, as applicable, upon resolution of the matter in accordance with this Section 2.8(i), the Parties shall not be required to determine Parent Net Cash or the Company Valuation again even though the Closing may occur later than the Anticipated Closing Date, except that either Parent and the Company may request a redetermination of Parent Net Cash or the Company Valuation if the Closing Date is more than thirty (30) days after the Anticipated Closing Date.

2.9 Further Action. If, at any time after the First Effective Time, any further action is determined by the Surviving Entity to be necessary or desirable to carry out the purposes of this Agreement or to vest the Surviving Entity with full right, title and possession of and to all rights and property of the Company, then the officers and directors of the Surviving Entity shall be fully authorized, and shall use their and its commercially reasonable efforts (in the name of the Company, in the name of First Merger Sub, in the name of Second Merger Sub, in the name of the Surviving Entity and otherwise) to take such action.

2.10 Intended Tax Treatment. The Parties acknowledge and agree that, for U.S. federal (and applicable state and local) income Tax purposes, the Merger is intended to qualify as a reorganization within the meaning of Section 368(a) of the Code (the "**Intended Tax Treatment**"). The Parties adopt this Agreement as a "plan of reorganization" within the meaning of Treasury Regulations Sections 1.368-2(g) and 1.368-3.

2.11 Withholding. Each of the Exchange Agent, Parent and the Surviving Entity shall be entitled to deduct and withhold from any consideration deliverable pursuant to this Agreement to any Person such amounts as are required to be deducted or withheld from such consideration under applicable Law; provided that

the Exchange Agent, Parent and the Surviving Entity shall use commercially reasonable efforts to promptly notify such Persons of any intention to withhold any portion of such consideration and cooperate with such Persons to reduce or eliminate any such withholding to the extent permitted by applicable Law. To the extent such amounts are so deducted or withheld and remitted to the appropriate Governmental Authority, such amounts shall be treated for all purposes under this Agreement as having been paid to the Person to whom such amounts would otherwise have been paid. All payments made under this agreement that constitute compensation to employees for services for Tax purposes shall be made through the payroll of the Surviving Entity or Parent, as applicable.

2.12 Appraisal Rights.

(a) Notwithstanding any provision of this Agreement to the contrary, shares of Company Capital Stock that are outstanding immediately prior to the First Effective Time and which are held by stockholders or owned by beneficial owners who have exercised and perfected appraisal rights for such shares of Company Capital Stock in accordance with the DGCL (collectively, the "**Dissenting Shares**") shall not be converted into or represent the right to receive the Merger Consideration described in Section 2.5 attributable to such Dissenting Shares. Such stockholders or beneficial owners shall be entitled to receive payment of the fair value of such shares of Company Capital Stock held by them in accordance with the DGCL, unless and until such stockholders or beneficial owners fail to perfect or effectively withdraw or otherwise lose their appraisal rights under the DGCL. All Dissenting Shares held by stockholders or owned by beneficial owners who shall have failed to perfect or shall have effectively withdrawn or lost their right to appraisal of such shares of Company Capital Stock under the DGCL (whether occurring before, at or after the First Effective Time) shall thereupon be deemed to be converted into and to have become exchangeable for, as of the First Effective Time, the right to receive the Merger Consideration, without interest, attributable to such Dissenting Shares upon their surrender in the manner provided in Sections 2.5 and 2.7.

(b) The Company shall give Parent prompt written notice of any demands by dissenting stockholders or beneficial owners received by the Company, withdrawals of such demands and any other instruments served on the Company and any material correspondence received by the Company in connection with such demands, and Parent shall have the right to participate in all negotiations and proceedings with respect to such demands. The Company shall not, except with Parent's prior written consent, not to be unreasonably withheld, delayed or conditioned, make any payment with respect to, or settle or offer to settle, any such demands, or approve any withdrawal of any such demands or agree to do any of the foregoing.

Section 3. Representations and Warranties of the Company.

Except as set forth in the written disclosure document delivered by the Company to Parent (the "**Company Disclosure Letter**") concurrently with the execution of this Agreement, the Company represents and warrants to Parent and Merger Subs as follows:

3.1 Due Organization; Subsidiaries.

(a) The Company is a corporation or other legal entity duly incorporated or otherwise organized, validly existing and in good standing under the Laws of the jurisdiction of its incorporation or organization and has all necessary power and authority: (i) to conduct its business in the manner in which its business is currently being conducted, (ii) to own or lease and use its property and assets in the manner in which its property and assets are currently owned or leased and used and (iii) to perform its obligations under all Contracts by which it is bound.

(b) The Company is duly licensed and qualified to do business, and is in good standing (to the extent applicable in such jurisdiction), under the Laws of all jurisdictions where the nature of its business in the manner in which its business is currently being conducted requires such licensing or qualification other than in jurisdictions where the failure to be so qualified individually or in the aggregate would not be reasonably expected to have a Company Material Adverse Effect.

(c) The Company has no Subsidiaries and the Company does not own any capital stock or membership interests of, or any equity, ownership or profit sharing interest of any nature in, or controls directly or indirectly, any other Entity. The Company is not and has never otherwise been, directly or indirectly, a party to, member of or participant in any partnership, joint venture or similar business entity. The Company has not agreed or is obligated to make, or is bound by any Contract under which it may become obligated to make, any

future investment in or capital contribution to any other Entity. The Company has not, at any time, been a general partner of, or has otherwise been liable for any of the debts or other obligations of, any general partnership, limited partnership or other Entity.

3.2 Organizational Documents. The Company has delivered to Parent accurate and complete copies of the Organizational Documents of the Company. The Company is not in breach or violation of its Organizational Documents in any material respect.

3.3 Authority; Binding Nature of Agreement. The Company has all necessary corporate power and authority to enter into and to perform its obligations under this Agreement and to consummate the Contemplated Transactions. The Company Board has (i) determined that the Contemplated Transactions are fair to, advisable and in the best interests of the Company and its stockholders, (ii) approved and declared advisable this Agreement and the Contemplated Transactions and (iii) determined to recommend, upon the terms and subject to the conditions set forth in this Agreement, that the stockholders of the Company vote to adopt this Agreement and thereby approve the Contemplated Transactions. This Agreement has been duly executed and delivered by the Company and assuming the due authorization, execution and delivery by Parent, First Merger Sub and Second Merger Sub, constitutes the legal, valid and binding obligation of the Company, enforceable against the Company in accordance with its terms, subject to the Enforceability Exceptions.

3.4 Vote Required. The affirmative vote (or written consent) of (i) the holders of a majority of the shares of Company Capital Stock outstanding on the record date, voting as a single class on an as-converted basis, and (ii) the holders of a majority of the shares of Company Series A Preferred Stock outstanding on the record date and entitled to vote thereon, voting as a separate class, is the only vote of the holders of any class or series of Company Capital Stock necessary to adopt and approve this Agreement and approve the Contemplated Transactions (collectively, the "**Required Company Stockholder Vote**").

3.5 Non-Contravention; Consents.

(a) Subject to obtaining the Required Company Stockholder Vote, compliance with any applicable requirements of the HSR Act (if applicable) and the filing of the Certificate of Merger and Certificate of Designation required by the DGCL or DLLCA, neither (x) the execution, delivery or performance of this Agreement by the Company, nor (y) the consummation of the Contemplated Transactions, will directly or indirectly (with or without notice or lapse of time):

(i) contravene, conflict with or result in a violation of any of the provisions of the Company's Organizational Documents;

(ii) contravene, conflict with or result in a material violation of, or give any Governmental Authority or other Person the right to challenge the Contemplated Transactions or to exercise any remedy or obtain any relief under, any Law or any Order by which the Company, or any of the assets owned or used by the Company, is subject;

(iii) contravene, conflict with or result in a material violation of any of the terms or requirements of, or give any Governmental Authority the right to revoke, withdraw, suspend, cancel, terminate or modify, any Governmental Authorization that is held by the Company or that otherwise relates to the business of the Company, or any of the assets owned, leased or used by the Company;

(iv) contravene, conflict with or result in a violation or breach of, or result in a default under, any provision of any Company Material Contract, or give any Person the right to: (A) declare a default or exercise any remedy under any Company Material Contract, (B) any material payment, rebate, chargeback, penalty or change in delivery schedule under any Company Material Contract, (C) accelerate the maturity or performance of any Company Material Contract or (D) cancel, terminate or modify any term of any Company Material Contract, except in the case of any nonmaterial breach, default, penalty or modification; or

(v) result in the imposition or creation of any Encumbrance upon or with respect to any asset owned or used by the Company (except for Permitted Encumbrances).

(b) Except for (i) the Required Company Stockholder Vote, (ii) the filing of the Certificate of Merger and Certificate of Designation with the Secretary of State of the State of Delaware pursuant to the DGCL or DLLCA, (iii) compliance with any applicable requirements of the HSR Act (if applicable) and (iv) such consents, waivers, approvals, orders, authorizations, registrations, declarations and filings as may be required under applicable federal and state securities laws, the Company was not, is not, nor will be required to make any filing with or give any notice to, or to obtain any Consent from, any Person in connection with (x) the execution, delivery or performance of this Agreement or (y) the consummation of the Contemplated Transactions.

(c) No state takeover statute or similar Law applies or purports to apply to the Merger, this Agreement, the Company Stockholder Support Agreements or any of the Contemplated Transactions.

3.6 Capitalization.

(a) The authorized capital stock of the Company consists of (i) 65,000,000 shares of Company Common Stock of which 9,460,019 shares have been issued and are outstanding as of the date hereof and (ii) 20,000,000 shares of Company Preferred Stock, of which 20,000,000 shares have been designated Series A Preferred Stock and 20,000,000 have been issued and are outstanding as of the date hereof. The Company does not hold any shares of its capital stock in its treasury. As of the date of this Agreement, the Company's capital stock is held by the Persons and in the amounts set forth in Section 3.6(a) of the Company Disclosure Letter, which further sets forth for each such Person (i) the name of such Person and the number of shares held, (ii) the class and series of such shares, (iii) the number of the applicable book-entry positions representing such shares or the number of the certificate representing such shares, (iv) whether such Person is or has ever been an employee, and (v) the state of residence of such Person. Each share of Company Preferred Stock is convertible into one share of Company Common Stock. There are no declared or accrued but unpaid dividends with respect to any shares of the Company's capital stock and the Company has never declared or paid any dividend or other distribution.

(b) All of the outstanding Company Capital Stock as set out in Section 3.6(a) of the Company Disclosure Letter have been duly authorized and validly issued, and are fully paid and nonassessable and are free of any Encumbrances other than Encumbrances set forth in the Organizational Documents or under applicable securities Laws. None of the outstanding Company Capital Stock is entitled or subject to any preemptive right, right of participation, right of maintenance or any similar right and none of the outstanding Company Capital Stock is subject to any right of first refusal in favor of the Company. Except as contemplated herein, there is no Company Contract relating to the voting or registration of, or restricting any Person from purchasing, selling, pledging or otherwise disposing of (or granting any option or similar right with respect to), any Company Capital Stock. The Company is not under any obligation, nor is it bound by any Contract pursuant to which it may become obligated, to repurchase, redeem or otherwise acquire any outstanding Company Capital Stock or other securities. Section 3.6(b) of the Company Disclosure Letter accurately and completely describes all repurchase rights held by the Company with respect to Company Capital Stock (including shares issued pursuant to the exercise of stock options) and specifies which of those repurchase rights are currently exercisable.

(c) Except for the Company Stock Plans and except as set forth on Section 3.6(c) of the Company Disclosure Letter, the Company does not have any stock option plan or any other plan, program, agreement or arrangement providing for any equity-based compensation for any Person. Section 3.6(c) of the Company Disclosure Letter sets forth the following information with respect to each Company Option outstanding as of the date hereof: (i) the name of the holder, (ii) the number of shares of Company Common Stock subject to such Company Option as of the date hereof, (iii) the exercise price of such Company Option, (iv) the date on which such Company Option was granted, (v) the applicable vesting schedule, including any acceleration provisions, (vi) the date on which such Company Option expires, (vii) whether such Company Option is intended to be an "incentive stock option" (as defined in the Code) or a nonqualified stock option and (viii) in the case of a Company Option, the plan pursuant to which such Company Option was granted. The Company has made available to Parent accurate and complete copies of equity incentive plans pursuant to which the Company has equity-based awards, the forms of all award agreements evidencing such equity-based awards and evidence of board and stockholder approval of the Company Stock Plans and any amendments thereto.

(d) Except for the outstanding Company Options or as set forth on Section 3.6(d) of the Company Disclosure Letter, there is no: (i) outstanding subscription, option, call, warrant or right (whether or not currently exercisable) to acquire any Company Capital Stock or other securities of the Company, (ii) outstanding security, instrument or obligation that is or may become convertible into or exchangeable for any shares of the

capital stock or other securities of the Company, (iii) stockholder rights plan (or similar plan commonly referred to as a "poison pill") or Contract under which the Company is or may become obligated to sell or otherwise issue any Company Capital Stock or any other securities or (iv) condition or circumstance that may give rise to or provide a basis for the assertion of a claim by any Person to the effect that such Person is entitled to acquire or receive any shares of capital stock or other securities of the Company. There are no outstanding or authorized stock appreciation, phantom stock, profit participation or other similar rights with respect to the Company.

(e) All outstanding Company Capital Stock, Company Options and other securities of the Company have been issued and granted in compliance in all material respects with (i) all applicable securities laws and other applicable Law and (ii) all requirements set forth in applicable Contracts.

(f) The Company Capital Stock are uncertificated.

3.7 Financial Statements.

(a) Section 3.7(a) of the Company Disclosure Letter includes true and complete copies of the Company's budget overview for March 2024 (the "**Company Budget**").

(b) The Company maintains a system of internal accounting controls designed to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of the financial statements of the Company in conformity with GAAP and to maintain accountability of the Company's assets, (iii) access to the Company's assets is permitted only in accordance with management's general or specific authorization and (iv) the recorded accountability for the Company's assets is compared with the existing assets at regular intervals and appropriate action is taken with respect to any differences. The Company maintains internal controls consistent with the practices of similarly situated private companies over financial reporting that provides reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes.

(c) Section 3.7(c) of the Company Disclosure Letter lists, and the Company has delivered to Parent accurate and complete copies of the documentation creating or governing, all securitization transactions and "off-balance sheet arrangements" (as defined in Item 303(c) of Regulation S-K under the Exchange Act) effected by the Company.

(d) There have been no formal internal investigations regarding financial reporting or accounting policies and practices discussed with, reviewed by or initiated at the direction of the chief executive officer, chief financial officer or general counsel of the Company, the Company Board or any committee thereof. Neither the Company nor its independent auditors have identified (i) any significant deficiency or material weakness in the design or operation of the system of internal accounting controls utilized by the Company, (ii) any fraud, whether or not material, that involves the Company, the Company's management or other employees who have a role in the preparation of financial statements or the internal accounting controls utilized by the Company or (iii) any claim or allegation regarding any of the foregoing.

3.8 Absence of Changes. Except as set forth on Section 3.8 of the Company Disclosure Letter, between the date of its incorporation and the date of this Agreement, the Company has conducted its business only in the Ordinary Course of Business (except for the execution and performance of this Agreement and the discussions, negotiations and transactions related thereto) and there has not been any (a) Company Material Adverse Effect or (b) action, event or occurrence that would have required consent of Parent pursuant to Section 5.2(b) of this Agreement had such action, event or occurrence taken place after the execution and delivery of this Agreement.

3.9 Absence of Undisclosed Liabilities. Since the date of its incorporation, the Company does not have any liability, indebtedness, obligation, expense, claim, deficiency, guaranty or endorsement of any kind, whether accrued, absolute, contingent, matured, unmatured or otherwise (each a "**Liability**"), except for: (a) Liabilities disclosed, reflected or reserved against in the Company Budget, (b) normal and recurring current Liabilities that have been incurred by the Company since the date of the Company Budget in the Ordinary Course of Business (none of which relates to any breach of contract, breach of warranty, tort, infringement or violation of Law), (c) Liabilities for performance of obligations of the Company under Company Contracts, (d) Liabilities incurred in connection with the Contemplated Transactions and the Subscription Agreement, (e) Liabilities described in Section 3.9 of the Company Disclosure Letter and (f) those Liabilities that are not material to the Company.

3.10 Title to Assets. The Company owns and has good and valid title to, or, in the case of leased properties and assets, valid leasehold interests in, all tangible properties or tangible assets and equipment used or held for use in its business or operations or purported to be owned by it, including: (a) all tangible assets reflected on the Company Budget and (b) all other tangible assets reflected in the books and records of the Company as being owned by the Company. All of such assets are owned or, in the case of leased assets, leased by the Company free and clear of any Encumbrances, other than Permitted Encumbrances.

3.11 Real Property; Leasehold. The Company does not own and has never owned any real property, nor is the Company party to any agreement to purchase or sell any real property. The Company has made available to Parent (a) an accurate and complete list of all real properties with respect to which the Company directly or indirectly holds a valid leasehold interest as well as any other real estate that is in the possession of or leased by the Company and (b) copies of all leases under which any such real property is possessed (the "**Company Real Estate Leases**"), each of which is in full force and effect, with no existing material default thereunder by the Company or to the Company's Knowledge, the other party thereto.

3.12 Intellectual Property.

(a) Section 3.12(a) of the Company Disclosure Letter is an accurate, true and complete listing of all Company Registered IP.

(b) Section 3.12(b) of the Company Disclosure Letter accurately identifies (i) all Company Contracts pursuant to which any Company IP Rights are licensed to the Company (other than (A) any non-customized software that (1) is so licensed solely in executable or object code form pursuant to a nonexclusive, internal use software license and other Intellectual Property associated with such software and (2) is not incorporated into, or material to the development, manufacturing or distribution of, any of the Company's products or services, (B) any Intellectual Property licensed on a nonexclusive basis ancillary to the purchase or use of services, equipment, reagents or other materials, (C) any confidential information provided under confidentiality agreements and (D) agreements between Company and its employees in Company's standard form thereof) and (ii) whether the license or licenses granted to the Company are exclusive or nonexclusive.

(c) Section 3.12(c) of the Company Disclosure Letter accurately identifies each Company Contract pursuant to which any Person has been granted any license or covenant not to sue under, or otherwise has received or acquired any right (whether or not currently exercisable) or interest in, any Company IP Rights (other than (i) any confidential information provided under confidentiality agreements and (ii) any Company IP Rights nonexclusively licensed to academic collaborators, suppliers or service providers for the sole purpose of enabling such academic collaborator, supplier or service providers to provide services for the Company's benefit).

(d) The Company is not bound by, and no Company IP Rights are subject to, any Contract containing any covenant or other provision that in any way limits or restricts the ability of the Company to use, exploit, assert or enforce any Company IP Rights anywhere in the world.

(e) The Company exclusively owns all right, title and interest to and in Company IP Rights (other than (i) Company IP Rights licensed to the Company, or co-owned rights each as identified in Section 3.12(e) of the Company Disclosure Letter, (ii) any non-customized software that (A) is licensed to the Company solely in executable or object code form pursuant to a nonexclusive, internal use software license and other Intellectual Property associated with such software and (B) is not incorporated into, or material to the development, manufacturing or distribution of, any of the Company's products or services and (iii) any Intellectual Property licensed on a nonexclusive basis ancillary to the purchase or use of equipment, reagents or other materials), in each case, free and clear of any Encumbrances (other than Permitted Encumbrances). Without limiting the generality of the foregoing:

(i) All documents and instruments necessary to register or apply for or renew registration of Company Registered IP have been validly executed, delivered and filed in a timely manner with the appropriate Governmental Authority.

(ii) Each Person who is or was an employee or contractor of the Company and who is or was involved in the creation or development of any Intellectual Property for the Company has signed a valid, enforceable agreement containing a present assignment of such Intellectual Property to the Company and confidentiality provisions protecting trade secrets and confidential information of the Company.

(iii) To the Knowledge of the Company, no current or former stockholder, officer, director or employee of the Company has any claim, right (whether currently exercisable, or exercisable in the future) or interest to or in any Company IP Rights purported to be owned by the Company. To the Knowledge of the Company, no employee of the Company is (a) bound by or otherwise subject to any Contract restricting him or her from performing his or her duties for the Company or (b) in breach of any Contract with any former employer or other Person concerning Company IP Rights purported to be owned by the Company or confidentiality provisions protecting trade secrets and confidential information comprising Company IP Rights purported to be owned by the Company.

(iv) No funding, facilities or personnel of any Governmental Authority or any university, college, research institute or other educational institution were used, directly or indirectly, to develop or create, in whole or in part, any Company IP Rights in which the Company has an ownership interest, except for any such funding or use of facilities or personnel that does not result in such Governmental Authority or institution owning such Company IP Rights or the right to receive royalties or other remuneration for the practice of such Company IP Rights as of the date of this Agreement.

(v) The Company has taken reasonable steps to maintain the confidentiality of and otherwise protect and enforce its rights in all proprietary information that the Company holds, or purports to hold, as confidential or a trade secret.

(vi) The Company has not assigned or otherwise transferred ownership of, or agreed to assign or otherwise transfer ownership of, any Company IP Rights to any other Person.

(f) The Company has delivered or made available to Parent, a complete and accurate copy of all Company IP Rights Agreements. With respect to each of the Company IP Rights Agreements: (i) each such agreement is valid and binding on the Company and in full force and effect, (ii) the Company has not received any written notice of termination or cancellation under such agreement, or received any written notice of breach or default under such agreement, which breach has not been cured or waived and (iii) the Company, and to the Knowledge of the Company, no other party to any such agreement, is not in breach or default thereof in any material respect.

(g) The manufacture, marketing, offering for sale, sale, importation, use or intended use or other disposal of any product as currently sold or under development by the Company does not violate any license or agreement between the Company and any other third party, and, to the Knowledge of the Company, does not infringe or misappropriate any valid and issued Patent right or other Intellectual Property of any other Person, which infringement or misappropriation would reasonably be expected to have a Company Material Adverse Effect. To the Knowledge of the Company, no third party is infringing upon any Patents owned by Company within the Company IP Rights, or otherwise violating any Company IP Rights Agreement.

(h) As of the date of this Agreement, Company is not a party to any Legal Proceeding (including, but not limited to, opposition, interference or other proceeding in any patent or other government office) contesting the validity, enforceability, claim construction, ownership or right to use, sell, offer for sale, license or dispose of any Company IP Rights. The Company has not received any written notice asserting that any Company IP Rights or the proposed use, sale, offer for sale, license or disposition of products, methods or processes claimed or covered thereunder infringes or misappropriates or violates the rights of any other Person or that the Company has otherwise infringed, misappropriated or otherwise violated any Intellectual Property of any Person. None of the Company IP Rights is subject to any outstanding order of, judgment of, decree of or agreement with any Governmental Authority that limits the ability of the Company to exploit any Company IP Rights.

(i) Each item of Company Registered IP is and at all times has been filed and maintained in compliance in all material respects with all applicable Law and all filings, payments and other actions required to be made or taken to maintain such item of Company Registered IP in full force and effect have been made by the applicable deadline. To the Knowledge of the Company, all Company Registered IP that is issued or granted is valid and enforceable.

(j) To the Knowledge of the Company, no trademark (whether registered or unregistered) or trade name owned, used or applied for by the Company conflicts or interferes with any trademark (whether registered or unregistered) or trade name owned, used or applied for by any other Person. None of the goodwill associated with or inherent in any trademark (whether registered or unregistered) in which the Company has or purports to have an ownership interest has been impaired as determined by the Company in accordance with GAAP.

(k) Except as set forth in Sections 3.12(b), 3.12(c) or 3.12(k) of the Company Disclosure Letter or as contained in "off-the-shelf" license agreements entered into in the Ordinary Course of Business by the Company, (i) the Company is not bound by any Contract to indemnify, defend, hold harmless or reimburse any other Person with respect to any Intellectual Property infringement, misappropriation, or similar claim which is material to the Company, taken as a whole and (ii) the Company has never assumed, or agreed to discharge or otherwise take responsibility for, any existing or potential liability of another Person for infringement, misappropriation, or violation of any Intellectual Property right, which assumption, agreement or responsibility remains in force as of the date of this Agreement.

(l) The Company is not party to any Contract that, as a result of such execution, delivery and performance of this Agreement, will cause the grant of any license or other right to any Company IP Rights, result in breach of, default under or termination of such Contract with respect to any Company IP Rights, or impair the right of the Company or the Surviving Entity and its Subsidiaries to use, sell or license or enforce any Company IP Rights or portion thereof, except for the occurrence of any such grant or impairment that would not individually or in the aggregate, reasonably be expected to result in a Company Material Adverse Effect.

3.13 Agreements, Contracts and Commitments.

(a) Section 3.13(a) of the Company Disclosure Letter lists the following Company Contracts in effect as of the date of this Agreement other than the Subscription Agreement (each, a "**Company Material Contract**" and collectively, the "**Company Material Contracts**"):

(i) each Company Contract relating to any agreement of indemnification or guaranty not entered into in the Ordinary Course of Business;

(ii) each Company Contract containing (A) any covenant limiting the freedom of the Company or the Surviving Entity to engage in any line of business or compete with any Person, or limiting the development, manufacture or distribution of the Company's products or services (B) any most-favored pricing arrangement, (C) any exclusivity provision or (D) any non-solicitation provision;

(iii) each Company Contract (A) pursuant to which any Person granted the Company an exclusive license under any Intellectual Property, or (B) pursuant to which the Company granted any Person an exclusive license under any Company IP Rights;

(iv) each Company Contract relating to capital expenditures and requiring payments after the date of this Agreement in excess of $100,000 pursuant to its express terms and not cancelable without penalty;

(v) each Company Contract containing any royalty, dividend or similar arrangement based on the revenues or profits of the Company, any of its Subsidiaries, or of a product;

(vi) each Company Contract relating to the disposition or acquisition of material assets or any ownership interest in any Entity, in each case, involving payments in excess of $100,000 after the date of this Agreement;

(vii) each Company Contract relating to any mortgages, indentures, loans, notes or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit in excess of $100,000 or creating any material Encumbrances with respect to any assets of the Company or any loans or debt obligations with officers or directors of the Company;

(viii) each Company Contract requiring payment by or to the Company after the date of this Agreement in excess of $100,000 pursuant to its express terms relating to: (A) any distribution agreement (identifying any that contain exclusivity provisions), (B) any agreement involving provision of services or products with respect to any pre-clinical or clinical development activities of the Company, (C) any dealer, distributor, joint marketing, alliance, joint venture, cooperation, development or other agreement currently in force under which the Company has continuing obligations to develop or market any product, technology or service, or any agreement pursuant to which the Company has continuing obligations to develop any Intellectual Property that will not be owned, in whole or in part, by the Company or (D) any Contract to license any patent, trademark registration, service mark registration, trade name or copyright registration to or from any third party to manufacture or produce any product, service or technology of the Company or any Contract to sell, distribute or commercialize any products or service of the Company, in each case, except for Company Contracts entered into in the Ordinary Course of Business;

(ix) each Company Contract with any Person, including any financial advisor, broker, finder, investment banker or other Person, providing advisory services to the Company in connection with the Contemplated Transactions and requiring payments by Company after the date in this Agreement in excess of $100,000 pursuant to its express terms;

(x) each Company Contract to which the Company is a party or by which any of its assets and properties is currently bound, which involves annual obligations of payment by, or annual payments to, the Company in excess of $100,000;

(xi) each Company Contract entered into in settlement of any Legal Proceeding or other dispute pursuant to which the Company or any of its Subsidiaries has outstanding obligations to pay consideration in excess of $100,000;

(xii) any other Company Contract that is not terminable at will (with no penalty or payment) by the Company, and (A) which involves payment or receipt by the Company after the date of this Agreement under any such agreement, contract or commitment of more than $100,000 in the aggregate, or obligations after the date of this Agreement in excess of $100,000 in the aggregate or (B) that is material to the business or operations of the Company taken as a whole; or

(xiii) Company Real Estate Leases.

(b) The Company has delivered or made available to Parent accurate and complete copies of all Company Material Contracts, including all amendments thereto. There are no Company Material Contracts that are not in written form. The Company has not, nor to the Company's Knowledge, as of the date of this Agreement has any other party to a Company Material Contract, breached, violated or defaulted under, or received notice that it breached, violated or defaulted under, any of the terms or conditions of any Company Material Contract in such a manner, and, if such Company Material Contract provides for a cure period, the Company or such other party fails to have cured such breach, violation or default, so that any other party or the Company, as the case may be, is permitted to modify, cancel or terminate any such Company Material Contract, or would permit any other party to seek damages which would reasonably be expected to have a Company Material Adverse Effect. As to the Company, as of the date of this Agreement, each Company Material Contract is valid, binding, enforceable and in full force and effect, subject to the Enforceability Exceptions. No Person is renegotiating, or has a right pursuant to the terms of any Company Material Contract to change, any material amount paid or payable to the Company under any Company Material Contract or any other material term or provision of any Company Material Contract.

3.14 Compliance; Permits; Restrictions.

(a) The Company is, and has been in material compliance with all applicable Laws. No investigation, claim, suit, proceeding, audit, Order or other Legal Proceeding or action by any Governmental Authority is pending or, to the Knowledge of the Company, threatened against the Company. There is no agreement or Order binding upon the Company which (i) has or would reasonably be expected to have the effect of prohibiting or materially impairing any business practice of the Company, any acquisition of material property by the Company or the conduct of business by the Company as currently conducted, (ii) is reasonably likely to have an adverse effect on the Company's ability to comply with or perform any covenant or obligation under this Agreement or (iii) is reasonably likely to have the effect of preventing, delaying, making illegal or otherwise interfering with the Contemplated Transactions.

(b) Except for matters regarding the U.S. Food and Drug Administration (or any successor agency thereto) ("**FDA**") or other comparable Governmental Authority responsible for regulation of the development, testing, manufacturing, processing, storage, labeling, sale, marketing, advertising, distribution and importation or exportation of drug or medical device products ("**Drug/Device Regulatory Agency**"), the Company holds all required Governmental Authorizations for the operation of the business of the Company as currently conducted (the "**Company Permits**"). Section 3.14(b) of the Company Disclosure Letter identifies each Company Permit. The Company is in material compliance with the terms of the Company Permits. No Legal Proceeding is pending or, to the Knowledge of the Company, threatened, which seeks to revoke, substantially limit, suspend or materially modify any Company Permit. The rights and benefits of each Company Permit will be available to the Surviving Entity or its Subsidiaries, as applicable, immediately after the Second Effective Time on terms substantially identical to those enjoyed by the Company as of the date of this Agreement and immediately prior to the First Effective Time.

(c) There are no Legal Proceedings pending or, to the Knowledge of the Company, threatened with respect to an alleged violation by the Company of the Federal Food, Drug, and Cosmetic Act ("**FDCA**"), the Public Health Service Act ("**PHSA**"), FDA regulations adopted thereunder, the Controlled Substances Act or any other similar Law promulgated by a Drug/Device Regulatory Agency.

(d) The Company holds all required Governmental Authorizations issuable by any Drug/Device Regulatory Agency necessary for the conduct of the business of the Company as currently conducted, and the development, testing, manufacturing, processing, storage, labeling, sale, marketing, advertising, distribution and importation or exportation, as currently conducted, of any of its products or product candidates (the "**Company Product Candidates**") (collectively, the "**Company Regulatory Permits**") and no such Company Regulatory Permit has been (i) revoked, withdrawn, suspended, cancelled or terminated or (ii) modified in any adverse manner, other than immaterial adverse modifications. Section 3.14(d) of the Company Disclosure Letter identifies each Company Regulatory Permit. The Company has timely maintained and is in compliance in all material respects with the Company Regulatory Permits and has not received any written notice or correspondence or, to the Knowledge of the Company, other communication from any Drug/Device Regulatory Agency regarding (A) any material violation of or failure to comply materially with any term or requirement of any Company Regulatory Permit or (B) any revocation, withdrawal, suspension, cancellation, termination or material modification of any Company Regulatory Permit. The Company has made available to Parent all information requested by Parent in the Company's possession or control relating to material Company Product Candidates and the development, testing, manufacturing, processing, storage, labeling, sale, marketing, advertising, distribution and importation or exportation of the Company Product Candidates, including but not limited to complete copies of the following (to the extent there are any): (x) adverse event reports; preclinical, clinical and other study reports and material study data; inspection reports, notices of adverse findings, untitled letters, warning letters, filings and letters and other written correspondence to and from any Drug/Device Regulatory Agency; and meeting minutes with any Drug/Device Regulatory Agency and (y) similar reports, material study data, notices, letters, filings, correspondence and meeting minutes with any other Governmental Authority. All such information is accurate and complete in all material respects.

(e) All clinical, preclinical and other studies and tests conducted by or on behalf of, or sponsored by, the Company, or in which the Company or its current products or product candidates, including the Company Product Candidates, have participated, were, and, if still pending, are being conducted in accordance in all material respects with standard medical and scientific research procedures, in accordance in all material respects

with the applicable protocols and in compliance in all material respects with the applicable regulations of the Drug/Device Regulatory Agencies and other applicable Law, including 21 C.F.R. Parts 11, 50, 54, 56, 58, 312 and 812. The Company has not received any written notices, correspondence or other communications from any Drug/Device Regulatory Agency, Governmental Authority, institutional review board, ethics committee or safety monitoring committee requiring, or to the Knowledge of the Company threatening to initiate, any action to place a clinical hold order on, or otherwise terminate, delay or suspend any clinical studies conducted by or on behalf of, or sponsored by, the Company or in which the Company or its current products or product candidates, including the Company Product Candidates, have participated. Further, no clinical investigator, researcher or clinical staff participating in any clinical study conducted by or, to the Knowledge of the Company, on behalf of the Company has been disqualified from participating in studies involving the Company Product Candidates, and to the Knowledge of the Company, no such administrative action to disqualify such clinical investigators, researchers or clinical staff has been threatened or is pending.

(f) The Company is not, and to the Knowledge of the Company, no contract manufacturer with respect to any Company Product Candidate, is the subject of any pending or, to the Knowledge of the Company, threatened investigation in respect of its business or products, including Company Product Candidates, by the FDA pursuant to its "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" Final Policy set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto or by any other Drug/Device Regulatory Agency under a comparable policy. The Company has not, and to the Knowledge of the Company, no contract manufacturer, nor their respective officers, employees or agents, with respect to any Company Product Candidate has committed any acts, made any statement or failed to make any statement, in each case in respect of its business or products that would violate the FDA's "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" Final Policy, and any amendments thereto or a comparable policy of any other Drug/Device Regulatory Agency. None of the Company, and to the Knowledge of the Company, any contract manufacturer with respect to any Company Product Candidate, or any of their respective officers, employees or agents is currently or has been debarred, convicted of any crime or is engaging or has engaged in any conduct that could result in a debarment or exclusion under (i) 21 U.S.C. Section 335a or (ii) any similar applicable Law. To the Knowledge of the Company, no debarment or exclusionary claims, actions, proceedings or investigations in respect of their business or products are pending or threatened against the Company, and to the Knowledge of the Company, any contract manufacturer with respect to any Company Product Candidate, or any of their respective officers, employees or agents.

(g) All manufacturing operations conducted by, or to the Knowledge of the Company, for the benefit of the Company in connection with any Company Product Candidate have been and are being conducted in compliance in all material respects with applicable Laws, including the FDA's standards for current good manufacturing practices, including applicable requirements contained in 21 C.F.R. Parts 210, 211 and 600-610 and the respective counterparts thereof promulgated by Governmental Authorities in countries outside the United States.

(h) Neither the Company nor, to the Knowledge of the Company, any manufacturing site of a contract manufacturer or laboratory, with respect to any Company Product Candidate, (i) is subject to a Drug/Device Regulatory Agency shutdown or import or export prohibition or (ii) has received any Form FDA 483, notice of violation, warning letter, untitled letter or similar correspondence or notice from the FDA or other Drug/Device Regulatory Agency alleging or asserting noncompliance with any applicable Law, in each case, that have not been complied with or closed to the satisfaction of the relevant Drug/Device Regulatory Agency, and, to the Knowledge of the Company, neither the FDA nor any other Drug/Device Regulatory Agency is considering such action.

3.15 Legal Proceedings; Orders.

(a) There is no pending Legal Proceeding and, to the Knowledge of the Company, no Person has threatened in writing to commence any Legal Proceeding: (i) that involves the Company or any of its Subsidiaries or any Company Associate (in his or her capacity as such) or any of the material assets owned or used by the Company or any of its Subsidiaries or (ii) that challenges, or that may have the effect of preventing, delaying, making illegal or otherwise interfering with, the Contemplated Transactions.

(b) There is no Order to which the Company or any of its Subsidiaries, or any of the material assets owned or used by the Company or any of its Subsidiaries, is subject. To the Knowledge of the Company, no officer or Company Key Employee is subject to any Order that prohibits such officer or Company Key Employee from engaging in or continuing in any conduct, activity or practice relating to the Company or any of its Subsidiaries or any material assets owned or used by the Company or any of its Subsidiaries.

3.16 Tax Matters.

(a) The Company has timely filed (or caused to be timely filed) all income Tax Returns and all other material Tax Returns required to be filed by the Company under applicable Law (taking into account any applicable extensions). All such Tax Returns were true, correct and complete in all material respects. Subject to exceptions as would not be material, no claim has been made by a Governmental Authority in a jurisdiction where the Company does not file Tax Returns that the Company is subject to taxation by that jurisdiction.

(b) All material amounts of Taxes due and owing by the Company (whether or not shown on any Tax Return) have been timely paid (taking into account any applicable extensions).

(c) The Company has withheld and paid to the appropriate Governmental Authority all material Taxes required to have been withheld and paid in connection with any amounts paid or owing to any employee, independent contractor, creditor, stockholder or other third party.

(d) There are no Encumbrances for a material amount of Taxes (other Encumbrances described in clause (a) of the definition of "Permitted Encumbrances") upon any of the assets of the Company.

(e) No deficiencies for a material amount of Taxes with respect to the Company have been claimed, proposed or assessed by any Governmental Authority in writing that have not been timely paid in full. There are no pending (or, based on written notice, threatened) material audits, assessments, examinations or other actions for or relating to any liability in respect of Taxes of the Company. The Company has not granted a waiver of any statute of limitations in respect of a material amount of Taxes or an extension of time with respect to a material Tax assessment or deficiency that, in each case, is currently in effect.

(f) The Company has not been a United States real property holding corporation within the meaning of Section 897(c)(2) of the Code in the last five (5) years.

(g) The Company is not a party to any Tax allocation, Tax sharing or similar agreement (including indemnity arrangements), other than customary commercial Contracts entered into in the Ordinary Course of Business the primary purpose of which does not relate to Tax (an "**Ordinary Course Agreement**").

(h) The Company has not been a member of an affiliated group filing a consolidated U.S. federal income Tax Return (other than a group the common parent of which is the Company). The Company has no Liability for the Taxes of any Person under Treasury Regulations Section 1.1502-6 (or any similar provision of state, local, or foreign law), as a transferee or successor, or by Contract (other than an Ordinary Course Agreement).

(i) The Company has not distributed stock of another Person, or has had its stock distributed by another Person, in a transaction that was purported or intended to be governed in whole or in part by Section 355 of the Code or Section 361 of the Code.

(j) The Company has not entered into any transaction identified as a "listed transaction" for purposes of Treasury Regulations Sections 1.6011-4(b)(2) or 301.6111-2(b)(2).

(k) The Company is not aware of any facts or circumstances and has not taken or agreed to take any action, in each case, that would reasonably be expected to prevent or impede the Intended Tax Treatment.

3.17 Employee and Labor Matters; Benefit Plans.

(a) The Company has made available to Parent a list (on an anonymized basis) setting forth, for each Company Associate who is an employee of the Company or any of its Subsidiaries, whether full- or part-time, such employee's annual salary (or if hourly, hourly rate), most recent annual bonus received, and current annual bonus opportunity. No Company Key Employee has indicated to the Company, or any of its Subsidiaries, that he or she intends to resign or retire as a result of the transactions contemplated by this Agreement or otherwise. The Company has made available to Parent a list (on an anonymized basis) setting forth, for each Company Associate who is an individual independent contractor engaged by the Company, such contractor's rate of compensation.

(b) The employment of the Company's and each of its Subsidiaries' employees is terminable by the Company and/or its applicable Subsidiary at will. The Company has made available to Parent accurate and complete copies of all employee manuals and handbooks, to the extent currently effective and material.

(c) Neither the Company nor any of its Subsidiaries is a party to, bound by the terms of, and does not have a duty to bargain under, any collective bargaining agreement or other Contract with a labor organization representing its employees, and there are no labor organizations representing or, to the Knowledge of the Company, purporting to represent or seeking to represent any employees of the Company.

(d) Section 3.17(d) of the Company Disclosure Letter lists all Company Employee Plans (other than employment arrangements which are terminable "at will" without any contractual obligation on the part of the Company or any of its Subsidiaries to make any severance, termination, change in control or similar payment and that are substantively identical to the employment arrangements made available to Parent).

(e) Each Company Employee Plan that is intended to be qualified under Section 401(a) of the Code has received a favorable determination or opinion letter with respect to such qualified status from the IRS. To the Knowledge of the Company, nothing has occurred that would reasonably be expected to adversely affect the qualified status of any such Company Employee Plan or the exempt status of any related trust.

(f) Each Company Employee Plan has been established, maintained and operated in compliance, in all material respects, with its terms all applicable Law, including, without limitation, the Code, ERISA and the Affordable Care Act. No Legal Proceeding (other than those relating to routine claims for benefits) is pending or, to the Knowledge of the Company, threatened with respect to any Company Employee Plan. All payments and/or contributions required to have been made with respect to all Company Employee Plans either have been made or have been accrued in accordance with the terms of the applicable Company Employee Plan and applicable Law.

(g) Neither the Company nor any of its ERISA Affiliates maintains, contributes to or is required to contribute to, or has, in the past six (6) years, maintained, contributed to or been required to contribute to (i) any "employee benefit plan" that is or was subject to Title IV or Section 302 of ERISA or Section 412 of the Code, (ii) a Multiemployer Plan, (iii) any funded welfare benefit plan within the meaning of Section 419 of the Code, (iv) any Multiple Employer Plan, or (v) any Multiple Employer Welfare Arrangement. Neither the Company nor any of its ERISA Affiliates has ever incurred any liability under Title IV of ERISA.

(h) No Company Employee Plan provides for medical or other welfare benefits to any service provider beyond termination of service or retirement, other than (1) pursuant to COBRA or an analogous state law requirement or (2) continuation coverage through the end of the month in which such termination or retirement occurs. The Company does not sponsor or maintain any self-funded medical or long-term disability benefit plan.

(i) No Company Employee Plan is subject to any law of a foreign jurisdiction outside of the United States.

(j) Each Company Employee Plan that constitutes in any part a "nonqualified deferred compensation plan" (as such term is defined under Section 409A(d)(1) of the Code and the guidance thereunder) (each, a "**Company 409A Plan**") has been operated and maintained in all material respects in

operational and documentary compliance with the requirements of Section 409A of the Code and the applicable guidance thereunder. No payment to be made under any Company 409A Plan is or, when made in accordance with the terms of the Company 409A Plan, will be subject to the penalties of Section 409A(a)(1) of the Code.

(k) The Company and each of its Subsidiaries is, and has been, in material compliance with all applicable federal, state and local laws, rules and regulations respecting employment, employment practices, terms and conditions of employment, worker classification, tax withholding, prohibited discrimination, retaliation and harassment, equal employment, fair employment practices, meal and rest periods, immigration status, employee and workplace safety and health, wages (including overtime wages), compensation, hours of work, "plant closings" and "mass layoffs" within the meaning of the Worker Adjustment and Retraining Act of 1988 or similar state or local law (the "**WARN Act**"), labor practices or disputes, restrictive covenants, employment agreements, workers' compensation and long-term disability policies, leaves of absence and worker privacy (collectively, "**Employment-Related Laws**"), and in each case, with respect to employees of the Company and any of its Subsidiaries: (i) has withheld and reported all material amounts required by law or by agreement to be withheld and reported with respect to wages, salaries and other payments to employees, (ii) is not liable for any material amounts of arrears of wages, severance pay or any Taxes or any penalty for failure to comply with any of the foregoing and (iii) is not liable for any material payment to any trust or other fund governed by or maintained by or on behalf of any Governmental Authority, with respect to unemployment compensation benefits, social security or other benefits or obligations for employees (other than routine payments to be made in the Ordinary Course of Business). There are no material Legal Proceedings, claims, labor disputes or organizing activities, or grievances pending or, to the Knowledge of the Company, threatened or reasonably anticipated against or involving the Company or any of its Subsidiaries or any trustee of the Company or any of its Subsidiaries relating to any employee, contingent worker, director, employment agreement or Employee Plan (other than routine claims for benefits) or Employment-Related Laws. To the Knowledge of the Company, there are no material pending or threatened or reasonably anticipated claims or actions against the Company, any trustee or any trustee of any Subsidiary of the Company under any workers' compensation policy or long-term disability policy. The Company is not a party to a conciliation agreement, consent decree or other agreement or Order with any federal, state or local agency or Governmental Authority with respect to employment practices.

(l) Neither the Company nor any of its Subsidiaries has any material liability with respect to any misclassification within the last four (4) years of: (i) any Person as an independent contractor rather than as an employee, (ii) any employee leased from another employer or (iii) any employee currently or formerly classified as exempt from overtime wages. Neither the Company nor any of its Subsidiaries has taken any action which would constitute a "plant closing" or "mass layoff" within the meaning of the WARN Act, issued any notification of a plant closing or mass layoff required by the WARN Act (nor has the Company or any of its Subsidiaries been under any requirement or obligation to issue any such notification), or incurred any liability or obligation under the WARN Act that remains unsatisfied.

(m) To the Company's Knowledge, there has never been, nor has there been any threat of, any strike, slowdown, work stoppage, lockout, job action, union, organizing activity, question concerning representation or any similar activity or dispute, by or with respect to any Company Associates. No event has occurred within the past six months, and no condition or circumstance exists, that, to the Company's Knowledge, might directly or indirectly be likely to give rise to or provide a basis for the commencement of any such strike, slowdown, work stoppage, lockout, job action, union organizing activity, question concerning representation or any similar activity or dispute.

(n) Neither the Company nor any of its Subsidiaries is, nor has the Company nor any of its Subsidiaries been, engaged in any material unfair labor practice within the meaning of the National Labor Relations Act. There is no material Legal Proceeding, claim, labor dispute or grievance pending or, to the Knowledge of the Company, threatened or reasonably anticipated relating to any employment contract, privacy right, labor dispute, wages and hours, leave of absence, plant closing notification, workers' compensation policy, long-term disability policy, harassment, retaliation, immigration, employment statute or regulation, safety or discrimination matter involving any current or former employee of the Company or any of its Subsidiaries including charges of unfair labor practices or discrimination complaints.

(o) There is no contract, agreement, plan or arrangement to which the Company or any of its Subsidiaries is a party or by which it is bound to compensate any of its employees or other service providers for any income or excise taxes paid pursuant to the Code, including, but not limited to, Section 4999 or Section 409A of the Code.

(p) Neither the Company nor any of its Subsidiaries is a party to any Contract that as a result of the execution and delivery of this Agreement, the stockholder approval of this Agreement, nor the consummation of the transactions contemplated hereby, could (either alone or in conjunction with any other event) result in, or cause the accelerated vesting, payment, funding or delivery of, or increase the amount or value of, any payment or benefit to any employee, officer, director or other service provider of the Company or any of its Subsidiaries.

3.18 Environmental Matters. The Company has complied with all applicable Environmental Laws, which compliance includes the possession by the Company of all permits and other Governmental Authorizations required under applicable Environmental Laws and compliance with the terms and conditions thereof, except for any failure to be in compliance that, individually or in the aggregate, would not result in a Company Material Adverse Effect. The Company has not received any written notice or other communication (in writing or otherwise), whether from a Governmental Authority, citizens group, employee or otherwise, that alleges that the Company is not in compliance with any Environmental Law and, to the Knowledge of the Company, there are no circumstances that may prevent or interfere with the Company's compliance with any Environmental Law in the future, except where such failure to comply would not reasonably be expected to have a Company Material Adverse Effect. To the Knowledge of the Company: (i) no current or prior owner of any property leased or controlled by the Company has received any written notice or other communication relating to property owned or leased at any time by the Company, whether from a Governmental Authority, citizens group, employee or otherwise, that alleges that such current or prior owner or the Company is not in compliance with or violated any Environmental Law relating to such property and (ii) the Company has no material liability under any Environmental Law. The Company has made available all environmental site assessments, environmental audits and other material environmental documents in the Company's possession or control relating to the Company, including the Company's business and current or former facilities.

3.19 Insurance. The Company has delivered to Parent accurate and complete copies of all material insurance policies and all material self-insurance programs and arrangements relating to the business, assets, liabilities and operations of the Company. Each of such insurance policies is in full force and effect and the Company is in compliance in all material respects with the terms thereof. Other than customary end of policy notifications from insurance carriers, the Company has not received any notice or other communication regarding any actual or possible: (i) cancellation or invalidation of any insurance policy or (ii) refusal or denial of any coverage, reservation of rights or rejection of any material claim under any insurance policy. The Company has provided timely written notice to the appropriate insurance carrier(s) of each Legal Proceeding pending against the Company, and no such carrier has issued a denial of coverage or a reservation of rights with respect to any such Legal Proceeding, or informed the Company of its intent to do so.

3.20 No Financial Advisors. Except as set forth on Section 3.20 of the Company Disclosure Letter, no broker, finder or investment banker is entitled to any brokerage fee, finder's fee, opinion fee, success fee, transaction fee or other fee or commission in connection with the Contemplated Transactions based upon arrangements made by or on behalf of the Company.

3.21 Transactions with Affiliates. Section 3.21 of the Company Disclosure Letter describes any material transactions or relationships between, on one hand, the Company and, on the other hand, any (a) executive officer or director of the Company or any of such executive officer's or director's immediate family members, (b) owner of more than 5% of the voting power of the outstanding Company Capital Stock or (c) to the Knowledge of the Company, any "related person" (within the meaning of Item 404 of Regulation S-K under the Securities Act) of any such officer, director or owner (other than the Company) in the case of each of (a), (b) or (c) that is of the type that would be required to be disclosed under Item 404 of Regulation S-K under the Securities Act.

3.22 Privacy and Data Security. The Company is and has at all times been in compliance with all applicable Privacy Laws and the applicable terms of any Company Contracts governing privacy, data protection, data security, trans-border data flow, data loss, data theft, or breach notification, data localization, sending solicited or

unsolicited electronic mail or text messages, cookies or other tracking technology, with respect to, or the collection, handling, use, maintenance, storage, disclosure, transfer, or other processing of, Personal Information (including any such information of individuals, clinical trial participants, patients, patient family members, caregivers or advocates, physicians and other health care professionals, clinical trial investigators, researchers, pharmacists that interact with the Company in connection with the operation of the Company's business), except, in each case, for such noncompliance as has not had, and would not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. To the Knowledge of the Company, the Company (i) has implemented and maintains reasonable written policies and procedures that materially comply with applicable Privacy Laws and are designed to protect the privacy and security of Personal Information (the "**Privacy Policies**") and (ii) has complied with such Privacy Policies, except for such noncompliance as has not had, and would not reasonably be expected to have, individually or in the aggregate, a Company Material Adverse Effect. To the Knowledge of the Company, no Legal Proceeding has been asserted or threatened against the Company by any Person alleging a violation of Privacy Laws, Privacy Policies, or the applicable terms of any Company Contracts governing privacy, data protection, data security, trans-border data flow, data loss, data theft, or breach notification, data localization, sending solicited or unsolicited electronic mail or text messages, cookies or other tracking technology, with respect to, or the collection, handling, use, maintenance, storage, disclosure, transfer, or other processing of, Personal Information. To the Knowledge of the Company, there have been no data security incidents or data breaches or other adverse events or incidents that have resulted in any unauthorized access to, or collection, use, disclosure, modification or destruction of, Personal Information or other data in the possession or control of the Company or any service provider acting on behalf of the Company, in each case, where such incident, breach or event resulted in a notification obligation to any Person under applicable Law or pursuant to the terms of any Company Contract.

3.23 Ownership of Parent Capital Stock. None of the Company or any of their directors, officers, or Affiliates or, to the knowledge of the Company or any of its controlled Affiliates, any employees of the Company or any of its controlled Affiliates (a) has owned any shares of Parent's capital stock; or (b) has been an "interested stockholder" (as defined in Section 203 of the DGCL) of Parent, in each case during the three years prior to the date hereof.

3.24 No Other Representations or Warranties. The Company hereby acknowledges and agrees that, except for the representations and warranties contained in this Agreement, neither Parent nor any other person on behalf of Parent makes any express or implied representation or warranty with respect to Parent or with respect to any other information provided to the Company, any of its stockholders or any of their respective Affiliates in connection with the Contemplated Transactions, and (subject to the express representations and warranties of Parent set forth in Section 4 (in each case as qualified and limited by the Parent Disclosure Letter)) none of the Company, or any of its Representatives or stockholders, has relied on any such information (including the accuracy or completeness thereof).

Section 4. Representations and Warranties of Parent, First Merger and Second Merger Sub.

Except (i) as set forth in the written disclosure document delivered by Parent to the Company (the "**Parent Disclosure Letter**") concurrently with the execution of this Agreement or (ii) as disclosed in the Parent SEC Documents filed with the SEC prior to the date hereof and publicly available on the SEC's Electronic Data Gathering Analysis and Retrieval system (but (A) without giving effect to any amendment thereof filed with, or furnished to the SEC on or after the date hereof and (B) excluding any disclosures contained under the heading "Risk Factors" and any disclosure of risks included in any "forward-looking statements" disclaimer or in any other section to the extent they are forward-looking statements or cautionary, predictive or forward-looking in nature), it being understood that any matter disclosed in the Parent SEC Documents shall be deemed to be disclosed in a section of the Parent Disclosure Letter only to the extent that is readily apparent from a reading of such Parent SEC Documents that is applicable to such section or subsection of the Parent Disclosure Letter, Parent, First Merger Sub and Second Merger Sub represent and warrant to the Company as follows:

4.1 Due Organization; Subsidiaries.

(a) Each of Parent, First Merger Sub and Second Merger Sub is a corporation duly incorporated or formed, as applicable, validly existing and in good standing under the Laws of the jurisdiction of its incorporation or formation, as applicable, and has all necessary corporate power and authority: (i) to conduct its business in the manner in which its business is currently being conducted, (ii) to own or lease and use its property

and assets in the manner in which its property and assets are currently owned or leased and used and (iii) to perform its obligations under all Contracts by which it is bound. Since the date of its incorporation, Merger Subs have not engaged in any activities other than in connection with or as contemplated by this Agreement.

(b) Each of Parent and its Subsidiaries is licensed and qualified to do business, and is in good standing (to the extent applicable in such jurisdiction), under the Laws of all jurisdictions where the nature of its business in the manner in which its business is currently being conducted requires such licensing or qualification other than in jurisdictions where the failure to be so qualified individually or in the aggregate would not be reasonably expected to have a Parent Material Adverse Effect.

(c) Parent has no Subsidiaries other than Merger Subs and except as set forth on Section 4.1(c) of the Parent Disclosure Letter, Parent does not own any capital stock of, or any equity ownership or profit sharing interest of any nature in, or control directly or indirectly, any other Entity other than Merger Subs. Except as set forth on Section 4.1(c) of the Parent Disclosure Letter, Parent is not and has not otherwise been, directly or indirectly, a party to, member of or participant in any partnership, joint venture or similar business entity. Parent has not agreed and is not obligated to make, nor is Parent bound by any Contract under which it may become obligated to make, any future investment in or capital contribution to any other Entity. Parent has not, at any time, been a general partner of, and has not otherwise been liable for any of the debts or other obligations of, any general partnership, limited partnership or other Entity.

4.2 Organizational Documents. Parent has delivered to the Company accurate and complete copies of Parent's Organizational Documents. Parent is not in breach or violation of its Organizational Documents in any material respect.

4.3 Authority; Binding Nature of Agreement. Parent and each Merger Sub has all necessary corporate power and authority to enter into and to perform its obligations under this Agreement and to consummate the Contemplated Transactions. The Parent Board has: (a) determined that the Contemplated Transactions are fair to, advisable and in the best interests of Parent and its stockholders, (b) approved and declared advisable this Agreement and the Contemplated Transactions, including the issuance of shares of Parent Capital Stock to the stockholders of the Company pursuant to the terms of this Agreement and (c) determined to recommend, upon the terms and subject to the conditions set forth in this Agreement, that the stockholders of Parent vote to approve the Contemplated Transactions, and, if deemed necessary by Parent and the Company, the amendment to the certificate of incorporation of the Parent to (i) change the name of Parent to "Oruka Therapeutics, Inc.", (ii) effect the Nasdaq Reverse Split and (iii) make such other changes as are mutually agreeable to Parent and the Company pursuant to the terms of this Agreement. The First Merger Sub Board (by unanimous written consent) has: (x) determined that the Contemplated Transactions are fair to, advisable and in the best interests of First Merger Sub and its sole stockholder, (y) deemed advisable and approved this Agreement and the Contemplated Transactions and (z) determined to recommend, upon the terms and subject to the conditions set forth in this Agreement, that the stockholder of First Merger Sub vote to adopt this Agreement and thereby approve the Contemplated Transactions. The sole member of Second Merger Sub (by unanimous written consent) has: (A) determined that the Contemplated Transactions are fair to, advisable, and in the best interests of Second Merger Sub and the sole member; and (B) deemed advisable and approved this Agreement and the Contemplated Transactions. This Agreement has been duly executed and delivered by Parent and Merger Subs and, assuming the due authorization, execution and delivery by the Company and the accuracy of the representation in Section 3.23, constitutes the legal, valid and binding obligation of Parent and Merger Subs, enforceable against each of Parent and Merger Subs in accordance with its terms, subject to the Enforceability Exceptions.

4.4 Vote Required. Assuming the accuracy of the representation in Section 3.23, the affirmative vote of a majority of the shares of Parent Common Stock properly cast at the Parent Stockholder Meeting is the only vote of the holders of any class or series of Parent's capital stock necessary to approve this Agreement and thereby approve the Contemplated Transactions and clauses (i), (ii) and (iii) of the definition of "Parent Charter Amendment" (collectively, the "**Required Parent Stockholder Vote**").

4.5 Non-Contravention; Consents.

(a) Subject to obtaining the Required Parent Stockholder Vote, compliance with any applicable requirements of the HSR Act (if applicable) and the filing of the Certificate of Merger and Certificate of Designation required by the DGCL or DLLCA, and assuming the accuracy of the representation in Section 3.23, neither (x) the execution, delivery or performance of this Agreement by Parent or Merger Subs, nor (y) the consummation of the Contemplated Transactions, will directly or indirectly (with or without notice or lapse of time):

(i) contravene, conflict with or result in a violation of any of the provisions of the Organizational Documents of Parent or its Subsidiaries;

(ii) contravene, conflict with or result in a material violation of, or give any Governmental Authority or other Person the right to challenge the Contemplated Transactions or to exercise any remedy or obtain any relief under, any Law or any Order to which Parent or its Subsidiaries or any of the assets owned or used by Parent or its Subsidiaries, is subject;

(iii) contravene, conflict with or result in a material violation of any of the terms or requirements of, or give any Governmental Authority the right to revoke, withdraw, suspend, cancel, terminate or modify, any Governmental Authorization that is held by Parent or its Subsidiaries or that otherwise relates to the business of Parent, or any of the assets owned, leased or used by Parent;

(iv) contravene, conflict with or result in a violation or breach of, or result in a default under, any provision of any Parent Material Contract, or give any Person the right to: (A) declare a default or exercise any remedy under any Parent Material Contract, (B) any material payment, rebate, chargeback, penalty or change in delivery schedule under any such Parent Material Contract, (C) accelerate the maturity or performance of any Parent Material Contract or (D) cancel, terminate or modify any term of any Parent Material Contract, except in the case of any nonmaterial breach, default, penalty or modification; or

(v) result in the imposition or creation of any Encumbrance upon or with respect to any asset owned or used by Parent or its Subsidiaries (except for Permitted Encumbrances).

(b) Except for (i) any Consent set forth on Section 4.5(a) of the Parent Disclosure Letter under any Parent Contract, (ii) the Required Parent Stockholder Vote, (iii) the filing of the Certificate of Merger and Certificate of Designation with the Secretary of State of the State of Delaware pursuant to the DGCL or DLLCA, (iv) compliance with any applicable requirements of the HSR Act (if applicable) and (v) such consents, waivers, approvals, orders, authorizations, registrations, declarations and filings as may be required under applicable federal and state securities laws, and assuming the accuracy of the representation in Section 3.23, neither Parent nor any of its Subsidiaries was, is or will be required to make any filing with or give any notice to, or to obtain any Consent from, any Person in connection with (x) the execution, delivery or performance of this Agreement or (y) the consummation of the Contemplated Transactions.

(c) Assuming the accuracy of the representation in Section 3.23, the Parent Board and the First Merger Sub Board have taken and will take all actions necessary to ensure that the restrictions applicable to business combinations contained in Section 203 of the DGCL are, and will be, inapplicable to the execution, delivery and performance of this Agreement and to the consummation of the Contemplated Transactions. No other state takeover statute or similar Law applies or purports to apply to the Merger, this Agreement or any of the other Contemplated Transactions.

4.6 Capitalization.

(a) The authorized capital stock of Parent consists of (i) 100,000,000 shares of Parent Common Stock of which 14,501,143 shares have been issued and are outstanding as of March 28, 2024 (the "**Capitalization Date**") and (ii) 5,000,000 shares of Parent Preferred Stock, par value $0.001 per share, of which 135,000 have been designated Series A Convertible Preferred Stock. No shares of Parent Preferred Stock have been issued and are outstanding as of the Capitalization Date. Parent does not hold any shares of its capital stock in its treasury.

(b) All of the outstanding shares of Parent Common Stock have been duly authorized and validly issued, and are fully paid and nonassessable and are free of any Encumbrances other than Encumbrances set forth in the Organizational Documents or under applicable securities Laws. None of the outstanding shares of Parent Common Stock is entitled or subject to any preemptive right, right of participation, right of maintenance or any similar right and none of the outstanding shares of Parent Common Stock is subject to any right of first refusal in favor of Parent. Except as contemplated herein, there is no Parent Contract relating to the voting or registration of, or restricting any Person from purchasing, selling, pledging or otherwise disposing of (or granting any option or similar right with respect to), any shares of Parent Common Stock. Parent is not under any obligation, nor is Parent bound by any Contract pursuant to which it may become obligated, to repurchase, redeem or otherwise acquire any outstanding shares of Parent Common Stock or other securities. Section 4.6(b) of the Parent Disclosure Letter accurately and completely describes all repurchase rights held by Parent with respect to shares of Parent Common Stock (including shares issued pursuant to the exercise of stock options) and specifies which of those repurchase rights are currently exercisable.

(c) Except for the Parent 2004 Equity Incentive Plan, Parent 2013 Equity Incentive Plan and Parent 2020 Equity Incentive Plan, (each as may be amended from time to time, collectively, the "**Parent Stock Plans**") and except as set forth on Section 4.6(c) of the Parent Disclosure Letter, Parent does not have any stock option plan or any other plan, program, agreement or arrangement providing for any equity-based compensation for any Person. Parent does not have any employee stock purchase plan or similar program. Section 4.6(c) of the Parent Disclosure Letter sets forth the following information with respect to each Parent Option outstanding as of the Capitalization Date, as applicable: (i) the name of the holder, (ii) the number of shares of Parent Common Stock subject to such Parent Option as of the Capitalization Date, (iii) the exercise price of such Parent Option, (iv) the date on which such Parent Option was granted, (v) the applicable vesting schedule, including any acceleration provisions, (vi) the date on which such Parent Option expires, (vii) whether such Parent Option is intended to be an "incentive stock option" (as defined in the Code) or a nonqualified stock option and (viii) in the case of a Parent Option, the plan pursuant to which such Parent Option was granted. Parent has made available to the Company accurate and complete copies of equity incentive plans pursuant to which Parent has equity-based awards, the forms of all award agreements evidencing such equity-based awards and evidence of board and stockholder approval of the Parent Stock Plans and any amendments thereto.

(d) Except for the outstanding Parent Options or as set forth on Section 4.6(d) of the Parent Disclosure Letter, there is no: (i) outstanding subscription, option, call, warrant or right (whether or not currently exercisable) to acquire any shares of the capital stock or other securities of Parent, (ii) outstanding security, instrument or obligation that is or may become convertible into or exchangeable for any shares of the capital stock or other securities of Parent, (iii) stockholder rights plan (or similar plan commonly referred to as a "poison pill") or Contract under which Parent is or may become obligated to sell or otherwise issue any shares of its capital stock or any other securities or (iv) condition or circumstance that may give rise to or provide a basis for the assertion of a claim by any Person to the effect that such Person is entitled to acquire or receive any shares of capital stock or other securities of Parent. There are no outstanding or authorized stock appreciation, phantom stock, profit participation or other similar rights with respect to Parent.

(e) All outstanding shares of Parent Common Stock and Parent Options, and other securities of Parent have been issued and granted in compliance in all material respects with (i) all applicable securities laws and other applicable Law and (ii) all requirements set forth in applicable Contracts.

4.7 SEC Filings; Financial Statements.

(a) Parent has filed or furnished, as applicable, on a timely basis all forms, statements, certifications, reports and documents required to be filed or furnished by it with the SEC under the Exchange Act or the Securities Act (the "**Parent SEC Documents**"). As of the time it was filed with the SEC (or, if amended or superseded by a filing prior to the date of this Agreement, then on the date of such filing), each of the Parent SEC Documents complied in all material respects with the applicable requirements of the Securities Act or the Exchange Act (as the case may be) and as of the time they were filed, none of the Parent SEC Documents contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The certifications and statements required by (i) Rule 13a-14 under the Exchange Act and (ii) 18 U.S.C. §1350 (Section 906 of the Sarbanes-Oxley Act) relating to the Parent SEC

Documents (collectively, the "**Certifications**") are accurate and complete and comply as to form and content with all applicable Laws. As used in this Section 4.7, the term "file" and variations thereof shall be broadly construed to include any manner in which a document or information is furnished, supplied or otherwise made available to the SEC.

(b) The financial statements (including any related notes) contained or incorporated by reference in the Parent SEC Documents: (i) complied as to form in all material respects with the Securities Act and the Exchange Act, as applicable, and the published rules and regulations of the SEC applicable thereto, (ii) were prepared in accordance with GAAP (except as may be indicated in the notes to such financial statements or, in the case of unaudited financial statements, as permitted by Form 10-Q of the SEC, and except that the unaudited financial statements may not contain footnotes and are subject to normal and recurring year-end adjustments that are not reasonably expected to be material in amount) applied on a consistent basis unless otherwise noted therein throughout the periods indicated and (iii) fairly present, in all material respects, the financial position of Parent as of the respective dates thereof and the results of operations and cash flows of Parent for the periods covered thereby. Other than as expressly disclosed in the Parent SEC Documents filed prior to the date hereof, there has been no material change in Parent's accounting methods or principles that would be required to be disclosed in Parent's financial statements in accordance with GAAP. The books of account and other financial records of Parent and each of its Subsidiaries are true and complete in all material respects.

(c) Parent's auditor has at all times since the date of enactment of the Sarbanes-Oxley Act been: (i) a registered public accounting firm (as defined in Section 2(a)(12) of the Sarbanes-Oxley Act), (ii) to the Knowledge of Parent, "independent" with respect to Parent within the meaning of Regulation S-X under the Exchange Act and (iii) to the Knowledge of Parent, in compliance with subsections (g) through (l) of Section 10A of the Exchange Act and the rules and regulations promulgated by the SEC and the Public Company Accounting Oversight Board thereunder.

(d) Except as set forth on Section 4.7(d) of the Parent Disclosure Letter, Parent has not received any comment letter from the SEC or the staff thereof or any correspondence from Nasdaq or the staff thereof relating to the delisting or maintenance of listing of the Parent Common Stock on Nasdaq. Parent has not disclosed any unresolved comments in the Parent SEC Documents.

(e) There have been no formal internal investigations regarding financial reporting or accounting policies and practices discussed with, reviewed by or initiated at the direction of the chief executive officer, chief financial officer or general counsel of Parent, the Parent Board or any committee thereof, other than ordinary course audits or reviews of accounting policies and practices or internal controls required by the Sarbanes-Oxley Act.

(f) Parent is in compliance in all material respects with the applicable provisions of the Sarbanes-Oxley Act, the Exchange Act and the applicable listing and governance rules and regulations of Nasdaq.

(g) Parent maintains a system of internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act) that is sufficient to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including policies and procedures sufficient to provide reasonable assurance (i) that Parent maintains records that in reasonable detail accurately and fairly reflect Parent's transactions and dispositions of assets, (ii) that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, (iii) that receipts and expenditures are made only in accordance with the authorization policy and (iv) regarding prevention or timely detection of the unauthorized acquisition, use or disposition of Parent's assets that could have a material effect on Parent's financial statements. Parent has evaluated the effectiveness of Parent's internal control over financial reporting and, to the extent required by applicable Law, presented in any applicable Parent SEC Document that is a report on Form 10-K or Form 10-Q (or any amendment thereto) its conclusions about the effectiveness of the internal control over financial reporting as of the end of the period covered by such report or amendment based on such evaluation. Parent has disclosed to Parent's auditors and the Audit Committee of the Parent Board (and made available to the Company a summary of the significant aspects of such disclosure) (A) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting that are reasonably likely to adversely affect Parent's ability to record, process, summarize and report financial information and (B) any fraud, whether or not material, that involves management or other employees who have a significant role in Parent's or its

Subsidiaries' internal control over financial reporting. Except as disclosed in the Parent SEC Documents filed prior to the date hereof, Parent's internal control over financial reporting is effective at the reasonable assurance level and Parent has not identified any material weaknesses in the design or operation of Parent's internal control over financial reporting.

(h) Parent's "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) are designed to ensure that all information (both financial and nonfinancial) required to be disclosed by Parent in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC, and that all such information is accumulated and communicated to Parent's principal executive officer and principal financial officer as appropriate to allow timely decisions regarding required disclosure and to make the Certifications and such disclosure controls and procedures are effective. Parent has carried out evaluation of the effectiveness of its disclosure controls and procedures as required by Rule 13a-15 of the Exchange Act.

4.8 Absence of Changes. Except as set forth on Section 4.8 of the Parent Disclosure Letter, between December 31, 2023 and the date of this Agreement, Parent has conducted its business only in the Ordinary Course of Business (except for the execution and performance of this Agreement and the discussions, negotiations and transactions related thereto) and there has not been any (a) Parent Material Adverse Effect or (b) action, event or occurrence that would have required consent of the Company pursuant to Section 5.1(b) of this Agreement had such action, event or occurrence taken place after the execution and delivery of this Agreement.

4.9 Absence of Undisclosed Liabilities. Since December 31, 2023, neither Parent nor any of its Subsidiaries has any Liability except for: (a) Liabilities disclosed, reflected or reserved against in the Parent Balance Sheet, (b) normal and recurring current Liabilities that have been incurred by Parent or its Subsidiaries since the date of the Parent Balance Sheet in the Ordinary Course of Business (none of which relates to any breach of contract, breach of warranty, tort, infringement or violation of Law), (c) Liabilities for performance of obligations of Parent or any of its Subsidiaries under Parent Contracts, (d) Liabilities incurred in connection with the Parent Legacy Business or the Contemplated Transactions, (e) Liabilities described in Section 4.9 of the Parent Disclosure Letter and (f) those Liabilities that are not material to Parent.

4.10 Title to Assets. Each of Parent and its Subsidiaries owns, and has good and valid title to, or, in the case of leased properties and assets, valid leasehold interests in, all tangible properties or tangible assets and equipment used or held for use in its business or operations or purported to be owned by it, including: (a) all tangible assets reflected on the Parent Balance Sheet and (b) all other tangible assets reflected in the books and records of Parent as being owned by Parent. All of such assets are owned or, in the case of leased assets, leased by Parent or any of its Subsidiaries free and clear of any Encumbrances, other than Permitted Encumbrances.

4.11 Real Property; Leasehold. Neither Parent nor any of its Subsidiaries owns or has ever owned any real property, nor is Parent party to any agreement to purchase or sell any real property. Parent has made available to the Company (a) an accurate and complete list of all real properties with respect to which Parent directly or indirectly holds a valid leasehold interest as well as any other real estate that is in the possession of or leased by Parent or any of its Subsidiaries and (b) copies of all leases under which any such real property is possessed (the "**Parent Real Estate Leases**"), each of which is in full force and effect, with no existing material default thereunder by Parent or its Subsidiaries or, to Parent's Knowledge, the other party thereto.

4.12 Intellectual Property.

(a) Section 4.12(a) of the Parent Disclosure Letter is an accurate, true and complete listing of all Parent Registered IP.

(b) Section 4.12(b) of the Parent Disclosure Letter accurately identifies (i) all Parent Contracts pursuant to which any Parent IP Rights are licensed to Parent (other than (A) any non-customized software that (1) is so licensed solely in executable or object code form pursuant to a nonexclusive, internal use software license and other Intellectual Property associated with such software and (2) is not incorporated into, or material to the development, manufacturing, or distribution of, any of Parent products or services, (B) any Intellectual Property licensed on a nonexclusive basis ancillary to the purchase or use of services, equipment, reagents or other materials, (C) any confidential information provided under confidentiality agreements and (D) agreements between Parent and its employees in Parent's standard form thereof) and (ii) whether the license or licenses granted to Parent are exclusive or nonexclusive.

(c) Section 4.12(c) of the Parent Disclosure Letter accurately identifies each Parent Contract pursuant to which any Person has been granted any license or covenant not to sue under, or otherwise has received or acquired any right (whether or not currently exercisable) or interest in, any Parent IP Rights (other than (i) any confidential information provided under confidentiality agreements and (ii) any Parent IP Rights nonexclusively licensed to academic collaborators, suppliers or service providers for the sole purpose of enabling such academic collaborator, supplier or service providers to provide services for Parent's benefit).

(d) Neither Parent nor any of its Subsidiaries is bound by, and no Parent IP Rights are subject to, any Contract containing any covenant or other provision that in any way limits or restricts the ability of Parent or any of its Subsidiaries to use, exploit, assert, or enforce any Parent IP Rights anywhere in the world.

(e) Parent or one of its Subsidiaries exclusively owns all right, title, and interest to and in the Parent IP Rights (other than (i) Parent IP Rights licensed to Parent, or co-owned rights each as identified in Section 4.12(e) of the Parent Disclosure Letter, (ii) any non-customized software that (A) is licensed to Parent solely in executable or object code form pursuant to a nonexclusive, internal use software license and other Intellectual Property associated with such software and (B) is not incorporated into, or material to the development, manufacturing or distribution of, any of Parent or its Subsidiaries' products or services and (iii) any Intellectual Property licensed on a nonexclusive basis ancillary to the purchase or use of equipment, reagents or other materials), in each case, free and clear of any Encumbrances (other than Permitted Encumbrances). Without limiting the generality of the foregoing:

(i) All documents and instruments necessary to register or apply for or renew registration of Parent Registered IP have been validly executed, delivered, and filed in a timely manner with the appropriate Governmental Authority.

(ii) Each Person who is or was an employee or contractor of Parent or any of its Subsidiaries and who is or was involved in the creation or development of any Intellectual Property for Parent or any of its Subsidiaries has signed a valid, enforceable agreement containing a present assignment of such Intellectual Property to Parent or such Subsidiary and confidentiality provisions protecting trade secrets and confidential information of Parent and its Subsidiaries.

(iii) To the Knowledge of Parent, no current or former stockholder, officer, director or employee of Parent or any of its Subsidiaries has any claim, right (whether currently exercisable, or exercisable in the future), or interest to or in any Parent IP Rights purported to be owned by Parent. To the Knowledge of Parent, no employee of Parent or any of its Subsidiaries is (a) bound by or otherwise subject to any Contract restricting him or her from performing his or her duties for Parent or such Subsidiary or (b) in breach of any Contract with any former employer or other Person concerning Parent IP Rights purported to be owned by Parent or such Subsidiary or confidentiality provisions protecting trade secrets and confidential information comprising Parent IP Rights purported to be owned by Parent or such Subsidiary.

(iv) No funding, facilities or personnel of any Governmental Authority were used, directly or indirectly, to develop or create, in whole or in part, any Parent IP Rights in which Parent or any of its Subsidiaries has an ownership interest.

(v) Parent and each of its Subsidiaries has taken reasonable steps to maintain the confidentiality of and otherwise protect and enforce its rights in all proprietary information that Parent or such Subsidiary holds, or purports to hold, as confidential or a trade secret.

(vi) Parent or any of its Subsidiaries has not assigned or otherwise transferred ownership of, or agreed to assign or otherwise transfer ownership of, any Parent IP Rights to any other Person.

(f) Parent has delivered, or made available to the Company, a complete and accurate copy of all material Parent IP Rights Agreements.

(g) The manufacture, marketing, offering for sale, sale, importation, use or intended use or other disposal of any product as currently sold or under development by Parent does not violate any license or agreement between Parent or its Subsidiaries and any third party in any material respect, and, to the Knowledge

of Parent, does not infringe or misappropriate any valid and issued Patent right or other Intellectual Property of any other Person, which infringement or misappropriation would reasonably be expected to have a Parent Material Adverse Effect. To the Knowledge of Parent, no third party is infringing upon any Patents owned by Parent within the Parent IP Rights, or violating any Parent IP Rights Agreement.

(h) As of the date of this Agreement, Parent is not a party to any Legal Proceeding (including, but not limited to, opposition, interference or other proceeding in any patent or other government office) contesting the validity, ownership or right to use, sell, offer for sale, license or dispose of any Parent IP Rights. Parent has not received any written notice asserting that any Parent Registered IP or the proposed use, sale, offer for sale, license or disposition of any products, methods or processes claimed or covered thereunder infringes or misappropriates or violates the rights of any other Person or that Parent or any of its Subsidiaries have otherwise infringed, misappropriated or otherwise violated any Intellectual Property of any Person.

(i) To the Knowledge of Parent, no trademark (whether registered or unregistered) or trade name owned, used or applied for by Parent conflicts or interferes with any trademark (whether registered or unregistered) or trade name owned, used or applied for by any other Person except as would not have a Parent Material Adverse Effect. None of the goodwill associated with or inherent in any trademark (whether registered or unregistered) in which Parent has or purports to have an ownership interest has been impaired as determined by Parent in accordance with GAAP.

(j) Except as may be set forth in the Contracts listed on Section 4.12(b), 4.12(c) or 4.12(k) of the Parent Disclosure Letter or as contained in "off-the-shelf" license agreements entered into in the Ordinary Course of Business by Parent, (i) Parent is not bound by any Contract to indemnify, defend, hold harmless or reimburse any other Person with respect to any Intellectual Property infringement, misappropriation or similar claim which is material to Parent taken as a whole and (ii) Parent has never assumed, or agreed to discharge or otherwise take responsibility for, any existing or potential liability of another Person for infringement, misappropriation or violation of any Intellectual Property right, which assumption, agreement or responsibility remains in force as of the date of this Agreement.

(k) Neither Parent nor any of its Subsidiaries is party to any Contract that, as a result of such execution, delivery and performance of this Agreement, will cause the grant of any license or other right to any Parent IP Rights, result in breach of, default under or termination of such Contract with respect to any Parent IP Rights, or impair the right of Parent or the Surviving Entity and its Subsidiaries to use, sell or license or enforce any Parent IP Rights or portion thereof, except for the occurrence of any such grant or impairment that would not individually or in the aggregate, reasonably be expected to result in a Parent Material Adverse Effect.

4.13 Agreements, Contracts and Commitments.

(a) Section 4.13 of the Parent Disclosure Letter identifies each Parent Contract that is in effect as of the date of this Agreement (each, an "**Parent Material Contract**" and collectively, the "**Parent Material Contracts**"):

(i) each Parent Contract relating to any material bonus, deferred compensation, severance, incentive compensation, pension, profit-sharing or retirement plans, or any other employee benefit plans or arrangements;

(ii) each Parent Contract requiring payments by Parent after the date of this Agreement in excess of $100,000 pursuant to its express terms relating to the employment of, or the performance of employment-related services by, any Parent Associate providing employment related, consulting or independent contractor services, not terminable by Parent on thirty (30) calendar days' or less notice without liability;

(iii) each Parent Contract relating to any agreement or plan, including any option plan, stock appreciation right plan or stock purchase plan, any of the benefits of which will be increased or the vesting of benefits of which will be accelerated, by the occurrence of any of the Contemplated Transactions (either alone or in conjunction with any other event, such as termination of employment), or the value of any of the benefits of which will be calculated on the basis of any of the Contemplated Transactions;

(iv) each Parent Contract relating to any agreement of indemnification or guaranty not entered into in the Ordinary Course of Business;

(v) each Parent Contract containing (A) any covenant limiting the freedom of Parent or any of its Subsidiaries to engage in any line of business or compete with any Person, or limiting the development, manufacture or distribution of the Parent's products or services (B) any most-favored pricing arrangement, (C) any exclusivity provision or (D) any non-solicitation provision;

(vi) each Parent Contract (A) pursuant to which any Person granted Parent an exclusive license under any Intellectual Property, or (B) pursuant to which Parent granted any Person an exclusive license under any Parent IP Rights;

(vii) each Parent Contract containing any royalty, dividend or similar arrangement based on the revenues or profits of Parent, any of its Subsidiaries, or of a product;

(viii) each Parent Contract relating to capital expenditures and requiring payments after the date of this Agreement in excess of $100,000 pursuant to its express terms and not cancelable without penalty;

(ix) each Parent Contract relating to the disposition or acquisition of material assets or any ownership interest in any Entity, in each case, involving payments in excess of $100,000 after the date of this Agreement;

(x) each Parent Contract entered into in settlement of any Legal Proceeding or other dispute pursuant to which Parent or any of its Subsidiaries has outstanding obligations to pay consideration in excess of $100,000;

(xi) each Parent Contract relating to any mortgages, indentures, loans, notes or credit agreements, security agreements or other agreements or instruments relating to the borrowing of money or extension of credit in excess of $100,000 or creating any material Encumbrances with respect to any assets of Parent or any loans or debt obligations with officers or directors of Parent;

(xii) each Parent Contract requiring payment by or to Parent after the date of this Agreement in excess of $100,000 pursuant to its express terms relating to: (A) any distribution agreement (identifying any that contain exclusivity provisions), (B) any agreement involving provision of services or products with respect to any pre-clinical or clinical development activities of Parent, (C) any dealer, distributor, joint marketing, alliance, joint venture, cooperation, development or other agreement currently in force under which Parent or any of its Subsidiaries has continuing obligations to develop or market any product, technology or service, or any agreement pursuant to which Parent or any of its Subsidiaries has continuing obligations to develop any Intellectual Property that will not be owned, in whole or in part, by Parent or such Subsidiary or (D) any Contract to license any patent, trademark registration, service mark registration, trade name or copyright registration to or from any third party to manufacture or produce any product, service or technology of Parent or any of its Subsidiaries or any Contract to sell, distribute or commercialize any products or service of Parent or any of its Subsidiaries, in each case, except for Parent Contracts entered into in the Ordinary Course of Business;

(xiii) each Parent Contract with any Person, including any financial advisor, broker, finder, investment banker or other Person, providing advisory services to Parent in connection with the Contemplated Transactions and requiring payments by Parent after the date in this Agreement in excess of $100,000 pursuant to its express terms;

(xiv) each Parent Contract to which Parent or any of its Subsidiaries is a party or by which any of their assets and properties is currently bound (other than Parent Real Estate Leases), which involves annual obligations of payment by, or annual payments to, Parent or such Subsidiary in excess of $100,000;

(xv) any Parent Real Estate Lease;

(xvi) a Contract disclosed in or required to be disclosed in Section 4.12(b) or Section 4.12(c) of the Parent Disclosure Letter; or

(xvii) any other Parent Contract (other than Parent Real Estate Leases) that is not terminable at will (with no penalty or payment) by Parent or any of its Subsidiaries, and (A) which involves payment or receipt by Parent or such Subsidiary after the date of this Agreement under any such agreement, contract or commitment of more than $100,000 in the aggregate, or obligations after the date of this Agreement in excess of $100,000 in the aggregate or (B) that is material to the business or operations of Parent and its Subsidiaries taken as a whole.

(b) Parent has delivered or made available to the Company accurate and complete copies of all Parent Material Contracts, including all amendments thereto. There are no Parent Material Contracts that are not in written form. Parent has not nor, to Parent's Knowledge as of the date of this Agreement, has any other party to a Parent Material Contract, breached, violated or defaulted under, or received notice that it breached, violated or defaulted under, any of the terms or conditions of any Parent Material Contract in such a manner, and, if such Parent Material Contract provides for a cure period, Parent or such other party fails to have cured such breach, violation or default, so that any other party or Parent, as the case may be, is permitted to modify, cancel or terminate any such Parent Material Contract, or would permit any other party to seek damages which would reasonably be expected to have a Parent Material Adverse Effect. As to Parent and its Subsidiaries, as of the date of this Agreement, each Parent Material Contract is valid, binding, enforceable and in full force and effect, subject to the Enforceability Exceptions. No Person is renegotiating, or has a right pursuant to the terms of any Parent Material Contract to change, any material amount paid or payable to Parent under any Parent Material Contract or any other material term or provision of any Parent Material Contract.

4.14 Compliance; Permits; Restrictions.

(a) Parent and each of its Subsidiaries is, and since January 1, 2023, has been in material compliance with all applicable Laws. No investigation, claim, suit, proceeding, audit, Order or other action by any Governmental Authority is pending or, to the Knowledge of Parent, threatened against Parent or any of its Subsidiaries. There is no agreement or Order binding upon Parent or any of its Subsidiaries which (i) has or would reasonably be expected to have the effect of prohibiting or materially impairing any business practice of Parent or any of its Subsidiaries, any acquisition of material property by Parent or any of its Subsidiaries or the conduct of business by Parent or any of its Subsidiaries as currently conducted, (ii) is reasonably likely to have an adverse effect on Parent's ability to comply with or perform any covenant or obligation under this Agreement or (iii) is reasonably likely to have the effect of preventing, delaying, making illegal or otherwise interfering with the Contemplated Transactions.

(b) Except for matters regarding the FDA or other Drug/Device Regulatory Agency, each of Parent and its Subsidiaries holds all required Governmental Authorizations that are material to the operation of the business of Parent and Merger Subs as currently conducted (collectively, the "**Parent Permits**"). Section 4.14(b) of the Parent Disclosure Letter identifies each Parent Permit. Each of Parent and its Subsidiaries is in material compliance with the terms of the Parent Permits. No Legal Proceeding is pending or, to the Knowledge of Parent, threatened, which seeks to revoke, substantially limit, suspend or materially modify any Parent Permit. The rights and benefits of each Parent Permit, if any, will be available to Parent and Surviving Entity immediately after the Second Effective Time on terms substantially identical to those enjoyed by Parent and its Subsidiaries as of the date of this Agreement and immediately prior to the First Effective Time.

(c) There are no Legal Proceedings pending or, to the Knowledge of Parent, threatened with respect to an alleged violation by Parent or any of its Subsidiaries of the FDCA, PHSA, FDA regulations adopted thereunder, the Controlled Substances Act or any other similar Law promulgated by a Drug/Device Regulatory Agency.

(d) Each of Parent and its Subsidiaries holds all required Governmental Authorizations issuable by any Drug/Device Regulatory Agency necessary for the conduct of the business of Parent and Merger Subs as currently conducted, and, as applicable, the development, testing, manufacturing, processing, storage, labeling, sale, marketing, advertising, distribution and importation or exportation, as currently conducted, of any of its product candidates (the "**Parent Product Candidates**") (the "**Parent Regulatory Permits**") and no such Parent Regulatory Permit has been (i) revoked, withdrawn, suspended, cancelled or terminated or (ii) modified in any adverse manner other than immaterial adverse modifications. Section 4.14(d) of the Parent Disclosure Letter identifies each Parent Regulatory Permit. Parent has timely maintained and is in compliance in all material respects with the Parent Regulatory Permits and neither Parent nor or any of its Subsidiaries has, since January 1, 2023,

received any written notice or correspondence or, to the Knowledge of Parent, other communication from any Drug/Device Regulatory Agency regarding (A) any material violation of or failure to comply materially with any term or requirement of any Parent Regulatory Permit or (B) any revocation, withdrawal, suspension, cancellation, termination or material modification of any Parent Regulatory Permit. Parent has made available to the Company all information requested by the Company in Parent's or its Subsidiaries' possession or control relating to material Parent Product Candidates and the development, testing, manufacturing, processing, storage, labeling, sale, marketing, advertising, distribution and importation or exportation of the Parent Product Candidates, including, but not limited to, complete copies of the following (to the extent there are any): (x) adverse event reports; pre-clinical, clinical and other study reports and material study data; inspection reports, notices of adverse findings, untitled letters, warning letters, filings and letters and other written correspondence to and from any Drug/Device Regulatory Agency; and meeting minutes with any Drug/Device Regulatory Agency and (y) similar reports, material study data, notices, letters, filings, correspondence and meeting minutes with any other Governmental Authority. All such information are accurate and complete in all material respects.

(e) All clinical, pre-clinical and other studies and tests conducted by or on behalf of, or sponsored by, Parent or its Subsidiaries, in which Parent or its Subsidiaries or their respective product candidates, including the Parent Product Candidates, have participated were, since January 1, 2023, and, if still pending, are being conducted in accordance in all material respects with standard medical and scientific research procedures, and in compliance in all material respects with the applicable regulations of the Drug/Device Regulatory Agencies and other applicable Law, including 21 C.F.R. Parts 11, 50, 54, 56, 58, 312 and 812. Since January 1, 2023, neither Parent nor any of its Subsidiaries has received any written notices, correspondence, or other communications from any Drug/Device Regulatory Agency requiring or, to the Knowledge of Parent, any action to place a clinical hold order on, or otherwise terminate, delay or suspend any clinical studies conducted by or on behalf of, or sponsored by, Parent or any of its Subsidiaries or in which Parent or any of its Subsidiaries or its current product candidates, including the Parent Product Candidates, have participated. Further, no clinical investigator, researcher or clinical staff participating in any clinical study conducted by or, to the Knowledge of Parent, on behalf of Parent or any of its Subsidiaries has been disqualified from participating in studies involving the Parent Product Candidates, and to the Knowledge of Parent, no such administrative action to disqualify such clinical investigators, researchers or clinical staff has been threatened or is pending.

(f) Neither Parent nor any of its Subsidiaries and, to the Knowledge of Parent, any contract manufacturer with respect to any Parent Product Candidate is the subject of any pending or, to the Knowledge of Parent, threatened investigation in respect of its business or products by the FDA pursuant to its "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" Final Policy set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto or by any other Drug/Device Regulatory Agency under a comparable policy. Neither Parent nor any of its Subsidiaries and, to the Knowledge of Parent, any contract manufacturer, nor their respective officers, employees or agents, with respect to any Parent Product Candidate has committed any acts, made any statement or failed to make any statement, in each case in respect of its business or products that would violate FDA's "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities" Final Policy, and any amendments thereto. None of Parent, any of its Subsidiaries, and to the Knowledge of Parent, any contract manufacturer with respect to any Parent Product Candidate, or any of their respective officers, employees or agents is currently or has been debarred, convicted of any crime or is engaging or has engaged in any conduct that could result in a material debarment or exclusion under (i) 21 U.S.C. Section 335a or (ii) any similar applicable Law. To the Knowledge of Parent, no material debarment or exclusionary claims, actions, proceedings or investigations in respect of their business or products are pending or threatened against Parent, any of its Subsidiaries, and to the Knowledge of the Parent, any contract manufacturer with respect to any Parent Product Candidate, or any of its officers, employees or agents.

(g) All manufacturing operations conducted by, or to the Knowledge of Parent, for the benefit of, Parent or its Subsidiaries in connection with any Parent Product Candidate, since January 1, 2023, have been and are being conducted in compliance in all material respects with applicable Laws, including the FDA's standards for current good manufacturing practices, including applicable requirements contained in 21 C.F.R. Parts 210 and 211, and the respective counterparts thereof promulgated by Governmental Authorities in countries outside the United States.

(h) None of Parent, any of its Subsidiaries, and to the Knowledge of Parent, any manufacturing site of a contract manufacturer or laboratory, with respect to any Parent Product Candidate, (i) is subject to a Drug/Device Regulatory Agency shutdown or import or export prohibition or (ii) has received any Form FDA 483, notice of violation, warning letter, untitled letter or similar correspondence or notice from the FDA or other Drug/Device Regulatory Agency alleging or asserting noncompliance with any applicable Law, in each case, that have not been complied with or closed to the satisfaction of the relevant Drug/Device Regulatory Agency, and, to the Knowledge of Parent, neither the FDA nor any other Drug/Device Regulatory Agency is considering such action.

4.15 Legal Proceedings; Orders.

(a) There is no pending Legal Proceeding and, to the Knowledge of Parent, no Person has threatened in writing to commence any Legal Proceeding: (i) that involves Parent or any of its Subsidiaries or any Parent Associate (in his or her capacity as such) or any of the material assets owned or used by Parent or any of its Subsidiaries or (ii) that challenges, or that may have the effect of preventing, delaying, making illegal or otherwise interfering with, the Contemplated Transactions.

(b) There is no Order to which Parent or any of its Subsidiaries, or any of the material assets owned or used by Parent or any of its Subsidiaries is subject. To the Knowledge of Parent, no officer or other Parent Key Employee or any of its Subsidiaries is subject to any Order that prohibits such officer or employee from engaging in or continuing in any conduct, activity or practice relating to the business of Parent or any of its Subsidiaries or any material assets owned or used by Parent or any of its Subsidiaries.

4.16 Tax Matters.

(a) Each of Parent and each of its Subsidiaries has timely filed (or caused to be timely filed) all income Tax Returns and all other material Tax Returns required to be filed by it under applicable Law (taking into account any applicable extensions). All such Tax Returns were true, correct and complete in all material respects. Subject to exceptions as would not be material, no claim has been made by a Governmental Authority in a jurisdiction where Parent or any of its Subsidiaries does not file Tax Returns that Parent or any of its Subsidiaries is subject to taxation by that jurisdiction.

(b) All material amounts of Taxes due and owing by Parent or any of its Subsidiaries (whether or not shown on any Tax Return) have been timely paid (taking into account any applicable extensions).

(c) Each of Parent and each of its Subsidiaries has withheld and paid to the appropriate Governmental Authority all material Taxes required to have been withheld and paid in connection with any amounts paid or owing to any employee, independent contractor, creditor, stockholder or other third party.

(d) There are no Encumbrances for a material amount of Taxes (other Encumbrances described in clause (a) of the definition of "Permitted Encumbrances") upon any of the assets of Parent or any of its Subsidiaries.

(e) No deficiencies for a material amount of Taxes with respect to Parent or any of its Subsidiaries have been claimed, proposed or assessed by any Governmental Authority in writing that have not been timely paid in full. There are no pending (or, based on written notice, threatened) material audits, assessments, examinations or other actions for or relating to any liability in respect of Taxes of Parent or any of its Subsidiaries. Neither Parent nor any of its Subsidiaries has granted a waiver of any statute of limitations in respect of a material amount of Taxes or an extension of time with respect to a material Tax assessment or deficiency that, in each case, is currently in effect.

(f) Neither Parent nor any of its Subsidiaries is a party to any Tax allocation, Tax sharing or similar agreement (including indemnity arrangements), other than Ordinary Course Agreements.

(g) Neither Parent nor any of its Subsidiaries has been a member of an affiliated group filing a consolidated U.S. federal income Tax Return (other than a group the common parent of which is Parent). Neither Parent nor any of its Subsidiaries has any material Liability for the Taxes of any Person (other than Parent or its Subsidiaries) under Treasury Regulations Section 1.1502-6 (or any similar provision of state, local, or foreign law), as a transferee or successor, or by Contract (other than an Ordinary Course Agreement).

(h) Neither Parent nor any of its Subsidiaries has distributed stock of another Person, or has had its stock distributed by another Person, in a transaction that was purported or intended to be governed in whole or in part by Section 355 of the Code or Section 361 of the Code.

(i) Neither Parent nor any of its Subsidiaries has entered into any transaction identified as a "listed transaction" for purposes of Treasury Regulations Sections 1.6011-4(b)(2) or 301.6111-2(b)(2).

(j) Neither Parent nor any of its Subsidiaries is aware of any facts or circumstances or has taken or agreed to take any action, in each case, that would reasonably be expected to prevent or impede the Intended Tax Treatment.

4.17 Employee and Labor Matters; Benefit Plans.

(a) The Parent has made available to Company a list setting forth, for each Parent Associate who is an employee of Parent or any of its Subsidiaries, such employee's name, employer, title, hire date, location, whether full- or part-time, whether active or on leave (and, if on leave, the expected return), whether exempt from the Fair Labor Standards Act and applicable state law, annual salary (or if hourly, hourly rate), most recent annual bonus received and current annual bonus opportunity. The Parent has made available to Company a list setting forth, for each Parent Associate who is an individual independent contractor engaged by Parent or any of its Subsidiaries, such contractor's name, duties and rate of compensation.

(b) The employment of Parent's employees is terminable by Parent at will. Parent has made available to the Company accurate and complete copies of all employee manuals and handbooks, to the extent currently effective and material.

(c) Parent is not a party to, bound by the terms of, and does not have a duty to bargain under, any collective bargaining agreement or other Contract with a labor organization representing any of its employees, and there are no labor organizations representing or, to the Knowledge of Parent, purporting to represent or seeking to represent any employees of Parent.

(d) Section 4.17(d) of the Parent Disclosure Letter lists all Parent Employee Plans (other than employment arrangements which are terminable "at will" without any contractual obligation on the part of Parent or any of its Subsidiaries to make any severance, termination, change in control or similar payment and that are substantively identical to the employment arrangements made available to the Company).

(e) Each Parent Employee Plan that is intended to be qualified under Section 401(a) of the Code has received a favorable determination or opinion letter with respect to such qualified status from the IRS. To the Knowledge of Parent, nothing has occurred that would reasonably be expected to adversely affect the qualified status of any such Parent Employee Plan or the exempt status of any related trust.

(f) Each Parent Employee Plan has been established, maintained and operated in compliance, in all material respects, with its terms all applicable Law, including, without limitation, the Code, ERISA and the Affordable Care Act. No Legal Proceeding (other than those relating to routine claims for benefits) is pending or, to the Knowledge of Parent, threatened with respect to any Parent Employee Plan. All payments and/or contributions required to have been made with respect to all Parent Employee Plans either have been made or have been accrued in accordance with the terms of the applicable Parent Employee Plan and applicable Law.

(g) Neither Parent nor any of its ERISA Affiliates maintains, contributes to or is required to contribute to, or has, in the past six (6) years, maintained, contributed to or been required to contribute to (i) any "employee benefit plan" that is or was subject to Title IV or Section 302 of ERISA or Section 412 of the Code, (ii) a Multiemployer Plan, (iii) any funded welfare benefit plan within the meaning of Section 419 of the Code, (iv) any Multiple Employer Plan, or (v) any Multiple Employer Welfare Arrangement. Neither Parent nor any of its ERISA Affiliates has ever incurred any liability under Title IV of ERISA.

(h) No Parent Employee Plan provides for medical or other welfare benefits to any service provider beyond termination of service or retirement, other than (1) pursuant to COBRA or an analogous state law requirement or (2) continuation coverage through the end of the month in which such termination or retirement occurs. Parent does not sponsor or maintain any self-funded medical or long-term disability benefit plan.

(i) No Parent Employee Plan is subject to any law of a foreign jurisdiction outside of the United States.

(j) Each Parent Employee Plan that constitutes in any part a "nonqualified deferred compensation plan" (as such term is defined under Section 409A(d)(1) of the Code and the guidance thereunder) (each, a "**Parent 409A Plan**") has been operated and maintained in all material respects in operational and documentary compliance with the requirements of Section 409A of the Code and the applicable guidance thereunder. No payment to be made under any Parent 409A Plan is or, when made in accordance with the terms of the Parent 409A Plan, will be subject to the penalties of Section 409A(a)(1) of the Code.

(k) Parent is in material compliance with all Employment-Related Laws and in each case, with respect to the employees of Parent: (i) has withheld and reported all material amounts required by law or by agreement to be withheld and reported with respect to wages, salaries and other payments to employees, (ii) is not liable for any material amounts of arrears of wages, severance pay or any Taxes or any penalty for failure to comply with any of the foregoing and (iii) is not liable for any material payment to any trust or other fund governed by or maintained by or on behalf of any Governmental Authority, with respect to unemployment compensation benefits, social security or other benefits or obligations for employees (other than routine payments to be made in the Ordinary Course of Business). There are no material Legal Proceedings, claims, labor disputes or organizing activities, or grievances pending or, to the Knowledge of Parent, threatened or reasonably anticipated against or involving Parent or any trustee of Parent relating to any employee, contingent worker, director, employment agreement or Parent Employee Plan (other than routine claims for benefits) or Employment-Related Laws. To the Knowledge of Parent, there are no material pending or threatened or reasonably anticipated claims or actions against Parent, any Parent trustee or any trustee of any Subsidiary of Parent under any workers' compensation policy or long-term disability policy. Parent is not a party to a conciliation agreement, consent decree or other agreement or Order with any federal, state or local agency or Governmental Authority with respect to employment practices.

(l) Parent has no material liability with respect to any misclassification within the past three (3) years of: (i) any Person as an independent contractor rather than as an employee, (ii) any employee leased from another employer or (iii) any employee currently or formerly classified as exempt from overtime wages. Parent has not taken any action which would constitute a "plant closing" or "mass layoff" within the meaning of the WARN Act, issued any notification of a plant closing or mass layoff required by the WARN Act (nor has Parent been under any requirement or obligation to issue any such notification), or incurred any liability or obligation under the WARN Act that remains unsatisfied.

(m) To the Knowledge of Parent, there has never been, nor has there been any threat of, any strike, slowdown, work stoppage, lockout, job action, union, organizing activity, question concerning representation or any similar activity or dispute, with respect to any Parent Associate. No event has occurred within the past six months, and no condition or circumstance exists, that, to the Knowledge of Parent, might directly or indirectly be likely to give rise to or provide a basis for the commencement of any such strike, slowdown, work stoppage, lockout, job action, union organizing activity, question concerning representation or any similar activity or dispute.

(n) Parent is not, nor has Parent been, engaged in any material unfair labor practice within the meaning of the National Labor Relations Act. There is no material Legal Proceeding, claim, labor dispute or grievance pending or, to the Knowledge of Parent, threatened or reasonably anticipated relating to any employment contract, privacy right, labor dispute, wages and hours, leave of absence, plant closing notification, workers' compensation policy, long-term disability policy, harassment, retaliation, immigration, employment statute or regulation, safety or discrimination matter involving any current or former employee of Parent, including charges of unfair labor practices or discrimination complaints.

(o) There is no contract, agreement, plan or arrangement to which Parent or any of its Subsidiaries is a party or by which it is bound to compensate any of its employees or other service providers for any income or excise taxes paid pursuant to the Code, including, but not limited to, Section 4999 or Section 409A of the Code.

(p) Neither Parent nor any of its Subsidiaries is a party to any Contract that as a result of the execution and delivery of this Agreement, the stockholder approval of this Agreement, nor the consummation of the transactions contemplated hereby, could (either alone or in conjunction with any other event)

(i) result in the payment of any "parachute payment" within the meaning of Section 280G of the Code or (ii) result in, or cause the accelerated vesting, payment, funding or delivery of, or increase the amount or value of, any payment or benefit to any employee, officer, director or other service provider of Parent or any of its Subsidiaries.

4.18 Environmental Matters. Since January 1, 2023, Parent and each of its Subsidiaries has complied with all applicable Environmental Laws, which compliance includes the possession by Parent of all permits and other Governmental Authorizations required under applicable Environmental Laws and compliance with the terms and conditions thereof, except for any failure to be in compliance that, individually or in the aggregate, would not result in a Parent Material Adverse Effect. Neither Parent nor any of its Subsidiaries has received since January 1, 2023, any written notice or other communication (in writing or otherwise), whether from a Governmental Authority, citizens group, employee or otherwise, that alleges that Parent or any of its Subsidiaries is not in compliance with any Environmental Law, and, to the Knowledge of Parent, there are no circumstances that may prevent or interfere with Parent's or any of its Subsidiaries' compliance with any Environmental Law in the future, except where such failure to comply would not reasonably be expected to have a Parent Material Adverse Effect. To the Knowledge of Parent: (i) no current or prior owner of any property leased or controlled by Parent or any of its Subsidiaries has received since January 1, 2023, any written notice or other communication relating to property owned or leased at any time by Parent or any of its Subsidiaries, whether from a Governmental Authority, citizens group, employee or otherwise, that alleges that such current or prior owner or Parent or any of its Subsidiaries is not in compliance with or violated any Environmental Law relating to such property and (ii) neither Parent nor any of its Subsidiaries has any material liability under any Environmental Law. Parent has made available all environmental site assessments, environmental audits and other material environmental documents in the Parent's possession or control relating to the Parent and its Subsidiaries, including the Parent's and its Subsidiaries' business and current or former facilities.

4.19 Insurance. Parent has delivered to the Company accurate and complete copies of all material insurance policies and all material self-insurance programs and arrangements relating to the business, assets, liabilities and operations of Parent and its Subsidiaries (including Merger Subs). Each of such insurance policies is in full force and effect and Parent and its Subsidiaries (including Merger Subs) are in compliance in all material respects with the terms thereof. Other than customary end of policy notifications from insurance carriers, since January 1, 2023, neither Parent nor any of its Subsidiaries has received any notice or other communication regarding any actual or possible: (i) cancellation or invalidation of any insurance policy or (ii) refusal or denial of any coverage, reservation of rights or rejection of any material claim under any insurance policy. Each of Parent and its Subsidiaries (including Merger Subs) has provided timely written notice to the appropriate insurance carrier(s) of each Legal Proceeding pending against Parent or such Subsidiary for which Parent or such Subsidiary has insurance coverage, and no such carrier has issued a denial of coverage or a reservation of rights with respect to any such Legal Proceeding, or informed Parent or any of its Subsidiaries of its intent to do so.

4.20 Transactions with Affiliates. Except as set forth in the Parent SEC Documents filed prior to the date of this Agreement, since the date of Parent's last proxy statement filed with the SEC, no event has occurred that would be required to be reported by Parent pursuant to Item 404 of Regulation S-K promulgated by the SEC. Section 4.20 of the Parent Disclosure Letter identifies each Person who is (or who may be deemed to be) an Affiliate of Parent as of the date of this Agreement.

4.21 No Financial Advisors. Except as set forth on Section 4.21 of the Parent Disclosure Letter, no broker, finder or investment banker is entitled to any brokerage fee, finder's fee, opinion fee, success fee, transaction fee or other fee or commission in connection with the Contemplated Transactions based upon arrangements made by or on behalf of Parent.

4.22 Valid Issuance. The Parent Capital Stock (including any Parent Common Stock issuable upon conversion of the Parent Convertible Preferred Stock) to be issued in the Merger will, when issued in accordance with the provisions of this Agreement, be validly issued, fully paid and nonassessable. The Parent Common Stock issuable upon conversion of the Parent Convertible Preferred Stock has been duly reserved for issuance, and upon issuance in accordance with the terms of the Certificate of Designation, will be validly issued, fully paid and nonassessable.

4.23 Privacy and Data Security. Parent and its Subsidiaries are and since January 1, 2023, have been in compliance with all applicable Privacy Laws and the applicable terms of any Parent Contracts governing privacy, data protection, data security, trans-border data flow, data loss, data theft, or breach notification, data

localization, sending solicited or unsolicited electronic mail or text messages, cookies or other tracking technology, with respect to, or the collection, handling, use, maintenance, storage, disclosure, transfer, or other processing of, Personal Information (including any such information of individuals, clinical trial participants, patients, patient family members, caregivers or advocates, physicians and other health care professionals, clinical trial investigators, researchers, pharmacists that interact with Parent or any of its Subsidiaries in connection with the operation of Parent's and its Subsidiaries' business), except, in each case, for such noncompliance as has not had, and would not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect. To the Knowledge of Parent, Parent (i) has implemented and maintains reasonable Privacy Policies that materially comply with applicable Privacy Laws and are designed to protect the privacy and security of Personal Information and (ii) has complied with such Privacy Policies, except for such noncompliance as has not had, and would not reasonably be expected to have, individually or in the aggregate, a Parent Material Adverse Effect. To the Knowledge of Parent, no Legal Proceeding has been asserted or threatened against Parent by any Person alleging a violation of Privacy Laws, Privacy Policies, or the applicable terms of any Parent Contracts governing privacy, data protection, data security, trans-border data flow, data loss, data theft, or breach notification, data localization, sending solicited or unsolicited electronic mail or text messages, cookies or other tracking technology, with respect to, or the collection, handling, use, maintenance, storage, disclosure, transfer, or other processing of, Personal Information. To the Knowledge of Parent, there have been no data security incidents or data breaches, or other adverse events or incidents that have resulted in any unauthorized access to, or collection, use, disclosure, modification or destruction of, Personal Information or other data in the possession or control of Parent or any service provider acting on behalf of Parent, in each case, where such incident, breach, or event has resulted in a notification obligation to any Person under applicable Law or pursuant to the terms of any Parent Contract.

4.24 No Other Representations or Warranties. Parent hereby acknowledges and agrees that, except for the representations and warranties contained in this Agreement, neither the Company nor any of its Subsidiaries nor any other person on behalf of the Company or its Subsidiaries makes any express or implied representation or warranty with respect to the Company or its Subsidiaries or with respect to any other information provided to Parent, Merger Subs or stockholders or any of their respective Affiliates in connection with the Contemplated Transactions, and (subject to the express representations and warranties of the Company set forth in Section 3 (in each case as qualified and limited by the Company Disclosure Letter)) none of Parent, Merger Subs nor any of their respective Representatives or stockholders, has relied on any such information (including the accuracy or completeness thereof).

Section 5. Certain Covenants of the Parties.

5.1 Operation of Parent's Business.

(a) Except (i) as expressly contemplated or permitted by this Agreement, (ii) as set forth in Section 5.1(a) of the Parent Disclosure Letter, (iii) as required by applicable Law, or (iv) unless the Company shall otherwise consent in writing (which consent shall not be unreasonably withheld, delayed or conditioned), during the period commencing on the date of this Agreement and continuing until the earlier to occur of the termination of this Agreement pursuant to Section 10 and the First Effective Time (the "**Pre-Closing Period**"), Parent shall, and shall cause its Subsidiaries to, use commercially reasonable efforts to (x) conduct its business and operations in the Ordinary Course of Business and in material compliance with all applicable Law and the requirements of all Contracts that constitute Parent Material Contracts and (y) continue to pay material outstanding accounts payable and other material current Liabilities (including payroll) when due and payable.

(b) Except (i) as expressly contemplated or permitted by this Agreement, (ii) as set forth in Section 5.1(b) of the Parent Disclosure Letter, (iii) as required by applicable Law, or (iv) with the prior written consent of the Company (which consent shall not be unreasonably withheld, delayed or conditioned), at all times during the Pre-Closing Period, Parent shall not, nor shall it cause or permit any of Subsidiaries to, do any of the following:

(i) declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of its capital stock or repurchase, redeem or otherwise reacquire any shares of its capital stock or other securities, (except for shares of Parent Common Stock from terminated employees, directors or consultants of Parent);

(ii) except as required to give effect to anything in contemplation of the Closing, amend any of its Organizational Documents, or effect or be a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction except, for the avoidance of doubt, the Contemplated Transactions;

(iii) sell, issue, grant, pledge or otherwise dispose of or encumber or authorize the issuance of: (A) any capital stock or other security (except for Parent Common Stock issued upon the valid exercise or settlement of outstanding Parent Options or Parent Restricted Stock Units, as applicable), (B) any option, warrant or right to acquire any capital stock or any other security or (C) any instrument convertible into or exchangeable for any capital stock or other security;

(iv) form any Subsidiary or acquire any equity interest or other interest in any other Entity or enter into a joint venture with any other Entity;

(v) (A) lend money to any Person, (B) incur or guarantee any indebtedness for borrowed money, (C) guarantee any debt securities of others or (D) make any capital expenditure or commitment in excess of $25,000;

(vi) (A) adopt, establish or enter into any Parent Employee Plan, including, for the avoidance of doubt, any equity awards plans, (B) cause or permit any Parent Employee Plan to be amended other than as required by law or in order to make amendments for the purposes of compliance with Section 409A of the Code, (C) pay any bonus or make any profit-sharing or similar payment to (except with respect to obligations in place on the date of this Agreement pursuant to any Parent Employee Plan disclosed to the Company), or increase the amount of the wages, salary, commissions, fringe benefits or other compensation or remuneration payable to, any of its directors, officers, employees or consultants, (D) increase the severance or change of control benefits offered to any current or new employees, directors or consultants, or (E) hire any officer, employee or consultant;

(vii) acquire any material asset or sell, lease, license or otherwise irrevocably dispose of any of its assets or properties, or grant any Encumbrance with respect to such assets or properties;

(viii) sell, assign, transfer, license, sublicense or otherwise dispose of any material Parent IP Rights (other than pursuant to non-exclusive licenses in the Ordinary Course of Business);

(ix) other than in the Ordinary Course of Business: (A) make, change or revoke any material Tax election; (B) file any amended income or other material Tax Return; (C) adopt or change any material accounting method in respect of Taxes; (D) enter into any material Tax closing agreement, settle any material Tax claim or assessment; (E) consent to any extension or waiver of the limitation period applicable to or relating to any material Tax claim or assessment; or (F) surrender any material claim for refund;

(x) waive, settle or compromise any pending or threatened Legal Proceeding against Parent or any of its Subsidiaries, other than waivers, settlements or agreements (A) for an amount not in excess of $100,000 in the aggregate (excluding amounts to be paid under existing insurance policies or renewals thereof) and (B) that do not impose any material restrictions on the operations or businesses of Parent or its Subsidiaries, taken as a whole, or any equitable relief on, or the admission of wrongdoing by Parent or any of its Subsidiaries;

(xi) delay or fail to repay when due any material obligation, including accounts payable and accrued expenses;

(xii) forgive any loans to any Person, including its employees, officers, directors or Affiliate;

(xiii) terminate or modify in any material respect, or fail to exercise renewal rights with respect to, any material insurance policy;

(xiv) (A) materially change pricing or royalties or other payments set or charged by Parent or any of Subsidiaries to its customers or licensees or (B) agree to materially change pricing or royalties or other payments set or charged by Persons who have licensed Intellectual Property to Parent or any of Subsidiaries;

(xv) enter into, amend in a manner adverse to Parent or terminate any Parent Material Contract outside of the Ordinary Course of Business; or

(xvi) agree, resolve or commit to do any of the foregoing.

Nothing contained in this Agreement shall give the Company, directly or indirectly, the right to control or direct the operations of Parent prior to the First Effective Time. Prior to the First Effective Time, Parent shall exercise, consistent with the terms and conditions of this Agreement, complete unilateral control and supervision over its business operations.

(c) Notwithstanding any provision herein to the contrary (including the foregoing provisions of this Section 5.1), Parent may:

(i) engage in the sale, license, transfer, disposition, divestiture or other monetization transaction (i.e., a royalty transaction) or winding down of the Parent Legacy Business (including terminating its Parent Real Estate Leases and other Parent Contracts) or the sale, license, transfer, disposition, divestiture or other monetization transaction (i.e., a royalty transaction) or other disposition of any Parent Legacy Business (each, an "**Parent Legacy Transaction**"); provided, however, that to the extent any Parent Legacy Transaction results in material obligations of Parent that will extend beyond Closing, such terms shall be reasonably acceptable to the Company and any such post-Closing obligations shall be a reduction to Parent Net Cash; and

(ii) declare and pay a dividend on the shares of Parent Common Stock outstanding prior to the First Effective Time (excluding for the avoidance of doubt any shares of Parent Common Stock issuable pursuant to the Contemplated Transactions), up to an amount equal in the aggregate to Parent's reasonable, good faith approximation of the amount by which Parent Net Cash will exceed $5,000,000 (such dividend, the "**Parent Pre-Closing Dividend**" and such amount, the "**Parent Pre-Closing Dividend Amount**").

5.2 Operation of the Company's Business.

(a) Except (i) as expressly contemplated or permitted by this Agreement or the Subscription Agreement, (ii) as set forth in Section 5.2(a) of the Company Disclosure Letter, (iii) as required by applicable Law, (iv) with respect to the issuance of any Company Notes, which is expressly permitted, or (v) unless Parent shall otherwise consent in writing (which consent shall not be unreasonably withheld, delayed or conditioned), during the Pre-Closing Period the Company shall, and shall cause its Subsidiaries to, use commercially reasonable efforts to conduct its business and operations in the Ordinary Course of Business and in material compliance with all applicable Law and the requirements of all Contracts that constitute Company Material Contracts.

(b) Except (i) as expressly contemplated or permitted by this Agreement, including the Subscription Agreement, (ii) as set forth in Section 5.2(b) of the Company Disclosure Letter, (iii) as required by applicable Law, (iv) with respect to the issuance of any Company Notes, which is expressly permitted, or (v) with the prior written consent of Parent (which consent shall not be unreasonably withheld, delayed or conditioned), at all times during the Pre-Closing Period, the Company shall not, nor shall it cause or permit any of its Subsidiaries to, do any of the following:

(i) declare, accrue, set aside or pay any dividend or make any other distribution in respect of any shares of its capital stock; or repurchase, redeem or otherwise reacquire any shares of Company Capital Stock or other securities (except for shares of Company Common Stock from terminated employees, directors or consultants of the Company);

(ii) except as required to give effect to anything in contemplation of the Closing, amend any of its or its Subsidiaries' Organizational Documents, or effect or be a party to any merger, consolidation, share exchange, business combination, recapitalization, reclassification of shares, stock split, reverse stock split or similar transaction except, for the avoidance of doubt, the Contemplated Transactions;

(iii) other than in the Ordinary Course of Business, sell, issue grant, or authorize any of the foregoing actions with respect to more than 25% of the shares of Company Capital Stock outstanding as of the date of this Agreement: (A) any capital stock or other security of the Company or any of its Subsidiaries (except for shares of outstanding Company Common Stock issued upon the valid exercise of Company Options or Company Warrants), (B) any option, warrant or right to acquire any capital stock or any other security or (C) any instrument convertible into or exchangeable for any capital stock or other security of the Company or any of its Subsidiaries;

(iv) other than in the Ordinary Course of Business, acquire any equity interest or other interest in any other Entity or enter into a joint venture with any other Entity;

(v) (A) lend money to any Person, (B) incur or guarantee any indebtedness for borrowed money, or (C) guarantee any debt securities of others;

(vi) acquire any material asset or sell, lease, license or otherwise irrevocably dispose of any of its assets or properties, or grant any Encumbrance with respect to such assets or properties, except in the Ordinary Course of Business;

(vii) sell, assign, transfer, license, sublicense or otherwise dispose of any material Company IP Rights (other than pursuant to non-exclusive licenses in the Ordinary Course of Business);

(viii) waive, settle or compromise any pending or threatened Legal Proceeding against the Company, other than waivers, settlements or agreements (A) for an amount not in excess of $100,000 in the aggregate (excluding amounts to be paid under existing insurance policies or renewals thereof) and (B) that do not impose any material restrictions on the operations or businesses of the Company or any equitable relief on, or the admission of wrongdoing by the Company;

(ix) enter into, amend in a manner adverse to the Company or terminate any Company Material Contract outside of the Ordinary Course of Business; or

(x) agree, resolve or commit to do any of the foregoing.

Nothing contained in this Agreement shall give Parent, directly or indirectly, the right to control or direct the operations of the Company prior to the First Effective Time. Prior to the First Effective Time, the Company shall exercise, consistent with the terms and conditions of this Agreement, complete unilateral control and supervision over its business operations.

5.3 Access and Investigation.

(a) Subject to the terms of the Confidentiality Agreement, which the Parties agree will continue in full force following the date of this Agreement, during the Pre-Closing Period, upon reasonable notice, Parent, on the one hand, and the Company, on the other hand, shall and shall use commercially reasonable efforts to cause such Party's Representatives to: (a) provide the other Party and such other Party's Representatives with reasonable access during normal business hours to such Party's Representatives, personnel, property and assets and to all existing books, records, Tax Returns, work papers and other documents and information relating to such Party and its Subsidiaries, (b) provide the other Party and such other Party's Representatives with such copies of the existing books, records, Tax Returns, work papers, product data, and other documents and information relating to such Party and its Subsidiaries, and with such additional financial, operating and other data and information regarding such Party and its Subsidiaries as the other Party may reasonably request, (c) permit the other Party's officers and other employees to meet, upon reasonable notice and during normal business hours, with the chief financial officer and other officers and managers of such Party responsible for such Party's financial statements and the internal controls of such Party to discuss such matters as the other Party may deem necessary, and (d) make

available to the other Party copies of any material notice, report or other document filed with or sent to or received from any Governmental Authority in connection with the Contemplated Transactions. Any investigation conducted by either Parent or the Company pursuant to this Section 5.3 shall be conducted in such manner as not to interfere unreasonably with the conduct of the business of the other Party.

(b) Notwithstanding anything herein to the contrary in this Section 5.3, no access or examination contemplated by this Section 5.3 shall be permitted to the extent that it would require any Party or its Subsidiaries to waive the attorney-client privilege or attorney work product privilege, or violate any applicable Law; provided, that such Party or its Subsidiary (i) shall be entitled to withhold only such information that may not be provided without causing such violation or waiver, (ii) shall provide to the other Party all related information that may be provided without causing such violation or waiver (including, to the extent permitted, redacted versions of any such information) and (iii) shall enter into such effective and appropriate joint-defense agreements or other protective arrangements as may be reasonably requested by the other Party in order that all such information may be provided to the other Party without causing such violation or waiver.

5.4 No Solicitation.

(a) Each of Parent and the Company agrees that, during the Pre-Closing Period, neither it nor any of its Subsidiaries shall, nor shall it or any of its Subsidiaries authorize or permit any of its Representatives to, directly or indirectly: (i) solicit, initiate or knowingly encourage, induce or facilitate the communication, making, submission or announcement of any Acquisition Proposal or Acquisition Inquiry, (ii) furnish any non-public information regarding such Party to any Person in connection with or in response to an Acquisition Proposal or Acquisition Inquiry, (iii) engage in discussions or negotiations with any Person with respect to any Acquisition Proposal or Acquisition Inquiry, (iv) execute or enter into any letter of intent or any Contract contemplating or otherwise relating to any Acquisition Transaction or (v) publicly propose to do any of the foregoing; provided, however, that, notwithstanding anything contained in this Section 5.4 and subject to compliance with this Section 5.4, prior to the approval of this Agreement by a Party's stockholders (i.e., the Required Company Stockholder Vote, in the case of the Company and its Subsidiaries, or the Required Parent Stockholder Vote in the case of Parent), such Party may furnish non-public information regarding such Party and its Subsidiaries to, and enter into discussions or negotiations with, any Person in response to a bona fide written Acquisition Proposal by such Person which such Party's board of directors determines in good faith, after consultation with such Party's financial advisors and outside legal counsel, constitutes, or is reasonably likely to result in, a Superior Offer (and is not withdrawn) if: (A) such Acquisition Proposal was not obtained or made as a direct or indirect result of a breach of this Agreement, (B) the board of directors of such Party concludes in good faith based on the advice of outside legal counsel, that the failure to take such action would reasonably be expected to be inconsistent with the board of directors' fiduciary duties under applicable Law, (C) at least two (2) Business Days prior to initially furnishing any such nonpublic information to, or entering into discussions with, such Person, such Party gives the other Party written notice of the identity of such Person and of such Party's intention to furnish nonpublic information to, or enter into discussions with, such Person, (D) such Party receives from such Person an executed Acceptable Confidentiality Agreement and (E) at least two (2) Business Days prior to furnishing any such nonpublic information to such Person, such Party furnishes such nonpublic information to the other Party (to the extent such information has not been previously furnished by such Party to the other Party). Without limiting the generality of the foregoing, each Party acknowledges and agrees that, in the event any Representative of such Party takes any action that, if taken by such Party, would constitute a breach of this Section 5.4 by such Party, the taking of such action by such Representative shall be deemed to constitute a breach of this Section 5.4 by such Party for purposes of this Agreement.

(b) If any Party or any Representative of such Party receives an Acquisition Proposal or Acquisition Inquiry at any time during the Pre-Closing Period, then such Party shall promptly (and in no event later than one (1) Business Day after such Party becomes aware of such Acquisition Proposal or Acquisition Inquiry) advise the other Party in writing of such Acquisition Proposal or Acquisition Inquiry (including the identity of the Person making or submitting such Acquisition Proposal or Acquisition Inquiry, and the terms thereof). Such Party shall keep the other Party reasonably informed with respect to the status and terms of any such Acquisition Proposal or Acquisition Inquiry and any material modification or material proposed modification thereto.

(c) Each Party shall immediately cease and cause to be terminated any existing discussions, negotiations and communications with any Person that relate to any Acquisition Proposal or Acquisition Inquiry as of the date of this Agreement and request the destruction or return of any nonpublic information provided to such Person.

5.5 Notification of Certain Matters. During the Pre-Closing Period, each of the Company, on the one hand, and Parent, on the other hand, shall promptly notify the other (and, if in writing, furnish copies of) if any of the following occurs: (a) any notice or other communication is received from any Person alleging that the Consent of such Person is or may be required in connection with any of the Contemplated Transactions, (b) any Legal Proceeding against or involving or otherwise affecting such Party or its Subsidiaries is commenced, or, to the Knowledge of such Party, threatened against such Party or, to the Knowledge of such Party, any director or officer of such Party, (c) such Party becomes aware of any inaccuracy in any representation or warranty made by such Party in this Agreement or (d) the failure of such Party to comply with any covenant or obligation of such Party; in each case that could reasonably be expected to make the timely satisfaction of any of the conditions set forth in Section 7, Section 8 or Section 9, as applicable, impossible or materially less likely. No such notice shall be deemed to supplement or amend the Company Disclosure Letter or the Parent Disclosure Letter for the purpose of (x) determining the accuracy of any of the representations and warranties made by the Company in this Agreement or (y) determining whether any condition set forth in Section 7, Section 8 or Section 9 has been satisfied. Any failure by either Party to provide notice pursuant to this Section 5.5 shall not be deemed to be a breach for purposes of Section 8.2 or Section 9.2, as applicable, unless such failure to provide such notice was knowing and intentional.

Section 6. Additional Agreements of the Parties.

6.1 Registration Statement, Proxy Statement.

(a) As promptly as practicable after the date of this Agreement, Parent, in cooperation with the Company, shall prepare and file with the SEC a registration statement on Form S-4 (the "**Form S-4**"), in which a proxy statement relating to the Parent Stockholder Meeting to be held in connection with the Merger (together with any amendments thereof or supplements thereto, the "**Proxy Statement**") shall be included as a part (the Proxy Statement and the Form S-4, collectively, the "**Registration Statement**"), in connection with the registration under the Securities Act of the shares of Parent Common Stock (including any Parent Common Stock issuable upon conversion of the Parent Convertible Preferred Stock) to be issued by virtue of the Contemplated Transactions, other than any shares of Parent Capital Stock which are not permitted to be registered on Form S-4 pursuant to applicable Law. Parent shall use commercially reasonable efforts to (i) cause the Registration Statement to comply with applicable rules and regulations promulgated by the SEC, (ii) cause the Registration Statement to become effective as promptly as practicable, and (iii) respond promptly to any comments or requests of the SEC or its staff related to the Registration Statement. Parent shall use commercially reasonable efforts to take all actions required under any applicable federal, state, securities and other Laws in connection with the issuance of shares of Parent Capital Stock pursuant to the Contemplated Transactions (including any Parent Common Stock issuable upon conversion of the Parent Convertible Preferred Stock). Each of the Parties shall reasonably cooperate with the other Party and furnish all information concerning itself and its Affiliates, as applicable, to the other Parties that is required by law to be included in the Registration Statement as the other Parties may reasonably request in connection with such actions and the preparation of the Registration Statement and Proxy Statement.

(b) Parent covenants and agrees that the Registration Statement (and the letter to stockholders, notice of meeting and form of proxy included therewith) will (i) comply as to form in all material respects with the requirements of applicable U.S. federal securities laws and the DGCL and DLLCA, and (ii) will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading. The Company covenants and agrees that the information supplied by or on behalf of the Company to Parent for inclusion in the Registration Statement (including the Company Budget) will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make such information, in light of the circumstances under which they were made, not misleading. Notwithstanding the foregoing, neither Party makes any covenant, representation or warranty with respect to statements made in the Registration Statement (and the letter to stockholders, notice of meeting and form of proxy included therewith), if any, based on information provided by the other Party or any of its Representatives regarding such other Party or its Affiliates for inclusion therein.

(c) Parent shall use commercially reasonable efforts to cause the Proxy Statement to be mailed to Parent's stockholders as promptly as practicable after the Registration Statement is declared effective under the Securities Act. If at any time before the First Effective Time, (i) Parent, Merger Subs or the Company (A) become aware of any event or information that, pursuant to the Securities Act or the Exchange Act, should be disclosed in an amendment or supplement to the Registration Statement or Proxy Statement, (B) receives notice of any SEC request for an amendment or supplement to the Registration Statement or for additional information related thereto, or (C) receives SEC comments on the Registration Statement, or (ii) the information provided in the Registration Statement has become "stale" and new information should be disclosed in an amendment or supplement to the Registration Statement, as the case may be, then such Party, as the case may be, shall promptly inform the other Parties thereof and shall cooperate with such other Parties in Parent filing such amendment or supplement with the SEC (and, if appropriate, in mailing such amendment or supplement to the Parent stockholders) or otherwise addressing such SEC request or comments and each Party and shall use their commercially reasonable efforts to cause any such amendment to become effective, if required. Parent shall promptly notify the Company if it becomes aware (1) that the Registration Statement has become effective, (2) of the issuance of any stop order or suspension of the qualification or registration of the Parent Capital Stock issuable in connection with the Contemplated Transactions (including any Parent Common Stock issuable upon conversion of the Parent Convertible Preferred Stock) for offering or sale in any jurisdiction, or (3) any order of the SEC related to the Registration Statement, and shall promptly provide to the Company copies of all written correspondence between it or any of its Representatives, on the one hand, and the SEC or staff of the SEC, on the other hand, with respect to the Registration Statement and all orders of the SEC relating to the Registration Statement.

(d) The Company shall reasonably cooperate with Parent and provide, and cause its Representatives to provide, Parent and its Representatives, with all true, correct and complete information regarding the Company that is required by Law to be included in the Registration Statement or reasonably requested by Parent to be included in the Registration Statement (collectively, the "**Company Required S-4 Information**"). Without limiting the foregoing, the Company will use commercially reasonable efforts to cause to be delivered to Parent a consent letter of the Company's independent accounting firm, dated no more than two (2) Business Days before the date on which the Registration Statement is filed with the SEC (and reasonably satisfactory in form and substance to Parent), that is customary in scope and substance for consent letters delivered by independent public accountants in connection with registration statements similar to the Registration Statement. The Company and its legal counsel shall be given reasonable opportunity to review and comment on the Registration Statement, including all amendments and supplements thereto, prior to the filing thereof with the SEC, and on the response to any comments of the SEC on the Registration Statement, prior to the filing thereof with the SEC. Parent may file the Registration Statement, or any amendment or supplement thereto, without the prior consent of the Company, provided that Parent has included the Company Required S-4 Information in the Registration Statement in substantially the same form as it was provided to Parent by the Company pursuant to this Section 6.1; provided, further, that if the prior consent of the Company is not obtained then, notwithstanding anything else herein, the Company makes no covenant or representation regarding the portion of such information supplied by or on behalf of the Company to Parent for inclusion in such Registration Statement that the Company reasonably identifies prior to such filing of the Registration Statement.

(e) As promptly as reasonably practicable following the date of this Agreement, the Company will use commercially reasonable efforts to furnish to Parent (i) audited financial statements for each of its fiscal years required to be included in the Registration Statement, or an audited period balance sheet, as applicable (the "**Company Audited Financial Statements**") and (ii) unaudited interim financial statements for each interim period completed prior to Closing that would be required to be included in the Registration Statement or any periodic report due prior to the Closing if the Company were subject to the periodic reporting requirements under the Securities Act or the Exchange Act (the "**Company Interim Financial Statements**"). Each of the Company Audited Financial Statements and the Company Interim Financial Statements will be suitable for inclusion in the Registration Statement and prepared in accordance with GAAP as applied on a consistent basis during the periods involved (except in each case as described in the notes thereto) and on that basis will present fairly, in all material respects, the financial position and the results of operations, changes in stockholders' equity and cash flows of the Company as of the dates of and for the periods referred to in the Company Audited Financial Statements or the Company Interim Financial Statements, as the case may be.

6.2 Company Stockholder Written Consent.

(a) Promptly after the Registration Statement has been declared effective under the Securities Act, and in any event no later than two (2) Business Days thereafter, the Company shall obtain the approval by written consent from Company stockholders sufficient for the Required Company Stockholder Vote in lieu of a meeting pursuant to Section 228 of the DGCL, for purposes of (i) adopting and approving this Agreement and the Contemplated Transactions, (ii) acknowledging that the approval given thereby is irrevocable and that such stockholder is aware of its rights to demand appraisal for its shares pursuant to Section 262 of the DGCL, and that such stockholder has received and read a copy of Section 262 of the DGCL and (iii) acknowledging that by its approval of the Merger it is not entitled to appraisal rights with respect to its shares in connection with the Merger and thereby waives any rights to receive payment of the fair value of its capital stock under the DGCL (the "**Company Stockholder Written Consents**"). Under no circumstances shall the Company assert that any other approval or consent is necessary by its stockholders to approve this Agreement and the Contemplated Transactions.

(b) Reasonably promptly following receipt of the Required Company Stockholder Vote, and in any event no later than ten (10) days thereafter, the Company shall prepare and mail a notice (the "**Stockholder Notice**") to every stockholder of the Company that did not execute the Company Stockholder Written Consent. The Stockholder Notice shall (i) be a statement to the effect that the Company Board determined that the Merger is advisable in accordance with Section 251(b) of the DGCL and in the best interests of the stockholders of the Company and approved and adopted this Agreement, the Merger and the other Contemplated Transactions, (ii) provide the stockholders of the Company to whom it is sent with notice of the actions taken in the Company Stockholder Written Consent, including the adoption and approval of this Agreement, the Merger and the other Contemplated Transactions in accordance with Section 228(e) of the DGCL and the certificate of incorporation and bylaws of the Company and (iii) include a description of the appraisal rights of the Company's stockholders available under the DGCL, along with such other information as is required thereunder and pursuant to applicable Law. All materials (including any amendments thereto) submitted to the stockholders of the Company in accordance with this Section 6.2(b) shall be subject to Parent's advance review and reasonable approval.

(c) The Company agrees that, subject to Section 6.2(d): (i) the Company Board shall recommend that the Company's stockholders vote to adopt and approve this Agreement and the Contemplated Transactions and shall use commercially reasonable efforts to solicit such approval within the time set forth in Section 6.2(a) (the recommendation of the Company Board that the Company's stockholders vote to adopt and approve this Agreement being referred to as the "**Company Board Recommendation**") and (ii) the Company Board Recommendation shall not be withdrawn or modified (and the Company Board shall not publicly propose to withdraw or modify the Company Board Recommendation) in a manner adverse to Parent, and no resolution by the Company Board or any committee thereof to withdraw or modify the Company Board Recommendation in a manner adverse to Parent or to adopt, approve or recommend (or publicly propose to adopt, approve or recommend) any Acquisition Proposal shall be adopted or proposed.

(d) Notwithstanding anything to the contrary contained in Section 6.2(c), and subject to compliance with Section 5.4 and Section 6.2, if at any time prior to approval and adoption of this Agreement by the Required Company Stockholder Vote, (i) the Company receives a bona fide written Acquisition Proposal that the Company Board determines, following consultation with its outside legal counsel and financial advisor, to be a Superior Offer, or (ii) as a result of a material development or change in circumstances (other than any such event, development or change to the extent related to (A) any Acquisition Proposal, Acquisition Inquiry, Acquisition Transaction or the consequences thereof or (B) the fact, in and of itself, that the Company meets or exceeds internal budgets, plans or forecasts of its revenues, earnings or other financial performance or results of operations) that affects the business, assets or operations of the Company that occurs or arises after the date of this Agreement (a "**Company Intervening Event**"), the Company Board may withhold, amend, withdraw or modify the Company Board Recommendation (or publicly propose to withhold, amend, withdraw or modify the Company Board Recommendation) in a manner adverse to Parent (collectively, a "**Company Board Adverse Recommendation Change**") if, but only if, (x) in the case of a Superior Offer, following the receipt of and on account of such Superior Offer, (i) the Company Board determines in good faith, based on the advice of its outside legal counsel, that the failure to withhold, amend, withdraw or modify the Company Board Recommendation would reasonably be expected to be inconsistent with its fiduciary duties under applicable Law, (ii) the Company has, during the Notice Period (as defined below), negotiated with Parent in good faith to make such adjustments to the terms and conditions of this Agreement so that such Acquisition Proposal ceases to constitute a Superior Offer and (iii) if, Parent has delivered

to the Company a written offer to alter the terms or conditions of this Agreement during the Notice Period, the Company Board shall have determined in good faith, based on the advice of its outside legal counsel and financial advisor, that the failure to withhold, amend, withdraw or modify the Company Board Recommendation would reasonably be expected to be inconsistent with its fiduciary duties under applicable Law (after taking into account such alterations of the terms and conditions of this Agreement); provided that (1) Parent receives written notice from the Company confirming that the Company Board has determined to change its recommendation at least four (4) Business Days in advance of the Company Board Adverse Recommendation Change (the "**Notice Period**"), which notice shall include a description in reasonable detail of the reasons for such Company Board Adverse Recommendation Change, and written copies of any relevant proposed transaction agreements with any party making a potential Superior Offer, (2) during any Notice Period, Parent shall be entitled to deliver to the Company one or more counterproposals to such Acquisition Proposal and the Company will, and cause its Representatives to, negotiate with Parent in good faith (to the extent Parent desires to negotiate) to make such adjustments in the terms and conditions of this Agreement so that the applicable Acquisition Proposal ceases to constitute a Superior Offer and (3) in the event of any material amendment to any Superior Offer (including any revision in the amount, form or mix of consideration the Company's stockholders would receive as a result of such potential Superior Offer), the Company shall be required to provide Parent with notice of such material amendment and the Notice Period shall be extended, if applicable, to ensure that at least three (3) Business Days remain in the Notice Period following such notification during which the parties shall comply again with the requirements of this Section 6.2(d) and the Company Board shall not make a Company Board Adverse Recommendation Change prior to the end of such Notice Period as so extended (it being understood that there may be multiple extensions) or (y) in the case of a Company Intervening Event, the Company promptly notifies Parent, in writing, within the Notice Period before making a Company Board Adverse Recommendation Change, which notice shall state expressly the material facts and circumstances related to the applicable Company Intervening Event and that the Company Board intends to make a Company Board Adverse Recommendation Change.

(e) The Company's obligation to solicit the consent of its stockholders to sign the Company Stockholder Written Consent in accordance with Section 6.2(a) shall not be limited or otherwise affected by the commencement, disclosure, announcement or submission of any Superior Offer or other Acquisition Proposal or Acquisition Inquiry, or by any Company Board Adverse Recommendation Change.

6.3 Parent Stockholder Meeting.

(a) Parent shall take all action necessary under applicable Law to call, give notice of and hold a meeting of the holders of Parent Common Stock to consider and vote to approve this Agreement and thereby approve the Contemplated Transactions and the Parent Charter Amendment and, if deemed necessary by Parent the approval of the Parent Legacy Transaction (collectively, the "**Parent Stockholder Matters**" and such meeting, the "**Parent Stockholder Meeting**"). The Parent Stockholder Meeting shall be held as promptly as practicable after the date that the Registration Statement is declared effective under the Securities Act, and in any event, no later than 45 days after the effective date of the Registration Statement. Parent shall take reasonable measures to ensure that all proxies solicited in connection with the Parent Stockholder Meeting are solicited in compliance with all applicable Law. Notwithstanding anything to the contrary contained herein, if on the date of the Parent Stockholder Meeting, or a date preceding the date on which the Parent Stockholder Meeting is scheduled, Parent reasonably believes that (i) it will not receive proxies sufficient to obtain the Required Parent Stockholder Vote, whether or not a quorum would be present, (ii) it will not have sufficient shares of Parent Common Stock represented (whether in person or by proxy) to constitute a quorum necessary to conduct the business of the Parent Stockholder Meeting or (iii) that the failure to postpone or adjourn the Parent Stockholder Meeting would reasonably be expected to be inconsistent with its fiduciary obligations under applicable Law, Parent may postpone or adjourn, or make one or more successive postponements or adjournments of, the Parent Stockholder Meeting as long as the date of the Parent Stockholder Meeting is not postponed or adjourned more than an aggregate of 30 days in connection with any postponements or adjournments.

(b) Parent agrees that (i) the Parent Board shall recommend that the holders of Parent Common Stock vote to approve the Parent Stockholder Matters and shall use commercially reasonable efforts to solicit such approval within the timeframe set forth in Section 6.3(a) above and (ii) the Proxy Statement shall include a statement to the effect that the Parent Board recommends that Parent's stockholders vote to approve the Parent Stockholder Matters (the recommendation of the Parent Board being referred to as the "**Parent Board Recommendation**").

(c) Notwithstanding anything to the contrary contained in Section 6.3(b), and subject to compliance with Section 5.4 and Section 6.3, if at any time prior to approval and adoption of this Agreement by the Required Parent Stockholder Vote, (i) Parent receives a bona fide written Acquisition Proposal that the Parent Board determines, following consultation with its outside legal counsel and financial advisor, to be a Superior Offer, the Parent Board may withhold, amend, withdraw or modify the Parent Board Recommendation (or publicly propose to withhold, amend, withdraw or modify the Parent Board Recommendation) in a manner adverse to the Company or (ii) as a result of a material development or change in circumstances (other than any such event, development or change to the extent related to (A) any Acquisition Proposal, Acquisition Inquiry, Acquisition Transaction or the consequences thereof, (B) the fact, in and of itself, that Parent meets or exceeds internal budgets, plans or forecasts of its revenues, earnings or other financial performance or results of operations or (C) any Parent Legacy Transaction) that affects the business, assets or operations of Parent that occurs or arises after the date of this Agreement (a "**Parent Intervening Event**"), (collectively, a "**Parent Board Adverse Recommendation Change**") if, but only if, (x) in the case of a Superior Offer, following the receipt of and on account of such Superior Offer, (i) the Parent Board determines in good faith, based on the advice of its outside legal counsel, that the failure to withhold, amend, withdraw or modify the Parent Board Recommendation would reasonably be expected to be inconsistent with its fiduciary duties under applicable Law, (ii) Parent has, and has caused its financial advisors and outside legal counsel to, during the Parent Notice Period (as defined below), negotiated with the Company in good faith to make such adjustments to the terms and conditions of this Agreement so that such Acquisition Proposal ceases to constitute a Superior Offer, and (iii) if, after the Company has delivered to Parent a written offer to alter the terms or conditions of this Agreement during the Parent Notice Period, the Parent Board shall have determined in good faith, based on the advice of its outside legal counsel and financial advisor, that the failure to withhold, amend, withdraw or modify the Parent Board Recommendation would reasonably be expected to be inconsistent with its fiduciary duties under applicable Law (after taking into account such alterations of the terms and conditions of this Agreement); provided that (1) the Company receives written notice from Parent confirming that the Parent Board has determined to change its recommendation at least four (4) Business Days in advance of the Parent Board Adverse Recommendation Change (the "**Parent Notice Period**"), which notice shall include a description in reasonable detail of the reasons for such Parent Board Adverse Recommendation Change, and written copies of any relevant proposed transaction agreements with any party making a potential Superior Offer, (2) during any Parent Notice Period, the Company shall be entitled to deliver to Parent one or more counterproposals to such Acquisition Proposal and Parent will, and cause its Representatives to, negotiate with the Company in good faith (to the extent the Company desires to negotiate) to make such adjustments in the terms and conditions of this Agreement so that the applicable Acquisition Proposal ceases to constitute a Superior Offer and (3) in the event of any material amendment to any Superior Offer (including any revision in the amount, form or mix of consideration the Parent's stockholders would receive as a result of such potential Superior Offer), Parent shall be required to provide the Company with notice of such material amendment and the Parent Notice Period shall be extended, if applicable, to ensure that at least three (3) Business Days remain in the Parent Notice Period following such notification during which the parties shall comply again with the requirements of this Section 6.3(c) and the Parent Board shall not make a Parent Board Adverse Recommendation Change prior to the end of such Parent Notice Period as so extended (it being understood that there may be multiple extensions) or (y) in the case of a Parent Intervening Event, Parent promptly notifies the Company, in writing, within the Parent Notice Period before making a Parent Board Adverse Recommendation Change, which notice shall state expressly the material facts and circumstances related to the applicable Parent Intervening Event and that the Parent Board intends to make a Parent Board Adverse Recommendation Change.

(d) Parent's obligation to call, give notice of and hold the Parent Stockholder Meeting in accordance with Section 6.3(a) shall not be limited or otherwise affected by the commencement, disclosure, announcement or submission of any Superior Offer, Acquisition Proposal or Acquisition Inquiry, or by any Parent Board Adverse Recommendation Change.

(e) Nothing contained in this Agreement shall prohibit Parent or the Parent Board from (i) complying with Rules 14d-9 and 14e-2(a) promulgated under the Exchange Act; provided, however, that any disclosure made by Parent or the Parent Board pursuant to Rules 14d-9 and 14e-2(a) shall be limited to a statement that Parent is unable to take a position with respect to the bidder's tender offer unless the Parent Board determines in good faith, after consultation with its outside legal counsel, that such statement would reasonably be expected to be inconsistent with its fiduciary duties under applicable Law; (ii) complying with Item 1012(a) of Regulation

M-A promulgated under the Exchange Act; (iii) informing any Person of the existence of the provisions contained in Section 5.4; or (iv) making any disclosure to the stockholders of Parent that the Parent Board (or a committee thereof), after consultation with its outside legal counsel, has determined in good faith is required by applicable Law.

6.4 Efforts; Regulatory Approvals.

(a) The Parties shall use reasonable best efforts to consummate the Contemplated Transactions. Without limiting the generality of the foregoing, each Party: (i) shall make all filings and other submissions (if any) and give all notices (if any) required to be made and given by such Party in connection with the Contemplated Transactions, (ii) shall use commercially reasonable efforts to obtain each Consent (if any) reasonably required to be obtained (pursuant to any applicable Law or Contract, or otherwise) by such Party in connection with the Contemplated Transactions or for such Contract to remain in full force and effect, (iii) shall use commercially reasonable efforts to lift any injunction prohibiting, or any other legal bar to, the Contemplated Transactions and (iv) shall use commercially reasonable efforts to satisfy the conditions precedent to the consummation of this Agreement.

(b) Notwithstanding the generality of the foregoing, each Party shall use commercially reasonable efforts to file or otherwise submit, as soon as practicable after the date of this Agreement, all applications, notices, reports and other documents reasonably required to be filed by such Party with or otherwise submitted by such Party to any Governmental Authority with respect to the Contemplated Transactions, and to submit promptly any additional information requested by any such Governmental Authority. Without limiting the generality of the foregoing, the Parties shall prepare and file, if required, (a) the notification and report forms required to be filed under the Hart–Scott–Rodino Antitrust Improvements Act of 1976 and (b) any notification or other document required to be filed in connection with the Merger under any applicable foreign Law relating to antitrust or competition matters, no later than ten (10) Business Days after the date the Company and Parent receive notification (in writing or otherwise) from the Federal Trade Commission, the Department of Justice, any state attorney general, foreign antitrust or competition authority or other Governmental Authority that a filing is required in connection with antitrust or competition matters.

(c) Without limiting the generality of the foregoing, Parent shall give the Company prompt written notice (email being sufficient) of any litigation against Parent and/or its directors relating to this Agreement or the Contemplated Transactions ("**Transaction Litigation**") (including by providing copies of all pleadings with respect thereto) and keep the Company reasonably informed with respect to the status thereof. Parent will (i) give the Company the opportunity to participate in, but not control, the defense, settlement or prosecution of any Transaction Litigation (to the extent that the attorney-client privilege is not undermined or otherwise adversely affected; provided that Parent and the Company will use commercially reasonable efforts to find alternative solutions to not undermine or adversely effect the privilege such as entering into common interest agreements, joint defense agreements or similar agreements), (ii) consult with the Company with respect to the defense, settlement and prosecution of any Transaction Litigation and (iii) consider in good faith the Company's advice with respect to such Transaction Litigation. Parent will obtain the prior written consent of the Company (such consent not to be unreasonably withheld, conditioned or delayed) prior to settling or satisfying any such claim.

6.5 Company Options; Company Warrants.

(a) At the First Effective Time, Parent shall assume each Company Stock Plan and each Company Option, whether vested or unvested, that is outstanding immediately prior to the First Effective Time shall, at the First Effective Time, cease to represent a right to acquire shares of Company Common Stock and shall be converted, at the First Effective Time, into an option to purchase shares of Parent Common Stock (an "**Assumed Option**"), on the same terms and conditions (including any vesting provisions and any provisions providing for accelerated vesting upon certain events) as were applicable under such Company Option as of immediately prior to the First Effective Time, except for administrative or ministerial changes as determined by the Company Board (or, following the First Effective Time, the Parent Board or compensation committee). The number of shares of Parent Common Stock subject to each such Assumed Option shall be equal to (i) the number of shares of Company Common Stock subject to the respective Company Option immediately prior to the First Effective Time multiplied by (ii) the Exchange Ratio, rounded down, if necessary, to the nearest whole share of Parent Common Stock, and such Assumed Option shall have an exercise price per share (rounded up to the nearest whole cent) equal to (A) the exercise price per share of the Company Common Stock otherwise purchasable pursuant to the respective Company Option immediately prior to the First Effective Time divided by (B) the Exchange Ratio; provided, that in the case of any Company Option

to which Section 421 of the Code applies as of immediately prior to the First Effective Time (taking into account the effect of any accelerated vesting thereof, if applicable) by reason of its qualification under Section 422 of the Code, the exercise price, the number of shares of Parent Common Stock subject to such option and the terms and conditions of exercise of such option shall be determined in a manner consistent with the requirements of Section 424(a) of the Code; provided further, that in the case of any Assumed Option to which Section 409A of the Code applies as of the First Effective Time, the exercise price, the number of shares of Parent Common Stock subject to such option and the terms and conditions of exercise of such option shall be determined in a manner consistent with the requirements of Section 409A of the Code in order to avoid the imposition of any additional taxes thereunder. The Company Board shall, prior to the First Effective Time, take all actions necessary to effect the foregoing.

(b) At the First Effective Time, each Company Warrant (including any pre-funded Company Warrant issued pursuant to the Company Pre-Closing Financing), whether vested or unvested, that is outstanding immediately prior to the First Effective Time shall, at the First Effective Time, cease to represent a right to acquire shares of Company Capital Stock and shall be converted, at the First Effective Time, into a warrant to purchase shares of Parent Common Stock (an "**Assumed Warrant**"), on the same terms and conditions (including any vesting provisions and any provisions providing for accelerated vesting upon certain events) as were applicable under such Assumed Warrant as of immediately prior to the First Effective Time. The number of shares of Parent Common Stock subject to each such Assumed Warrant shall be equal to (i) the number of shares of the Company Common Stock subject to each Assumed Warrant immediately prior to the First Effective Time multiplied by (ii) the Exchange Ratio, rounded down, if necessary, to the nearest whole share of Parent Common Stock, and such Assumed Warrant shall have an exercise price per share (rounded up to the nearest whole cent) equal to (A) the exercise price per share of the Company Common Stock otherwise purchasable pursuant to such Assumed Warrant immediately prior to the First Effective Time divided by (B) the Exchange Ratio.

6.6 Employee Benefits.

(a) Parent shall comply with the terms of any employment, severance, retention, change of control, or similar agreement specified on Section 4.17(d) or contemplated by Section 5.1(b) of the Parent Disclosure Letter, subject to the provisions of such agreements.

(b) From and after the First Effective Time, with respect to each benefit plan maintained by Parent or the Surviving Entity that is an "employee welfare benefit plan" as defined in Section 3(1) of ERISA (each, a "**Post-Closing Welfare Plan**") in which any current or former employee of Parent is or becomes eligible to participate (including under COBRA), Parent and the Surviving Entity shall use commercially reasonable efforts to cause each such Post-Closing Welfare Plan to (i) waive all limitations as to pre-existing conditions, waiting periods, required physical examinations and exclusions with respect to participation and coverage requirements applicable under such Post-Closing Welfare Plan for such current or former Parent employee and his or her eligible dependents to the same extent that such pre-existing conditions, waiting periods, required physical examinations and exclusions would not have applied or would have been waived under the corresponding Parent Employee Plan in which such current or former Parent employee was a participant immediately prior to his or her commencement of participation in such Post-Closing Welfare Plan, and (ii) provide each such current or former Parent employee and his or her eligible dependents with credit for any co-payments and deductibles paid in the plan year that includes the First Effective Time, and prior to the date that, such current or former Parent employee commences participation in such Post-Closing Welfare Plan in satisfying any applicable co-payment or deductible requirements under such Post-Closing Welfare Plan for the applicable plan year, to the extent that such expenses were recognized for such purposes under the comparable Parent Employee Plan.

(c) As of immediately prior to the First Effective Time, each Parent Option that is then outstanding but not then vested or exercisable shall become immediately vested and exercisable in full. At the First Effective Time, each In the Money Parent Option that is then outstanding shall be canceled and the holder thereof shall be entitled to receive (i) an amount in cash without interest, less any applicable tax withholding, equal to the product obtained by multiplying (A) the excess of the Parent Closing Price over the exercise price per share of the Parent Common Stock underlying such Parent Option by (B) the number of shares of the Parent Common Stock underlying such Parent Option (such amount, the "**Parent Stock Option Cash Consideration**"). Parent shall cause the Surviving Entity to pay the Parent Stock Option Cash Consideration, less applicable withholdings, at or

within ten (10) business days after the First Effective Time. At the First Effective Time, each Out of the Money Parent Option shall be cancelled for no consideration. Prior to the Closing, the Parent Board shall have adopted appropriate resolutions and taken all other actions necessary and appropriate to provide for the foregoing.

6.7 Indemnification of Officers and Directors.

(a) From the First Effective Time through the sixth anniversary of the date on which the First Effective Time occurs, each of Parent and the Surviving Entity shall indemnify and hold harmless each person who is now, or has been at any time prior to the date hereof, or who becomes prior to the First Effective Time, a director or officer of Parent or the Company, respectively (the "**D&O Indemnified Parties**"), against all claims, losses, liabilities, damages, judgments, fines and reasonable fees, costs and expenses, including attorneys' fees and disbursements (collectively, "**Costs**"), incurred in connection with any claim, action, suit, proceeding or investigation, whether civil, criminal, administrative or investigative, arising out of or pertaining to the fact that the D&O Indemnified Party is or was a director or officer of Parent or of the Company, whether asserted or claimed prior to, at or after the First Effective Time, in each case, to the fullest extent permitted under the DGCL. Each D&O Indemnified Party will be entitled to advancement of expenses incurred in the defense of any such claim, action, suit, proceeding or investigation from each of Parent and the Surviving Entity, jointly and severally, upon receipt by Parent or the Surviving Entity from the D&O Indemnified Party of a request therefor; provided that any such person to whom expenses are advanced provides an undertaking to Parent, to the extent then required by the DGCL, to repay such advances if it is ultimately determined that such person is not entitled to indemnification. Without otherwise limiting the D&O Indemnified Parties' rights with regards to counsel, following the First Effective Time, the D&O Indemnified Parties shall be entitled to continue to retain Wilson Sonsini Goodrich & Rosati or such other counsel selected by the D&O Indemnified Parties.

(b) The certificate of incorporation and bylaws of the Surviving Entity shall contain, and Parent shall cause the certificate of incorporation and bylaws of the Surviving Entity to so contain, provisions no less favorable with respect to indemnification, advancement of expenses and exculpation of present and former directors and officers as those presently set forth in the certificate of incorporation and bylaws of Parent.

(c) From and after the First Effective Time, (i) the Surviving Entity shall fulfill and honor in all respects the obligations of the Company to its D&O Indemnified Parties as of immediately prior to the Closing pursuant to any indemnification provisions under the Company's Organizational Documents and pursuant to any indemnification agreements between the Company and such D&O Indemnified Parties, with respect to claims arising out of matters occurring at or prior to the First Effective Time and (ii) Parent shall fulfill and honor in all respects the obligations of Parent to its D&O Indemnified Parties as of immediately prior to the Closing pursuant to any indemnification provisions under Parent's Organizational Documents and pursuant to any indemnification agreements between Parent and such D&O Indemnified Parties, with respect to claims arising out of matters occurring at or prior to the First Effective Time.

(d) From and after the First Effective Time, Parent shall maintain directors' and officers' liability insurance policies, with an effective date as of the Closing Date, on commercially reasonable terms and conditions and with coverage limits customary for U.S. public companies similarly situated to Parent. In addition, Parent shall purchase at its sole expense, prior to the First Effective Time, a six (6) year prepaid "D&O tail policy" for the non-cancelable extension of the directors' and officers' liability coverage of Parent's existing directors' and officers' insurance policies for a claims reporting or discovery period of at least six (6) years from and after the First Effective Time with respect to any claim related to any period of time at or prior to the First Effective Time with terms, conditions, retentions and limits of liability that are no less favorable than the coverage provided under Parent's existing policies as of the date of this Agreement, or otherwise acceptable to Parent, except that Parent will not commit or spend on such "D&O Tail policy" annual premiums in excess of 250% of the annual premiums paid by Parent in its last full fiscal year prior to the date hereof for Parent's current policies of directors' and officers' liability insurance and fiduciary liability insurance (nor, for the avoidance of doubt, shall Parent be obligated to spend any specific amount), and if such premiums for such "D&O tail policy" would exceed 250% of such annual premium, then Parent shall purchase policies that provide the maximum coverage available at an annual premium equal to 250% of such annual premium. The Company shall in good faith cooperate with Parent prior to the First Effective Time with respect to the procurement of such "D&O tail policy."

(e) From and after the First Effective Time, Parent shall pay all expenses, including reasonable attorneys' fees, that are incurred by the persons referred to in this Section 6.7 in connection with their enforcement of the rights provided to such persons in this Section 6.7.

(f) The provisions of this Section 6.7 are intended to be in addition to the rights otherwise available to the current and former officers and directors of Parent and the Company by Law, charter, statute, bylaw or agreement, and shall operate for the benefit of, and shall be enforceable by, each of the D&O Indemnified Parties, their heirs and their Representatives.

(g) In the event Parent or the Surviving Entity or any of their respective successors or assigns (i) consolidates with or merges into any other Person and shall not be the continuing or surviving corporation or entity of such consolidation or merger or (ii) transfers all or substantially all of its properties and assets to any Person, then, and in each such case, proper provision shall be made so that the successors and assigns of Parent or the Surviving Entity, as the case may be, shall succeed to the obligations set forth in this Section 6.7. Parent shall cause the Surviving Entity to perform all of the obligations of the Surviving Entity under this Section 6.7.

(h) Unless directed otherwise by the Company in writing no less than three (3) Business Days before the Closing Date, Parent shall use reasonable best efforts to take all actions as are necessary to terminate any 401(k) or other plan(s) with a cash or deferred arrangement (as defined in Section 401(k) of the Code), effective as of no later than the day immediately preceding the Closing Date. Parent shall provide the Company copies of all such corporate actions or documentation related to the same at least three (3) Business Days before their adoption or approval for the Company's reasonable review and comment.

6.8 Disclosure. The Parties shall use their commercially reasonable efforts to agree to the text of any initial press release and Parent's Form 8-K announcing the execution and delivery of this Agreement. Without limiting any Party's obligations under the Confidentiality Agreement, no Party shall, and no Party shall permit any of its Subsidiaries or any of its Representative to, issue any press release or make any public disclosure regarding the Contemplated Transactions unless: (a) the other Party shall have approved such press release or disclosure in writing, such approval not to be unreasonably conditioned, withheld or delayed; or (b) such Party shall have determined in good faith, upon the advice of outside legal counsel, that such disclosure is required by applicable Law and, to the extent practicable, before such press release or disclosure is issued or made, such Party advises the other Party of, and consults with the other Party regarding, the text of such press release or disclosure; provided, however, that each of the Company and Parent may make any public statement in response to specific questions by the press, analysts, investors or those attending industry conferences or financial analyst conference calls, so long as any such statements are consistent with previous press releases, public disclosures or public statements made by the Company or Parent in compliance with this Section 6.8. Notwithstanding the foregoing, a Party need not consult with any other Parties in connection with such portion of any press release, public statement or filing to be issued or made pursuant to Section 6.2(d) or pursuant to Section 6.3(e).

6.9 Listing. At or prior to the First Effective Time, Parent shall use its commercially reasonable efforts to (a) maintain its listing on Nasdaq until the First Effective Time and to obtain approval of the listing of the combined corporation on Nasdaq, (b) to the extent required by the rules and regulations of Nasdaq, prepare and submit to Nasdaq a notification form for the listing of the shares of Parent Common Stock to be issued in connection with the Contemplated Transactions, and to cause such shares to be approved for listing (subject to official notice of issuance); (c) prepare and timely submit to Nasdaq a notification form for the Nasdaq Reverse Split (if required) and to submit a copy of the amendment to Parent's certificate of incorporation effecting the Nasdaq Reverse Split, certified by the Secretary of State of the State of Delaware, to Nasdaq on the Closing Date; and (d) to the extent required by Nasdaq Marketplace Rule 5110, assist the Company in preparing and filing an initial listing application for the Parent Common Stock on Nasdaq (including any Parent Common Stock issuable upon conversion of the Parent Convertible Preferred Stock) (the "**Nasdaq Listing Application**") and to cause such Nasdaq Listing Application to be conditionally approved prior to the First Effective Time. Each Party will reasonably promptly inform the other Party of all verbal or written communications between Nasdaq and such Party or its representatives. The Parties will use commercially reasonable efforts to coordinate with respect to compliance with Nasdaq rules and regulations. The Party not filing the Nasdaq Listing Application will cooperate with the other Party as reasonably requested by such filing Party with respect to the Nasdaq Listing Application and promptly furnish to such filing Party all information concerning itself and its members that may be required or reasonably requested in connection

with any action contemplated by this Section 6.9. All Nasdaq fees associated with any action contemplated by this Section 6.9, including any fees related to the engagement of a consultant (the "**Nasdaq Fees**"), shall be shared equally by the Company and Parent.

6.10 Tax Matters.

(a) The Parties shall use reasonable best efforts (and each shall cause its Affiliates) to cause the Merger to qualify for the Intended Tax Treatment. No Party shall take any actions, or fail to take any action, which action or failure to act would reasonably be expected to prevent or impede the Intended Tax Treatment. The Parties shall report the Contemplated Transactions for all applicable Tax purposes in a manner that is consistent with the Intended Tax Treatment. No Party shall take any position that is inconsistent with the Intended Tax Treatment during the course of any audit, litigation or other proceeding with respect to Taxes, in each case, unless otherwise required by a determination within the meaning of Section 1313(a) of the Code. The Parties shall comply with the recordkeeping and information reporting requirements imposed on them, including, but not limited to, those set forth in Treasury Regulation Section 1.368-3.

(b) Parent shall promptly notify the Company if, at any time before the First Effective Time, Parent becomes aware of any fact or circumstance that would reasonably be expected to prevent, cause a failure of, or impede the Intended Tax Treatment. The Company shall promptly notify Parent if, at any time before the First Effective Time, the Company becomes aware of any fact or circumstance that would reasonably be expected to prevent, cause a failure of, or impede the Intended Tax Treatment.

(c) If the SEC requires that an opinion with respect to the Intended Tax Treatment be prepared and submitted in connection with the Registration Statement and Proxy Statement, (i) the Company shall use its reasonable best efforts to cause Gibson, Dunn and Crutcher LLP (or such other nationally recognized law or accounting firm reasonably satisfactory to the Company) to furnish an opinion (as so required and subject to customary assumptions and limitations), (ii) Parent shall use its reasonable best efforts to cause Wilson Sonsini Goodrich & Rosati (or such other nationally recognized law or accounting firm reasonably satisfactory to Parent) to furnish an opinion (as so required and subject to customary assumptions and limitations), and (iii) Parent and the Company shall each deliver to each of Gibson, Dunn and Crutcher LLP (or such other nationally recognized law or accounting firm reasonably satisfactory to the Company) and Wilson Sonsini Goodrich & Rosati (or such other nationally recognized law or accounting firm reasonably satisfactory to Parent) a Tax certificate, dated as of the date the Registration Statement and Proxy Statement shall have been declared effective by the SEC and signed by an officer of Parent or the Company, as applicable, containing customary representations and covenants reasonably acceptable to the Company and Parent, as applicable, in each case, as reasonably necessary and appropriate to enable such advisors to render such opinions (the "**Tax Certificates**"). Each of Parent and the Company shall use its commercially reasonable efforts not to take or cause to be taken any action that would cause to be untrue (or fail to take or cause not to be taken any action which would cause to be untrue) any of the Tax certifications, covenants or representations included in the Tax Certificates.

(d) Parent and the Company shall reasonably cooperate in the preparation, execution and filing of all Tax Returns, questionnaires, applications or other documents regarding any real property transfer, sales, use, transfer, value added, stock transfer and stamp taxes, and transfer, recording, registration and other fees and similar Taxes which become payable in connection with the Merger that are required or permitted to be filed on or before the First Effective Time. Each of Parent and the Company shall pay, without deduction from any consideration or other amounts payable or otherwise deliverable pursuant to this Agreement and without reimbursement from the other party, any such Taxes or fees imposed on it by any Governmental Authority, which becomes payable in connection with the Merger.

6.11 Legends. Parent shall be entitled to place appropriate legends on the book entries and/or certificates evidencing any shares of Parent Capital Stock to be received in the Merger by equityholders of the Company who may be considered "affiliates" of Parent for purposes of Rules 144 and 145 under the Securities Act reflecting the restrictions set forth in Rules 144 and 145 and to issue appropriate stop transfer instructions to the transfer agent for any such shares of Parent Capital Stock.

6.12 Officers and Directors. Until successors are duly elected or appointed and qualified in accordance with applicable Law, the Parties shall use commercially reasonable efforts and take all necessary action so that the Persons listed on Section 6.12 of the Parent Disclosure Letter are elected or appointed, as applicable, to

the positions of officers or directors of Parent and the Surviving Entity, as set forth therein, to serve in such positions effective as of the Second Effective Time. If any Person listed on Section 6.12 of the Parent Disclosure Letter is unable or unwilling to serve as officer or director of Parent or the Surviving Entity, as set forth therein, the Party appointing such Person (as set forth on Section 6.12 of the Parent Disclosure Letter) shall designate a successor. The Parties shall use reasonable best efforts to have each of the Persons that will serve as directors and officers of the Parent following the Closing to execute and deliver a Lock-Up Agreement prior to Closing.

6.13 Termination of Certain Agreements and Rights. Each of Parent and the Company shall cause any stockholder agreements, voting agreements, registration rights agreements, co-sale agreements and any other similar Contracts between either Parent or the Company and any holders of Parent Common Stock or Company Capital Stock, respectively, including any such Contract granting any Person investor rights, rights of first refusal, registration rights or director registration rights, to be terminated immediately prior to the First Effective Time, without any liability being imposed on the part of Parent or the Surviving Entity.

6.14 Section 16 Matters. Prior to the First Effective Time, Parent shall take all such steps as may be required to cause any acquisitions of Parent Common Stock and any options to purchase Parent Common Stock in connection with the Contemplated Transactions, by each individual who is reasonably expected to become subject to the reporting requirements of Section 16(a) of the Exchange Act with respect to Parent, to be exempt under Rule 16b-3 promulgated under the Exchange Act.

6.15 Allocation Information. The Company will prepare and deliver to Parent prior to the Closing a spreadsheet setting forth (as of immediately prior to the First Effective Time) (a) each holder of Company Capital Stock, (b) such holder's name and address, (c) the number or percentage and type of Company Capital Stock held as of the Closing Date for each such holder and (d) the number of shares of Parent Capital Stock to be issued to such holder pursuant to this Agreement in respect of the Company Capital Stock held by such holder as of immediately prior to the First Effective Time (the "**Allocation Certificate**").

6.16 Parent SEC Documents. From the date of this Agreement to the First Effective Time, Parent shall use commercially reasonable efforts to timely file with the SEC all registration statements, proxy statements, Certifications, reports, schedules, exhibits, forms and other documents required to be filed by Parent with the SEC under the Exchange Act or the Securities Act ("**SEC Documents**"). As of its filing date, or if amended after the date of this Agreement, as of the date of the last such amendment, each SEC Document filed by Parent with the SEC (a) shall comply in all material respects with the applicable requirements of the Exchange Act and the Securities Act, and (b) shall not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading.

6.17 Wind-Down Activities. Following the Closing, Parent shall use its commercially reasonable efforts to continue the wind-down activities of Parent associated with the Parent Legacy Business, including termination of its research and development activities set forth on Section 6.17 of the Parent Disclosure Letter.

6.18 Obligations of Merger Subs. Parent will take all action necessary to cause each Merger Sub to perform its obligations under this Agreement and to consummate the Merger on the terms and conditions set forth in this Agreement.

6.19 Pre-Closing Financing Restructuring. In the event the structure of the Company Pre-Closing Financing either violates applicable Law or materially and adversely effects Parent's ability to cause the Registration Statement to become effective in a timely manner, and in any event 60 days prior to the End Date, then Parent and the Company shall, and shall use their reasonable best efforts to cause the investors in the Company Pre-Closing Financing, to cause the Company Pre-Closing Financing to be amended, modified and/or restructured such that such investment occurs as a direct acquisition of shares of Parent Common Stock substantially contemporaneously with the Closing in a manner which preserves to the extent possible, the amount of funds ultimately received by Parent and its Subsidiaries, and the number of Parent shares ultimately held by the investor in respect of such amounts as though the Company Pre-Closing Financing has been consummated by its terms.

6.20 Parent Pre-Closing Dividend. If Parent declares the Parent Pre-Closing Dividend, then, prior to the First Effective Time, Parent shall deposit the Parent Pre-Closing Dividend Amount with Parent's transfer agent for further distribution to the holders of the shares of Parent Common Stock outstanding as of the record date of the Parent Pre-Closing Dividend.

6.21 Parent Re-Domestication. The parties shall discuss in good faith whether to change the domicile of Parent prior to the First Effective Time.

Section 7. Conditions Precedent to Obligations of Each Party. The obligations of each Party to effect the Merger and otherwise consummate the Contemplated Transactions to be consummated at the Closing are subject to the satisfaction or, to the extent permitted by applicable law, the written waiver by each of the Parties, at or prior to the Closing, of each of the following conditions:

7.1 Effectiveness of Registration Statement. The Registration Statement shall have become effective in accordance with the provisions of the Securities Act, and shall not be subject to any stop order or Legal Proceeding seeking a stop order with respect to the Registration Statement that has not been withdrawn. Any material state securities laws applicable to the issuance of the shares of Parent Capital Stock in connection with the Contemplated Transactions (including any Parent Common Stock issuable upon conversion of the Parent Convertible Preferred Stock) shall have been complied with and no stop order (or similar order) shall have been issued in respect of such shares of Parent Capital Stock (including any Parent Common Stock issuable upon conversion of the Parent Convertible Preferred Stock) by any applicable state securities commissioner or court of competent jurisdiction.

7.2 Regulatory Approvals. Any applicable waiting periods (or any extensions thereof) under the HSR Act (if applicable) shall have expired or otherwise been terminated.

7.3 No Restraints. No Order preventing the consummation of the Contemplated Transactions shall have been issued by any Governmental Authority of competent jurisdiction and remain in effect and there shall not be any Law which has the effect of making the consummation of the Contemplated Transactions illegal.

7.4 Stockholder Approval. (a) Parent shall have obtained the Required Parent Stockholder Vote (but solely with respect to such items as are necessary to consummate the transactions contemplated by this Agreement) and (b) the Company shall have obtained the Required Company Stockholder Vote.

7.5 Listing. The Nasdaq Listing Application shall have been approved by Nasdaq.

7.6 Lock-Up Agreements. The Lock-Up Agreements shall be in full force and effect.

7.7 Parent Charter Amendment. The Parent Charter Amendment shall have been duly filed with the Secretary of State of the State of Delaware, containing such amendments as are necessary to consummate the transactions contemplated by this Agreement.

7.8 Certificate of Designation. Parent shall have filed the Certificate of Designation with the Secretary of State of the State of Delaware.

Section 8. Additional Conditions Precedent to Obligations of Parent and Merger Subs. The obligations of Parent and Merger Subs to effect the Merger and otherwise consummate the transactions to be consummated at the Closing are subject to the satisfaction or the written waiver by Parent, at or prior to the Closing, of each of the following conditions:

8.1 Accuracy of Representations. The Company Fundamental Representations shall have been true and correct in all material respects as of the date of this Agreement and shall be true and correct on and as of the Closing Date with the same force and effect as if made on and as of such date (except to the extent such representations and warranties are specifically made as of a particular date, in which case such representations and warranties shall be true and correct as of such date). The Company Capitalization Representations shall have been true and correct in all respects as of the date of this Agreement and shall be true and correct on and as of the Closing Date with the same force and effect as if made on and as of such date, except, in each case, (x) for such inaccuracies which are de minimis, individually or in the aggregate, (y) for those representations and warranties which address matters only as of a particular date (which representations and warranties shall have been true and correct, subject to the qualifications as set forth in the preceding clause (x), as of such particular date). The representations and warranties of the Company contained in this Agreement (other than the Company Fundamental Representations

and the Company Capitalization Representations) shall have been true and correct as of the date of this Agreement and shall be true and correct on and as of the Closing Date with the same force and effect as if made on the Closing Date except (a) in each case, or in the aggregate, where the failure to be so true and correct would not reasonably be expected to have a Company Material Adverse Effect (without giving effect to any references therein to any Company Material Adverse Effect or other materiality qualifications) or (b) for those representations and warranties which address matters only as of a particular date (which representations shall have been true and correct, subject to the qualifications as set forth in the preceding clause (a), as of such particular date) (it being understood that, for purposes of determining the accuracy of such representations and warranties, any update of or modification to the Company Disclosure Letter made or purported to have been made after the date of this Agreement shall be disregarded).

8.2 Performance of Covenants. The Company shall have performed or complied with in all material respects all agreements and covenants required to be performed or complied with by it under this Agreement at or prior to the First Effective Time.

8.3 Documents. Parent shall have received the following documents, each of which shall be in full force and effect:

(a) a certificate executed by the Chief Executive Officer or Chief Financial Officer of the Company certifying (i) that the conditions set forth in Sections 8.1, 8.2, 8.4, 8.5 and 8.6 have been duly satisfied and (ii) that the information (other than emails and addresses) set forth in the Allocation Certificate delivered by the company in accordance with Section 6.15 is true and accurate in all respects as of the Closing Date;

(b) a certificate pursuant to Treasury Regulations Sections 1.1445-2(c) and 1.897-2(h), together with a form of notice to the IRS in accordance with the requirements of Treasury Regulations Section 1.897-2(h), in each case, in form and substance reasonably acceptable to Parent;

(c) the Company Valuation Schedule; and

(d) the Allocation Certificate.

8.4 No Company Material Adverse Effect. Since the date of this Agreement, there shall not have occurred any Company Material Adverse Effect that is continuing.

8.5 Company Stockholder Written Consent. The Company Stockholder Written Consent executed by the stockholders of the Company shall be in full force and effect.

8.6 Company Pre-Closing Financing. The Subscription Agreement (as may be amended, restated or supplemented pursuant to Section 6.19) shall be in full force and effect and proceeds of not less than $175,000,000 (including in the proceeds any Company Notes contributed as consideration in the Company Pre-Closing Financing) shall have been received by the Company (or, if applicable pursuant to Section 6.19, Parent or one or more of its affiliates) or will be received by the Company (or, if applicable pursuant to Section 6.19, Parent or one or more of its affiliates) substantially simultaneously with the Closing in connection with the consummation of the transactions contemplated by the Subscription Agreement.

8.7 Parent Pre-Closing Dividend. If Parent declares the Parent Pre-Closing Dividend, then the Parent Pre-Closing Dividend Amount shall have been deposited by Parent with Parent's transfer agent for further distribution to the holders of the shares of Parent Common Stock outstanding as of the record date of the Parent Pre-Closing Dividend.

Section 9. Additional Conditions Precedent to Obligation of the Company. The obligations of the Company to effect the Merger and otherwise consummate the transactions to be consummated at the Closing are subject to the satisfaction or the written waiver by the Company, at or prior to the Closing, of each of the following conditions:

9.1 Accuracy of Representations. The Parent Fundamental Representations shall have been true and correct in all material respects as of the date of this Agreement and shall be true and correct on and as of the Closing Date with the same force and effect as if made on and as of such date (except to the extent such representations and warranties are specifically made as of a particular date, in which case such representations and warranties shall be true and correct as of such date). The Parent Capitalization Representations shall have been true and correct in all respects as of the date of this Agreement and shall be true and correct on and as of the Closing

Date with the same force and effect as if made on and as of such date, except, in each case, (x) for such inaccuracies which are de minimis, individually or in the aggregate, (y) for those representations and warranties which address matters only as of a particular date (which representations and warranties shall have been true and correct, subject to the qualifications as set forth in the preceding clause (x), as of such particular date). The representations and warranties of Parent and Merger Subs contained in this Agreement (other than the Parent Fundamental Representations and the Parent Capitalization Representations) shall have been true and correct as of the date of this Agreement and shall be true and correct on and as of the Closing Date with the same force and effect as if made on the Closing Date except (a) in each case, or in the aggregate, where the failure to be so true and correct would not reasonably be expected to have a Parent Material Adverse Effect (without giving effect to any references therein to any Parent Material Adverse Effect or other materiality qualifications) or (b) for those representations and warranties which address matters only as of a particular date (which representations shall have been true and correct, subject to the qualifications as set forth in the preceding clause (a), as of such particular date) (it being understood that, for purposes of determining the accuracy of such representations and warranties, any update of or modification to the Parent Disclosure Letter made or purported to have been made after the date of this Agreement shall be disregarded).

9.2 Performance of Covenants. Parent and Merger Subs shall have performed or complied with in all material respects all of their agreements and covenants required to be performed or complied with by each of them under this Agreement at or prior to the First Effective Time.

9.3 Documents. The Company shall have received the following documents, each of which shall be in full force and effect:

(a) a certificate executed by an executive officer of Parent certifying that the conditions set forth in Sections 9.1, 9.2 and 9.4 have been duly satisfied;

(b) written resignations in forms satisfactory to the Company, dated as of the Closing Date and effective as of the Closing executed by the officers and directors of Parent who are not to continue as officers or directors of Parent pursuant to Section 6.12 hereof; and

(c) the Parent Net Cash Schedule.

9.4 No Parent Material Adverse Effect. Since the date of this Agreement, there shall not have occurred any Parent Material Adverse Effect that is continuing.

Section 10. Termination.

10.1 Termination. This Agreement may be terminated prior to the First Effective Time (whether before or after adoption of this Agreement by the Company's stockholders and whether before or after approval of the Parent Stockholder Matters by Parent's stockholders, unless otherwise specified below):

(a) by mutual written consent of Parent and the Company;

(b) by either Parent or the Company if the Merger shall not have been consummated by October 3, 2024 (subject to possible extension as provided in this Section 10.1(b), the "**End Date**"); provided, however, that the right to terminate this Agreement under this Section 10.1(b) shall not be available to the Company or Parent if such Party's (or in the case of Parent, Merger Subs') action or failure to act has been a principal cause of the failure of the Merger to occur on or before the End Date and such action or failure to act constitutes a breach of this Agreement, provided further, however, that, in the event that the SEC has not declared effective under the Securities Act the Registration Statement by the date which is sixty (60) days prior to the End Date, then either the Company or Parent shall be entitled to extend the End Date for an additional sixty (60) days;

(c) by either Parent or the Company if a court of competent jurisdiction or other Governmental Authority shall have issued a final and nonappealable Order having the effect of permanently restraining, enjoining or otherwise prohibiting the Contemplated Transactions;

(d) by Parent if the Required Company Stockholder Vote shall not have been obtained within two (2) Business Days of the Registration Statement becoming effective in accordance with the provisions of the Securities Act; provided, however, that once the Required Company Stockholder Vote has been obtained, Parent may not terminate this Agreement pursuant to this Section 10.1(d);

(e) by either Parent or the Company if (i) the Parent Stockholder Meeting (including any adjournments and postponements thereof) shall have been held and completed and Parent's stockholders shall have taken a final vote on the Parent Stockholder Matters and (ii) the Parent Stockholder Matters shall not have been approved at the Parent Stockholder Meeting (or at any adjournment or postponement thereof) by the Required Parent Stockholder Vote; provided, however, that the right to terminate this Agreement under this Section 10.1(e) shall not be available to Parent where the failure to obtain the Required Parent Stockholder Vote shall have been caused by the action or failure to act of Parent and such action or failure to act constitutes a material breach by Parent of this Agreement;

(f) by the Company (at any time prior to the approval of the Parent Stockholder Matters by the Required Parent Stockholder Vote) if a Parent Triggering Event shall have occurred;

(g) by Parent (at any time prior to the adoption of this Agreement and the approval of the Contemplated Transactions by the Required Company Stockholder Vote) if a Company Triggering Event shall have occurred;

(h) by the Company, upon a breach of any representation, warranty, covenant or agreement set forth in this Agreement by Parent or Merger Subs or if any representation or warranty of Parent or Merger Subs shall have become inaccurate, in either case, such that the conditions set forth in Section 9.1 or Section 9.2 would not be satisfied as of the time of such breach or as of the time such representation or warranty shall have become inaccurate; provided, that the Company is not then in material breach of any representation, warranty, covenant or agreement under this Agreement; provided further, that if such inaccuracy in Parent's or Merger Subs' representations and warranties or breach by Parent or Merger Subs is curable by Parent or Merger Subs, then the Company shall not be permitted to terminate this Agreement pursuant to this Section 10.1(h) as a result of such particular breach or inaccuracy until the earlier of (i) the expiration of a thirty (30) day period commencing upon delivery of written notice from the Company to Parent or Merger Subs of such breach or inaccuracy and its intention to terminate pursuant to this Section 10.1(h) and (ii) Parent or Merger Subs (as applicable) ceasing to exercise commercially reasonable efforts to cure such breach following delivery of written notice from the Company to Parent or Merger Subs of such breach or inaccuracy and its intention to terminate pursuant to this Section 10.1(h) (it being understood that the Company shall not be permitted to terminate this Agreement pursuant to this Section 10.1(h) as a result of such particular breach or inaccuracy if such breach by Parent or Merger Subs is cured prior to such termination becoming effective);

(i) by Parent, upon a breach of any representation, warranty, covenant or agreement set forth in this Agreement by the Company or if any representation or warranty of the Company shall have become inaccurate, in either case, such that the conditions set forth in Section 8.1 or Section 8.2 would not be satisfied as of the time of such breach or as of the time such representation or warranty shall have become inaccurate; provided that Parent is not then in material breach of any representation, warranty, covenant or agreement under this Agreement; provided, further, that if such inaccuracy in the Company's representations and warranties or breach by the Company is curable by the Company then Parent shall not be permitted to terminate this Agreement pursuant to this Section 10.1(i) as a result of such particular breach or inaccuracy until the earlier of (i) the expiration of a thirty (30) day period commencing upon delivery of written notice from Parent to the Company of such breach or inaccuracy and its intention to terminate pursuant to this Section 10.1(i) and (ii) the Company ceasing to exercise commercially reasonable efforts to cure such breach following delivery of written notice from Parent to the Company of such breach or inaccuracy and its intention to terminate pursuant to this Section 10.1(i) (it being understood that Parent shall not be permitted to terminate this Agreement pursuant to this Section 10.1(i) as a result of such particular breach or inaccuracy if such breach by the Company is cured prior to such termination becoming effective); or

(j) by Parent (at any time prior to the approval of the Parent Stockholder Matters by the Required Parent Stockholder Vote) and following compliance with all of the requirements set forth in the proviso to this Section 10.1(j), upon the Parent Board authorizing Parent to enter into a Permitted Alternative Agreement; provided, however, that Parent shall not enter into any Permitted Alternative Agreement unless: (i) Parent shall have complied in all material respects with its obligations under Section 5.4 and Section 6.3, (ii) the Parent Board shall have determined in good faith, after consultation with its outside legal counsel, that the failure to enter into such Permitted Alternative Agreement would reasonably be expected to be inconsistent with its fiduciary obligations under applicable Law and (iii) Parent shall concurrently pay to the Company the Company Termination Fee in accordance with Section 10.3(d).

The Party desiring to terminate this Agreement pursuant to this Section 10.1 (other than pursuant to Section 10.1(a)) shall give a notice of such termination to the other Party specifying the provisions hereof pursuant to which such termination is made and the basis therefor described in reasonable detail.

10.2 Effect of Termination. In the event of the termination of this Agreement as provided in Section 10.1, this Agreement shall be of no further force or effect; provided, however, that (a) this Section 10.2, Section 10.3 and Section 11 (other than Section 11.8) and the related definitions of the defined terms in such sections shall survive the termination of this Agreement and shall remain in full force and effect and (b) the termination of this Agreement and the provisions of Section 10.3 shall not relieve any Party of any liability for fraud or for any willful and material breach of any representation, warranty, covenant, obligation or other provision contained in this Agreement.

10.3 Expenses; Termination Fees.

(a) Except as set forth in this Section 10.3 and Section 6.9 all fees and expenses incurred in connection with this Agreement and the Contemplated Transactions shall be paid by the Party incurring such expenses, whether or not the Merger is consummated.

(b) If (i) this Agreement is terminated by Parent or the Company pursuant to Section 10.1(e) or by the Company pursuant to Section 10.1(f), (ii) at any time after the date of this Agreement and prior to the Parent Stockholder Meeting, an Acquisition Proposal with respect to Parent shall have been publicly announced, disclosed or otherwise communicated to the Parent Board (and shall not have been withdrawn) and (iii) in the event this Agreement is terminated pursuant to Section 10.1(e), within twelve (12) months after the date of such termination, Parent enters into a definitive agreement with respect to a Subsequent Transaction or consummates a Subsequent Transaction, then Parent shall pay to the Company, within ten (10) Business Days after termination (or, if applicable, upon such entry into a definitive agreement or consummation of a Subsequent Transaction), a nonrefundable fee in an amount equal to $440,000 (the "**Company Termination Fee**").

(c) If this Agreement is terminated (i) by the Company pursuant to Section 10.1(b) or Section 10.1(e) (when at the time this Agreement is terminated, the Company had the right to terminate this Agreement pursuant to Section 10.1(f)) then Parent shall pay to the Company within five (5) Business Days of such termination, the Company Termination Fee or (ii) by Parent pursuant to Section 10.1(j), then Parent shall pay to the Company, concurrent with such termination, the Company Termination Fee.

(d) If (i) this Agreement is terminated by Parent pursuant to Section 10.1(d) or Section 10.1(g), (ii) at any time after the date of this Agreement and before obtaining the Required Company Stockholder Vote, an Acquisition Proposal with respect to the Company shall have been announced, disclosed or otherwise communicated to the Company Board (and shall not have been withdrawn) and (iii) in the event this Agreement is terminated pursuant to Section 10.1(d), within twelve (12) months after the date of such termination, the Company enters into a definitive agreement with respect to a Subsequent Transaction or consummates a Subsequent Transaction, then the Company shall pay to Parent, within ten (10) Business Days after termination (or, if applicable, upon such entry into a definitive agreement or consummation of a Subsequent Transaction), a nonrefundable fee in an amount equal to $440,000.

(e) If either Party fails to pay when due any amount payable by it under this Section 10.3, then (i) such Party shall reimburse the other Party for reasonable costs and expenses (including reasonable fees and disbursements of counsel) incurred in connection with the collection of such overdue amount and the enforcement by the other Party of its rights under this Section 10.3 and (ii) such Party shall pay to the other Party interest on such overdue amount (for the period commencing as of the date such overdue amount was originally required to be paid and ending on the date such overdue amount is actually paid to the other Party in full) at a rate per annum equal to the "prime rate" (as announced by Bank of America or any successor thereto) in effect on the date such overdue amount was originally required to be paid plus three percent.

(f) The Parties agree that, subject to Section 10.2, the payment of the fees and expenses set forth in this Section 10.3 shall be the sole and exclusive remedy of each Party following a termination of this Agreement under the circumstances described in this Section 10.3, it being understood that in no event shall either Parent or the Company be required to pay the individual fees or damages payable pursuant to this Section 10.3 on more than one occasion. Subject to Section 10.2, following the payment of the fees and expenses set forth in

this Section 10.3 by a Party, (i) such Party shall have no further liability to the other Party in connection with or arising out of this Agreement or the termination thereof, any breach of this Agreement by the other Party giving rise to such termination, or the failure of the Contemplated Transactions to be consummated, (ii) no other Party or their respective Affiliates shall be entitled to bring or maintain any other claim, action or proceeding against such Party or seek to obtain any recovery, judgment or damages of any kind against such Party (or any partner, member, stockholder, director, officer, employee, Subsidiary, Affiliate, agent or other Representative of such Party) in connection with or arising out of this Agreement or the termination thereof, any breach by such Party giving rise to such termination or the failure of the Contemplated Transactions to be consummated and (iii) all other Parties and their respective Affiliates shall be precluded from any other remedy against such Party and its Affiliates, at law or in equity or otherwise, in connection with or arising out of this Agreement or the termination thereof, any breach by such Party giving rise to such termination or the failure of the Contemplated Transactions to be consummated. Each of the Parties acknowledges that (x) the agreements contained in this Section 10.3 are an integral part of the Contemplated Transactions, (y) without these agreements, the Parties would not enter into this Agreement and (z) any amount payable pursuant to this Section 10.3 is not a penalty, but rather is liquidated damages in a reasonable amount that will compensate the Parties in the circumstances in which such amount is payable; provided, however, that nothing in this Section 10.3(f) shall limit the rights of the Parties under Section 11.10.

Section 11. Miscellaneous Provisions.

11.1 Non-Survival of Representations and Warranties. The representations and warranties of the Company, Parent and Merger Subs contained in this Agreement or any certificate or instrument delivered pursuant to this Agreement shall terminate at the First Effective Time, and only the covenants that by their terms survive the First Effective Time and this Section 11 shall survive the First Effective Time.

11.2 Amendment. This Agreement may be amended with the approval of the respective boards of directors of the Company, Merger Subs and Parent at any time (whether before or after the adoption and approval of this Agreement by the Company's stockholders or before or after obtaining the Required Parent Stockholder Vote); provided, however, that after any such approval of this Agreement by a Party's stockholders, no amendment shall be made which by Law requires further approval of such stockholders without the further approval of such stockholders. This Agreement may not be amended except by an instrument in writing signed on behalf of each of the Company, Merger Subs and Parent.

11.3 Waiver.

(a) Any provision hereof may be waived by the waiving Party solely on such Party's own behalf, without the consent of any other Party. No failure on the part of any Party to exercise any power, right, privilege or remedy under this Agreement, and no delay on the part of any Party in exercising any power, right, privilege or remedy under this Agreement, shall operate as a waiver of such power, right, privilege or remedy; and no single or partial exercise of any such power, right, privilege or remedy shall preclude any other or further exercise thereof or of any other power, right, privilege or remedy.

(b) No Party shall be deemed to have waived any claim arising out of this Agreement, or any power, right, privilege or remedy under this Agreement, unless the waiver of such claim, power, right, privilege or remedy is expressly set forth in a written instrument duly executed and delivered on behalf of such Party and any such waiver shall not be applicable or have any effect except in the specific instance in which it is given.

11.4 Entire Agreement; Counterparts; Exchanges by Electronic Transmission or Facsimile. This Agreement and the other schedules, exhibits, certificates, instruments and agreements referred to in this Agreement constitute the entire agreement and supersede all prior agreements and understandings, both written and oral, among or between any of the Parties with respect to the subject matter hereof and thereof; provided, however, that the Confidentiality Agreement shall not be superseded and shall remain in full force and effect in accordance with its terms; provided, further, that only Exhibit D (including Exhibit A to such Exhibit) is incorporated by reference and made a part hereof for purposes of Section 251 of the DGCL. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument. The exchange of a fully executed Agreement (in counterparts or otherwise) by all Parties by facsimile or electronic transmission in PDF format shall be sufficient to bind the Parties to the terms and conditions of this Agreement.

11.5 Applicable Law; Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of laws. In any action or proceeding between any of the Parties arising out of or relating to this Agreement or any of the Contemplated Transactions, each of the Parties: (a) irrevocably and unconditionally consents and submits to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware or, to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, (b) agrees that all claims in respect of such action or proceeding shall be heard and determined exclusively in accordance with clause (a) of this Section 11.5, (c) waives any objection to laying venue in any such action or proceeding in such courts, (d) waives any objection that such courts are an inconvenient forum or do not have jurisdiction over any Party, (e) agrees that service of process upon such Party in any such action or proceeding shall be effective if notice is given in accordance with Section 11.7 of this Agreement and (f) irrevocably and unconditionally waives the right to trial by jury.

11.6 Assignability. This Agreement shall be binding upon, and shall be enforceable by and inure solely to the benefit of, the Parties and their respective successors and permitted assigns; provided, however, that neither this Agreement nor any of a Party's rights or obligations hereunder may be assigned or delegated by such Party without the prior written consent of the other Party, and any attempted assignment or delegation of this Agreement or any of such rights or obligations by such Party without the other Party's prior written consent shall be void and of no effect.

11.7 Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly delivered and received hereunder (a) one (1) Business Day after being sent for next Business Day delivery, fees prepaid, via a reputable international overnight courier service, (b) upon delivery in the case of delivery by hand or (c) on the date delivered in the place of delivery if sent by email or facsimile (with a written or electronic confirmation of delivery) prior to 6:00 p.m. (New York City time), otherwise on the next succeeding Business Day, in each case to the intended recipient as set forth below:

if to Parent or Merger Subs:

ARCA biopharma, Inc.
10170 Church Ranch Way, Suite 100
Westminster, CO 80021
Attention: C. Jeffrey Dekker
Email: ***

with a copy to (which shall not constitute notice):

Wilson Sonsini Goodrich & Rosati
1881 9th Street, Suite 110
Boulder, CO 80302
Attn: Brent Fassett
Email: bfassett@wsgr.com

and

Wilson Sonsini Goodrich & Rosati
One Market Plaza, Spear Tower, Suite 3300
San Francisco, CA 94105
Attn: Ethan Lutske, Ross Tanaka
Email: elutske@wsgr.com, rtanaka@wsgr.com

if to the Company:

Oruka Therapeutics, Inc.
221 Crescent Street, Building 23, Suite 105
Waltham, Massachusetts 02453
Attention: Lawrence Klein
Email: ***

with a copy to (which shall not constitute notice):

Gibson, Dunn & Crutcher LLP
One Embarcadero Center, Suite 2600
San Francisco, CA 94111
Attention: Ryan Murr, Branden Berns, Chris Trester
Email: rmurr@gibsondunn.com, bberns@gibsondunn.com, ctrester@gibsondunn.com

11.8 Cooperation. Each Party agrees to cooperate fully with the other Party and to execute and deliver such further documents, certificates, agreements and instruments and to take such other actions as may be reasonably requested by the other Party to evidence or reflect the Contemplated Transactions and to carry out the intent and purposes of this Agreement.

11.9 Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions of this Agreement or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction. If a final judgment of a court of competent jurisdiction declares that any term or provision of this Agreement is invalid or unenforceable, the Parties agree that the court making such determination shall have the power to limit such term or provision, to delete specific words or phrases or to replace such term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and this Agreement shall be valid and enforceable as so modified. In the event such court does not exercise the power granted to it in the prior sentence, the Parties agree to replace such invalid or unenforceable term or provision with a valid and enforceable term or provision that will achieve, to the extent possible, the economic, business and other purposes of such invalid or unenforceable term or provision.

11.10 Other Remedies; Specific Performance. Except as otherwise provided herein, any and all remedies herein expressly conferred upon a Party will be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such Party, and the exercise by a Party of any one remedy will not preclude the exercise of any other remedy. The Parties agree that irreparable damage for which monetary damages, even if available, would not be an adequate remedy, would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms (including failing to take such actions as are required of it hereunder to consummate this Agreement) or were otherwise breached. It is accordingly agreed that the Parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof in the Court of Chancery of the State of Delaware or, to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, this being in addition to any other remedy to which they are entitled at law or in equity, and each of the Parties waives any bond, surety or other security that might be required of any other Party with respect thereto. Each of the Parties further agrees that it will not oppose the granting of an injunction, specific performance or other equitable relief on the basis that any other Party has an adequate remedy at law or that any award of specific performance is not an appropriate remedy for any reason at law or in equity.

11.11 No Third-Party Beneficiaries. Nothing in this Agreement, express or implied, is intended to or shall confer upon any Person (other than the Parties and the D&O Indemnified Parties to the extent of their respective rights pursuant to Section 6.7) any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

Remainder of page intentionally left blank

In Witness Whereof, the Parties have caused this Agreement to be executed as of the date first above written.

ARCA biopharma, Inc.

By: /s/ C. Jeffrey Dekker
Name: C. Jeffrey Dekker
Title: Chief Financial Officer

ATLAS MERGER SUB CORP.

By: /s/ C. Jeffrey Dekker
Name: C. Jeffrey Dekker
Title: President

ATLAS MERGER SUB II, LLC

By: /s/ C. Jeffrey Dekker
Name: C. Jeffrey Dekker
Title: President

Signature Page to Agreement and Plan of Merger and Reorganization

In Witness Whereof, the Parties have caused this Agreement to be executed as of the date first above written.

Oruka Therapeutics, Inc.

By: /s/ Lawrence Klein
Name: Lawrence Klein
Title: Chief Executive Officer

Signature Page to Agreement and Plan of Merger and Reorganization

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OPINION OF LUCID CAPITAL MARKETS

LUCID CAPITAL MARKETS, LLC

April 2, 2024

ARCA biopharma, Inc.
10170 Church Ranch Way, Suite 100
Westminster, CO 80021
Attention: Robert E. Conway
Chairman of the Board of Directors

Members of the Board of Directors:

We have been advised that ARCA biopharma, Inc., a Delaware corporation ("ARCA" or "Parent"), proposes to enter into an Agreement and Plan of Merger (the "Agreement"), by and among ARCA, Atlas Merger Sub Corp., a Delaware corporation and a wholly owned subsidiary of ARCA ("Merger Sub"), and Oruka Therapeutics, Inc., a Delaware corporation ("Oruka" or the "Company"). At the Effective Time, Merger Sub will be merged with and into the Company (the "Merger"), and the separate existence of the Merger Sub will cease. The Company will continue as the surviving corporation in the Merger (the "Surviving Corporation"). Pursuant to the terms of the Agreement, upon consummation of the Merger, each share of Company Capital Stock (other than shares of Company Capital Stock held as treasury stock immediately prior to the Effective Time which shall be canceled and retired and shall cease to exist and excluding Dissenting Shares) will be converted into and become exchangeable for a number of shares of Parent Common Stock equal to the Exchange Ratio. The terms and conditions of the Merger are more fully set forth in the Agreement. Capitalized terms used but not defined herein shall have the meanings ascribed to such terms in the Agreement.

The Agreement contemplates that Parent may declare and pay a dividend on the shares of Parent Common Stock outstanding prior to the Effective Time (excluding for the avoidance of doubt any shares of Parent Common Stock issuable pursuant to the Contemplated Transactions) up to an amount equal in the aggregate to Parent's reasonable, good faith approximation of the amount by which Parent Net Cash will exceed $5,000,000 (the "Parent Pre-Closing Dividend"). The Agreement also contemplates that concurrently with the execution and delivery of the Agreement, certain investors will execute a Subscription Agreement pursuant to which such Persons will have agreed to purchase (including by contribution of Company Notes) (i) shares of Company Common Stock and (ii) pre-funded Company Warrants, in each case immediately prior to the Effective Time (the "Company Pre-Closing Financing"). It is a condition precedent to the obligations of Parent and Merger Sub to effect the Merger that proceeds of not less than $175 million be received from the Company Pre-Closing Financing.

We have assumed, with your consent, that the Parent Net Cash amount is expected to be, and we have assumed, with your consent, that it will be approximately $5.0 million at Closing after taking effecting the Parent Pre-Closing Dividend.

Assuming that the Parent Pre-Closing Dividend has occurred, the holders of Company Common Stock, Company Options and Company Warrants will in the aggregate hold approximately 97.6% of the fully-diluted shares of Parent Common Stock (excluding certain Parent Options) immediately following the Merger and the holders of Parent Common Stock will in the aggregate hold approximately 2.4% of the fully-diluted shares of Parent Common Stock (excluding certain Parent Options) immediately following the Merger, in each case, after accounting for the Parent Pre-Closing Dividend and the Company Pre-Closing Financing.

We have, with your consent, relied upon the assumption that all information provided to us by ARCA and Oruka is accurate and complete in all material respects. We expressly disclaim any undertaking or obligation to advise any person of any change in any fact or matter affecting our Opinion of which we become aware after the date hereof. We have assumed there were no material changes in the assets, liabilities, financial condition, results of operations, business or prospects of ARCA or Oruka since the date of the last financial statements made available to

us. We have not obtained any independent evaluations, valuations or appraisals of the assets or liabilities of ARCA or Oruka, nor have we been furnished with such materials. In addition, we have not evaluated the solvency or fair value of ARCA or Oruka under any state or federal laws relating to bankruptcy, insolvency or similar matters.

Our Opinion does not address any legal, regulatory, tax or accounting matters related to the Merger, as to which we have assumed that ARCA and the Board of Directors have received such advice from legal, tax and accounting advisors as each has determined appropriate. Our Opinion addresses only the fairness from a financial point of view of the Exchange Ratio as set forth in the Merger Agreement to the holders of Parent Common Stock.

We express no view as to any other aspect or implication of the Merger or any other agreement or arrangement entered into in connection with the Merger. Our Opinion is necessarily based upon economic and market conditions and other circumstances as they exist and can be evaluated by us on the date hereof. It should be understood that although subsequent developments may affect our Opinion, we do not have any obligation to update, revise or reaffirm our Opinion and we expressly disclaim any responsibility to do so.

We have not considered any potential legislative or regulatory changes currently being considered or recently enacted by the United States or any foreign government, or any domestic or foreign regulatory body, or any changes in accounting methods or generally accepted accounting principles that may be adopted by the Securities and Exchange Commission (the "SEC"), the Financial Accounting Standards Board, or any similar foreign regulatory body or board.

In your capacity as members of the Board of Directors of ARCA (the "Board of Directors"), you have requested our opinion (our "Opinion") as to the fairness, from a financial point of view and as of the date hereof, of the Exchange Ratio as set forth in the Agreement to the holders of Parent Common Stock.

In connection with our Opinion, we took into account an assessment of general economic, market and financial conditions as well as our experience in connection with similar transactions and securities valuations generally and, among other things:

- Reviewed a draft of the Merger Agreement;
- Reviewed and analyzed certain publicly available financial and other information for each of ARCA and Oruka, respectively, including equity research on comparable companies and on ARCA, and certain other relevant financial and operating data furnished to us by the management of each of ARCA and Oruka, respectively;
- Reviewed and analyzed certain relevant historical financial and operating data concerning Oruka furnished to us by the management of Oruka;
- Discussed with certain members of the management of ARCA the historical and current business operations, financial condition and prospects of ARCA and Oruka;
- Reviewed and analyzed certain operating results of Oruka as compared to operating results and the reported price and trading histories of certain publicly traded companies that we deemed relevant;
- Reviewed and analyzed certain financial terms of the Merger Agreement as compared to the publicly available financial terms of certain selected business combinations that we deemed relevant;
- Reviewed and analyzed certain financial terms of completed initial public offerings for certain companies that we deemed relevant;
- Reviewed certain pro forma financial effects of the Merger;
- Reviewed and analyzed certain internal financial analyses, including the cash burn model over the next year, projections as to cost and expenses and whether concurrent capital raised would sufficiently cover select programs, reports, and other information concerning Oruka prepared by Oruka; and
- Reviewed and analyzed such other information and such other factors, and conducted such other financial studies, analyses and investigations, as we deemed relevant for the purposes of our Opinion.

For purposes of rendering our Opinion we have assumed, with your consent, that except as would not be in any way meaningful to our analysis: (i) the final form of the Agreement will not differ from the Draft Agreement that we have reviewed; (ii) the representations and warranties of each party contained in the Agreement are true and correct in all respects; (iii) each party will perform all of the covenants and agreements required to be performed by such party under the Agreement; and (iv) the transactions contemplated by the Agreement will be consummated in accordance with the terms of the Agreement, without any waiver or amendment of any term or condition thereof. We have also assumed that all governmental, regulatory and other consents and approvals contemplated by the Agreement or otherwise required for the transactions contemplated by the Agreement will be obtained and that in the course of obtaining any of those consents no restrictions will be imposed, or waivers made that would have an adverse effect on ARCA, Oruka, or the contemplated benefits of the Merger. We have assumed that the Merger will be consummated in a manner that complies with the applicable provisions of the Securities Act of 1933, as amended, the Securities Exchange Act of 1934, as amended, and all other applicable federal and state statutes and the rules and regulations promulgated thereunder.

It is understood that this letter is intended for the benefit and use of the Board of Directors (in its capacity as such) in its consideration of the financial terms of the Merger and, except as set forth in our engagement letter with ARCA, dated as of March 19, 2024 (the "Engagement Letter"), may not be used for any other purpose or reproduced, disseminated, quoted or referred to at any time, in any manner or for any purpose without our prior written consent, except that this Opinion may be included in its entirety in any filing related to the Merger required to be filed with the SEC and any proxy statement to be mailed to holders of Parent Common Stock. This letter does not constitute a recommendation to the Board of Directors of whether to approve the Merger or to any stockholder of ARCA or any other person as to how to vote or act with respect to the transactions contemplated by the Agreement (including the Merger) or any other matter. Our Opinion does not address ARCA's underlying business decision to proceed with the Merger or the relative merits of the Merger compared to other alternatives available to ARCA. We express no opinion as to the prices or ranges of prices at which shares or the securities of any person, including ARCA, will trade at any time, including following the announcement or consummation of the Merger, or as to the potential effects of volatility in the credit, financial, and stock markets on ARCA, Oruka or the transactions contemplated by the Agreement. We have not been requested to opine as to, and our Opinion does not in any manner address, the amount or nature of compensation to any of the officers, directors or employees of any party to the Merger, or any class of such persons, relative to the compensation to be paid to the holders of Parent Common Stock in connection with the Merger or with respect to the fairness of any such compensation.

Lucid is an investment bank providing investment banking, brokerage, equity research, institutional sales and trading services. As part of our investment banking services, we are regularly engaged in the valuation of businesses and their securities in connection with mergers, negotiated underwritings, secondary distributions of listed and unlisted securities, private placements and valuations for corporate and other purposes. We have acted as ARCA's financial advisor in connection with the Merger and will receive a fee for our services pursuant to the terms of our Engagement Letter, a significant portion of which is contingent upon consummation of the Merger. In addition, ARCA has agreed to reimburse our expenses and indemnify us for certain liabilities that may arise out of our engagement. We will also receive an additional fee for rendering our Opinion set forth below pursuant to the Engagement Letter, which is not contingent upon consummation of the Merger. In the two years preceding the date hereof, Lucid has not had a relationship with ARCA or its affiliates and has not received any fees from ARCA or any of its affiliates. In the two years preceding the date hereof, Lucid has not had a relationship with Oruka or any of its affiliates and has not received any fees from Oruka or any of its affiliates. Lucid and its affiliates may in the future seek to provide investment banking or financial advisory services to ARCA and Oruka and/or their respective affiliates and expect to receive fees for the rendering of these services.

In the ordinary course of business, Lucid or certain of our affiliates, as well as investment funds in which we or our affiliates may have financial interests, may acquire, hold or sell long or short positions, or trade or otherwise effect transactions in debt, equity, and other securities and financial instruments (including bank loans and other obligations) of, or investments in, ARCA, Oruka or any other party that may be involved in the Merger and/or their respective affiliates.

Consistent with applicable legal and regulatory requirements, Lucid has adopted policies and procedures to establish and maintain the independence of our research department and personnel. As a result, our research analysts may hold views, make statements or investment recommendations and/or publish research reports with respect to ARCA and the proposed Merger that may differ from the views of Lucid's investment banking personnel.

The Opinion set forth below was reviewed and approved by a fairness opinion committee of Lucid.

Based upon and subject to the foregoing, including the various assumptions and limitations set forth herein and such other factors that we deem relevant, it is our opinion that, as of the date hereof, the Exchange Ratio is fair, from a financial point of view, to the holders of Parent Common Stock.

Very truly yours,

Lucid Capital Markets

Lucid Capital Markets, LLC

FORM OF COMPANY STOCKHOLDER SUPPORT AGREEMENT

This Support Agreement (this "Agreement") is made and entered into as of April 3, 2024, by and among Oruka Therapeutics, Inc., a Delaware corporation (the "Company"), ARCA biopharma, Inc., a Delaware corporation ("Parent"), and the undersigned stockholder (the "Stockholder") of the Company. Capitalized terms used herein but not otherwise defined shall have the respective meanings ascribed to such terms in the Merger Agreement (as defined below).

RECITALS

WHEREAS, concurrently with the execution and delivery hereof, Parent, the Company and Atlas Merger Sub Corp., a Delaware corporation and a wholly owned subsidiary of Parent (the "First Merger Sub"), and Atlas Merger Sub II LLC, a Delaware limited liability company (the "Second Merger Sub") have entered into an Agreement and Plan of Merger and Reorganization (as such agreement may be amended or supplemented from time to time pursuant to the terms thereof, the "Merger Agreement"), pursuant to which (i) the First Merger Sub will merge with and into the Company, with the Company surviving the merger as the surviving corporation and a wholly owned subsidiary of Parent and (ii) the Company will merge with and into the Second Merger Sub, with Second Merger Sub being the surviving entity of the Second Merger, upon the terms and subject to the conditions set forth in the Merger Agreement (the "Merger").

WHEREAS, as of the date hereof, the Stockholder is the beneficial owner (as defined in Rule 13d-3 under the Exchange Act) of such number of shares of Company Capital Stock as indicated in Appendix A.

WHEREAS, as an inducement to the willingness of Parent to enter into the Merger Agreement, Parent has required that Stockholder enter into this Agreement.

NOW, THEREFORE, intending to be legally bound, the parties hereby agree as follows:

1. Certain Definitions. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed thereto in the Merger Agreement. For all purposes of this Agreement, the following terms shall have the following respective meanings:

(a) "Constructive Sale" means, with respect to any security, a short sale with respect to such security, entering into or acquiring a derivative contract with respect to such security, entering into or acquiring a futures or forward contract to deliver such security or entering into any other hedging or other derivative transaction that has the effect of either directly or indirectly materially changing the economic benefits or risks of ownership of such security.

(b) "Shares" means (i) all shares of Company Capital Stock beneficially owned by the Stockholder as of the date hereof, and (ii) all additional shares of Company Capital Stock acquired and beneficially owned by the Stockholder during the period commencing with the execution and delivery of this Agreement and expiring on the Closing Date.

(c) "Transfer" or "Transferred" means, with respect to any security, the direct or indirect assignment, sale, transfer, tender, exchange, pledge or hypothecation, or the grant, creation or suffrage of a lien, security interest or encumbrance in or upon, or the gift, grant or placement in trust, or the Constructive Sale or other disposition of such security (including transfers by testamentary or intestate succession, by domestic relations order or other court order, or otherwise by operation of law) or any right, title or interest therein (including any right or power to vote to which the holder thereof may be entitled, whether such right or power is granted by proxy or otherwise), or the beneficial ownership thereof, the offer to make such a sale, transfer, Constructive Sale or other disposition, and each agreement, arrangement or understanding, whether or not in writing, to effect any of the foregoing.

2. Transfer and Voting Restrictions. The Stockholder covenants to Parent and the Company as follows:

(a) Except as otherwise permitted by Section 2(c), during the period commencing with the execution and delivery of this Agreement and expiring on the Expiration Date (as defined below), the Stockholder shall not Transfer any of the Stockholder's Shares, or publicly announce its intention to Transfer any of its Shares.

(b) Except as otherwise permitted by this Agreement or otherwise permitted or required by order of a court of competent jurisdiction or a Governmental Authority, the Stockholder will not commit any act that would restrict the Stockholder's legal power, authority and right to vote all of the Shares held by the Stockholder or otherwise prevent or disable the Stockholder from performing any of his, her or its obligations under this Agreement. Without limiting the generality of the foregoing, except for this Agreement, the Voting Agreement of the Company, dated as of March 6, 2024 (the "Voting Agreement") and as otherwise permitted by this Agreement, the Stockholder shall not enter into any voting agreement with any person or entity with respect to any of the Stockholder's Shares, grant any person or entity any proxy (revocable or irrevocable) or power of attorney with respect to any of the Shares, deposit any Shares in a voting trust or otherwise enter into any agreement or arrangement with any person or entity limiting or affecting the Stockholder's legal power, authority or right to execute and deliver the Company Stockholder Written Consent.

(c) Notwithstanding anything else herein to the contrary, the Stockholder may, at any time, Transfer Shares (i) by will or other testamentary document or by intestacy, (ii) to such Stockholder's Affiliates (in each case, directly or indirectly) (iii) to any member of the Stockholder's immediate family (or, if the Stockholder is a corporation, partnership or other entity, to an immediate family member of a beneficial owner of the Shares held by the Stockholder), (iv) to any trust or other entity for the direct or indirect benefit of the Stockholder or the immediate family of the Stockholder (or, if the Stockholder is a corporation, partnership or other entity, for the direct or indirect benefit of an immediate family member of a beneficial owner of the Shares held by the Stockholder) or otherwise for estate tax or estate planning purposes, (v) in the case of a Stockholder who is not a natural person, by pro rata distributions from the Stockholder to its members, partners, or shareholders pursuant to the Stockholder's organizational documents, (vi) purchased from the Company pursuant to the Company Pre-Closing Financing on or about the Closing Date but prior to the Closing (including any shares of the Company issued upon conversion of any pre-funded Company Warrants), and (vii) to the extent required by applicable Law; provided, that in the cases of clauses (i)-(v), (x) such Transferred Shares shall continue to be bound by this Agreement and (y) the applicable direct transferee (if any) of such Transferred Shares shall have executed and delivered to Parent and the Company a support agreement substantially identical to this Agreement upon consummation of the Transfer if not already a party thereto.

(d) Notwithstanding anything to the contrary herein, nothing in this Agreement shall obligate the Stockholder to exercise any option or any other right to acquire any shares of Company Capital Stock.

3. Agreement to Vote Shares. The Stockholder covenants to the Company as follows:

(a) Until the Expiration Date (as defined below), at any meeting of the stockholders of the Company, however called, and at every adjournment or postponement thereof, and on every action or approval by written consent of the stockholders of the Company, the Stockholder shall be present (in person or by proxy) and vote, or exercise its right to consent with respect to, all Shares held by the Stockholder (A) in favor of the adoption and approval of the Merger Agreement, (B) in favor of approval of the Contemplated Transactions, and (C) against any Acquisition Proposal.

(b) If the Stockholder is not the record holder, of Shares, the Stockholder agrees to take all actions necessary to cause the record holder and any nominees to be present (in person or by proxy) and vote all the Stockholder's Shares in accordance with this Section 3.

(c) In the event of a stock split, stock dividend or distribution, or any change in the capital stock of the Company by reason of any split-up, reverse stock split, recapitalization, combination, reclassification, reincorporation, exchange of shares or the like, the term "Shares" shall be deemed to refer to and include such shares as well as all such stock dividends and distributions and any securities into which or for which any or all of such shares may be changed or exchanged or which are received in such transaction.

4. Action in Stockholder Capacity Only. The Stockholder is entering into this Agreement solely in the Stockholder's capacity as the beneficial owner of its Shares and not in the Stockholder's capacity as a director or officer of the Company. Nothing herein shall limit or affect the Stockholder's ability to act as an officer or director of the Company.

5. Irrevocable Proxy. The Stockholder hereby revokes (or agrees to cause to be revoked) any proxies that the Stockholder has heretofore granted with respect to its Shares. In the event and to the extent that the Stockholder fails to vote the Shares in accordance with Section 3 at any applicable meeting of the stockholders of the Company or pursuant to any applicable written consent of the stockholders of the Company, the Stockholder shall be deemed to have irrevocably granted to, and appointed, the Company, and any individual designated in writing by it, and each of them individually, as his, her or its proxy and attorney-in-fact (with full power of substitution), for and in its name, place and stead, to vote his, her or its Shares in any action by written consent of Company stockholders or at any meeting of the Company stockholders called with respect to any of the matters specified in, and in accordance and consistent with, Section 3 of this Agreement. The Company agrees not to exercise the proxy granted herein for any purpose other than the purposes described in this Agreement. Except as otherwise provided for herein (including the next sentence), the Stockholder hereby affirms that the irrevocable proxy is coupled with an interest and may under no circumstances be revoked and that such irrevocable proxy is executed and intended to be irrevocable. Notwithstanding any other provisions of this Agreement, the irrevocable proxy granted hereunder shall automatically terminate on the Expiration Date.

6. No Solicitation. The Stockholder agrees not to directly or indirectly, including through any of its officers, directors or agents, take any action that the Company is prohibited from taking pursuant to Section 5.4 of the Merger Agreement and Section 5.4 of the Merger Agreement is hereby incorporated by reference *mutatis mutandis*.

7. Documentation and Information. The Stockholder shall permit and hereby authorizes Parent and the Company to publish and disclose in all documents and schedules filed with the SEC, and any press release or other disclosure document that Parent or the Company reasonably determines to be necessary in connection with the Merger and any of the Contemplated Transactions, a copy of this Agreement, the Stockholder's identity and ownership of the Shares and the nature of the Stockholder's commitments and obligations under this Agreement; provided, that, Parent and the Company provide such documents, schedules, press release or other disclosure document to the Stockholder in advance for its review and comment. Each of Parent and the Company is an intended third-party beneficiary of this Section 7.

8. No Exercise of Appraisal Rights; Waivers. The Stockholder hereby irrevocably and unconditionally (a) waives, and agrees to cause to be waived and to prevent the exercise of, any rights of appraisal, any dissenters' rights and any similar rights (including any notice requirements related thereto) relating to the Merger that Stockholder may have by virtue of, or with respect to, any Shares (including all rights under Section 262 of the DGCL) and (b) agrees that the Stockholder will not bring, commence, institute, maintain, prosecute or voluntarily aid or participate in any action, claim, suit or cause of action, in law or in equity, in any court or before any Governmental Authority, which (i) challenges the validity of or seeks to enjoin the operation of any provision of this Agreement or (ii) alleges that the execution and delivery of this Agreement by the Stockholder breaches any duty that such Stockholder has (or may be alleged to have) to the Company or to the other Company stockholders; provided, that (x) the Stockholder may defend against, contest or settle any such action, claim, suit or cause of action brought against the Stockholder that relates solely to the Stockholder's capacity as a director, officer or securityholder of the Company and (y) the foregoing shall not limit or restrict in any manner the Stockholder from enforcing the Stockholder's rights under this Agreement and the other agreements entered into by the Stockholder in connection herewith, or otherwise in connection with the Merger, including the Stockholder's right to receive the Merger Consideration pursuant to the terms of the Merger Agreement.

9. Representations and Warranties of the Stockholder. The Stockholder hereby represents and warrants to Parent and the Company as follows:

(a) (i) The Stockholder is the beneficial owner of the shares of Company Capital Stock indicated in Appendix A (each of which shall be deemed to be "held" by the Stockholder for purposes of Section 3 unless otherwise expressly stated with respect to any shares in Appendix A), free and clear of any and all Encumbrances (except for any Encumbrance that may be imposed pursuant to this Agreement, the Voting Agreement, the Investors'

Rights Agreement of the Company, dated as of March 6, 2024 (the "Investors' Rights Agreement"), the Right of First Refusal and Co-Sale Agreement of the Company, dated as of March 6, 2024 (the "ROFR"), any lock-up agreement entered into by and between the Stockholder, the Company and Parent, and Encumbrances arising under applicable securities or community property laws; and (ii) the Stockholder does not beneficially own any securities of the Company other than the shares of Company Capital Stock and rights to purchase shares of Company Capital Stock set forth in Appendix A.

(b) Except as otherwise provided in this Agreement, the Stockholder has full power and authority to (i) make, enter into and carry out the terms of this Agreement and (ii) vote all of its Shares in the manner set forth in this Agreement without the consent or approval of, or any other action on the part of, any other person or entity (including any Governmental Authority). Without limiting the generality of the foregoing, except for the Voting Agreement, the Stockholder has not entered into any voting agreement (other than this Agreement) with any person with respect to any of the Stockholder's Shares, granted any person any proxy (revocable or irrevocable) or power of attorney with respect to any of the Stockholder's Shares, deposited any of the Stockholder's Shares in a voting trust or entered into any arrangement or agreement with any person limiting or affecting the Stockholder's legal power, authority or right to vote the Stockholder's Shares on any matter.

(c) This Agreement has been duly and validly executed and delivered by the Stockholder and (assuming the due authorization, execution and delivery by the other parties hereto) constitutes a valid and binding agreement of the Stockholder enforceable against the Stockholder in accordance with its terms, subject to the Enforceability Exceptions. The execution and delivery of this Agreement by the Stockholder and the performance by the Stockholder of the agreements and obligations hereunder will not result in any breach or violation of or be in conflict with or constitute a default under any term of any Contract or if applicable any provision of an organizational document (including a certificate of incorporation) to or by which the Stockholder is a party or bound, or any applicable law to which the Stockholder (or any of the Stockholder's assets) is subject or bound, except for any such breach, violation, conflict or default which, individually or in the aggregate, would not reasonably be expected to materially impair or adversely affect the Stockholder's ability to perform its obligations under this Agreement.

(d) The execution, delivery and performance of this Agreement by the Stockholder do not and will not require any consent, approval, authorization or permit of, action by, filing with or notification to, any Governmental Authority, except for any such consent, approval, authorization, permit, action, filing or notification the failure of which to make or obtain, individually or in the aggregate, has not and would not materially impair the Stockholder's ability to perform its obligations under this Agreement.

(e) The Stockholder has had the opportunity to review the Merger Agreement and this Agreement with counsel of the Stockholder's own choosing. The Stockholder has had an opportunity to review with its own tax advisors the tax consequences of the Merger and the Contemplated Transactions. The Stockholder understands that it must rely solely on its advisors and not on any statements or representations made by Parent, the Company or any of their respective agents or representatives with respect to the tax consequences of the Merger and the Contemplated Transactions. The Stockholder understands that such Stockholder (and not Parent, the Company or the Surviving Corporation) shall be responsible for such Stockholder's tax liability that may arise as a result of the Merger or the Contemplated Transactions. The Stockholder understands and acknowledges that the Company, Parent and Merger Sub are entering into the Merger Agreement in reliance upon the Stockholder's execution, delivery and performance of this Agreement.

(f) With respect to the Stockholder, as of the date hereof, there is no action, suit, investigation or proceeding pending against, or, to the knowledge of the Stockholder, threatened against, the Stockholder or any of the Stockholder's properties or assets (including the Shares) that would reasonably be expected to prevent or materially delay or impair the ability of the Stockholder to perform its obligations hereunder or to consummate the transactions contemplated hereby.

10. Certain Agreements. Each Stockholder, by this Agreement, and with respect to such Stockholder's Shares, severally and not jointly, hereby agrees to terminate, subject to the occurrence of, and effective immediately prior to, the Effective Time each of (a) the Voting Agreement, the Investors' Rights Agreement and the ROFR and (b) any rights under any letter agreement providing for redemption rights, put rights, purchase rights, information rights, rights to consult with and advise management, inspection rights, preemptive rights, board of directors

observer rights or rights to receive information delivered to the board of directors or other similar rights not generally available to stockholders of the Company between the Stockholder and the Company, but excluding, for the avoidance of doubt, any rights the Stockholder may have that relate to any indemnification, commercial, development or employment agreements or arrangements between such Stockholder and the Company or any subsidiary of the Company, which shall survive in accordance with their terms. Each Stockholder hereby terminates and waives all rights of first refusal, redemption rights and rights of notice of the Merger and the other transactions contemplated by the Merger Agreement, effective as of immediately prior to, and contingent upon, the Effective Time.

11. Termination. This Agreement shall terminate and shall cease to be of any further force or effect as of the earliest of (a) such date and time as the Merger Agreement shall have been terminated pursuant to the terms thereof as in effect on the date of this Agreement (and without giving effect to any amendments thereto unless consented to by the Stockholder), (b) the Effective Time and (c) the time this Agreement is terminated upon the written agreement of the Stockholder, the Company and Parent (the "***Expiration Date***"); provided, however, that (i) Section 12 shall survive the termination of this Agreement, and (ii) the termination of this Agreement shall not relieve any party hereto from any liability for any material and willful breach of this Agreement prior to the Effective Time.

12. Miscellaneous Provisions.

(a) Amendments. No amendment of this Agreement shall be effective against any party unless it shall be in writing and signed by each of the parties hereto.

(b) Entire Agreement; Counterparts; Exchanges by Electronic Transmission or Facsimile. This Agreement constitutes the entire agreement between the parties to this Agreement and supersedes all other prior agreements, arrangements and understandings, both written and oral, among the parties with respect to the subject matter hereof. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument. The exchange of a fully executed Agreement (in counterparts or otherwise) by all parties by facsimile or electronic transmission in PDF format shall be sufficient to bind the parties to the terms and conditions of this Agreement.

(c) Applicable Law; Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of laws. In any action or proceeding between any of the parties arising out of or relating to this Agreement, each of the parties: (i) irrevocably and unconditionally consents and submits to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware or, to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, (ii) agrees that all claims in respect of such action or proceeding shall be heard and determined exclusively in accordance with clause (i) of this Section 12(c), (iii) waives any objection to laying venue in any such action or proceeding in such courts, (iv) waives any objection that such courts are an inconvenient forum or do not have jurisdiction over any party, (v) agrees that service of process upon such party in any such action or proceeding shall be effective if notice is given in accordance with Section 12(h) of this Agreement and (vi) irrevocably and unconditionally waives the right to trial by jury.

(d) Assignment. This Agreement shall be binding upon, and shall be enforceable by and inure solely to the benefit of, the parties and their respective successors and permitted assigns; provided, however, that neither this Agreement nor any of a party's rights or obligations hereunder may be assigned or delegated (except by Merger) by such party without the prior written consent of the other party, and any attempted assignment or delegation of this Agreement or any of such rights or obligations by such party without the other party's prior written consent shall be void and of no effect.

(e) No Third Party Rights. Nothing in this Agreement, express or implied, is intended to or shall confer upon any Person any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

(f) Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions of this Agreement or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction. If a final judgment of a court of competent jurisdiction declares that any term or provision of this

Agreement is invalid or unenforceable, the Parties agree that the court making such determination shall have the power to limit such term or provision, to delete specific words or phrases or to replace such term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and this Agreement shall be valid and enforceable as so modified. In the event such court does not exercise the power granted to it in the prior sentence, the Parties agree to replace such invalid or unenforceable term or provision with a valid and enforceable term or provision that will achieve, to the extent possible, the economic, business and other purposes of such invalid or unenforceable term or provision.

(g) Specific Performance. Except as otherwise provided herein, any and all remedies herein expressly conferred upon a party will be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy will not preclude the exercise of any other remedy. The parties agree that irreparable damage for which monetary damages, even if available, would not be an adequate remedy, would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms (including failing to take such actions as are required of it hereunder to consummate this Agreement) or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof the Court of Chancery of the State of Delaware or, to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, this being in addition to any other remedy to which they are entitled at law or in equity, and each of the parties waives any bond, surety or other security that might be required of any other party with respect thereto. Each of the parties further agrees that it will not oppose the granting of an injunction, specific performance or other equitable relief on the basis that any other party has an adequate remedy at law or that any award of specific performance is not an appropriate remedy for any reason at law or in equity.

(h) Notices. All notices and other communications hereunder shall be in writing and shall be deemed duly delivered (i) one (1) Business Day after being sent for next Business Day delivery, fees prepaid, via a reputable international overnight courier service, (ii) upon delivery in the case of delivery by hand or (iii) on the date delivered in the place of delivery if sent by email or facsimile (with a written or electronic confirmation of delivery) prior to 6:00 p.m. (New York City time), otherwise on the next succeeding Business Day, (A) if to the Company or Parent, to the address, electronic mail address or facsimile provided in Section 11.7 of the Merger Agreement, including to the persons designated therein to receive copies; and/or (B) if to the Stockholder, to the Stockholder's address, electronic mail address or facsimile shown below Stockholder's signature to this Agreement.

(i) Confidentiality. Except to the extent required by applicable Law or regulation, the Stockholder shall hold any non-public information regarding the Company, this Agreement, the Merger Agreement and the Merger in strict confidence and shall not divulge any such information to any third person until the Company and Parent have publicly disclosed their entry into the Merger Agreement and this Agreement; provided, however, that the Stockholder may disclose such information to its Affiliates, attorneys, accountants, consultants, and other advisors (provided that such Persons are subject to confidentiality obligations at least as restrictive as those contained herein). Neither the Stockholder nor any of its Affiliates (other than the Company, whose actions shall be governed by the Merger Agreement), shall issue or cause the publication of any press release or other public announcement with respect to the Company, this Agreement, the Merger, the Merger Agreement or the other transactions contemplated hereby or thereby without the prior written consent of the Company and Parent, except as may be required by applicable Law in which circumstance such announcing party shall make reasonable efforts to consult with the Company and Parent to the extent practicable.

(j) Interpretation. The words "hereof," "herein" and "hereunder" and words of like import used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement. The captions herein are included for convenience of reference only and shall be ignored in the construction or interpretation hereof. References to Sections and Appendixes are to Sections and Appendixes of this Agreement unless otherwise specified. Any capitalized terms used in any Appendix but not otherwise defined therein shall have the meaning as defined in this Agreement. Any singular term in this Agreement shall be deemed to include the plural, and any plural term the singular, the masculine gender shall include the feminine and neuter genders; the feminine gender shall include the masculine and neuter genders; and the neuter gender shall include masculine and feminine gender. Whenever the words "include," "includes" or "including" are used in this Agreement, they shall be deemed to be followed by the words "without limitation," whether or not they are in fact followed by those words or words of like import. The word "or" is not exclusive. "Writing," "written" and comparable terms refer to

printing, typing and other means of reproducing words (including electronic media) in a visible form. References to any agreement or Contract are to that agreement or Contract as amended, modified or supplemented from time to time in accordance with the terms hereof and thereof. References to any Person include the successors and permitted assigns of that Person. References to any statute are to that statute and to the rules and regulations promulgated thereunder, in each case as amended, modified, re-enacted thereof, substituted, from time to time. References to "$" and "dollars" are to the currency of the United States. All accounting terms used herein will be interpreted, and all accounting determinations hereunder will be made, in accordance with GAAP unless otherwise expressly specified. References from or through any date shall mean, unless otherwise specified, from and including or through and including, respectively. All references to "days" shall be to calendar days unless otherwise indicated as a "Business Day." Except as otherwise specifically indicated, for purposes of measuring the beginning and ending of time periods in this Agreement (including for purposes of "Business Day" and for hours in a day or Business Day), the time at which a thing, occurrence or event shall begin or end shall be deemed to occur in the Eastern time zone of the United States. The Parties agree that any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in the construction or interpretation of this Agreement.

[*Remainder of Page Left Intentionally Blank*]

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be duly executed as of the date first above written.

COMPANY:

ORUKA THERAPEUTICS, INC.

_____

By:
Title:

[*Signature Page to Company Stockholder Support Agreement*]

PARENT:

ARCA BIOPHARMA, INC.

_____

By:
Title:

[*Signature Page to Company Stockholder Support Agreement*]

[STOCKHOLDER],
in his/her capacity as the Stockholder:

Signature: _____

Address:

_____
_____
_____

[*Signature Page to Company Stockholder Support Agreement*]

Appendix A

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FORM OF ARCA STOCKHOLDER SUPPORT AGREEMENT

This Support Agreement (this "Agreement") is made and entered into as of April 3, 2024, by and among Oruka Therapeutics, Inc., a Delaware corporation (the "Company"), ARCA biopharma, Inc., a Delaware corporation ("Parent"), and the undersigned stockholder (the "Stockholder") of the Parent. Capitalized terms used herein but not otherwise defined shall have the respective meanings ascribed to such terms in the Merger Agreement (as defined below).

RECITALS

WHEREAS, concurrently with the execution and delivery hereof, Parent, the Company and Atlas Merger Sub Corp., a Delaware corporation and a wholly owned subsidiary of Parent (the "First Merger Sub"), and Atlas Merger Sub II, LLC, a Delaware limited liability company (the "Second Merger Sub") have entered into an Agreement and Plan of Merger and Reorganization (as such agreement may be amended or supplemented from time to time pursuant to the terms thereof, the "Merger Agreement"), pursuant to which (i) the First Merger Sub will merge with and into the Company, with the Company surviving the merger as the surviving corporation and a wholly owned subsidiary of Parent and (ii) the Company will merge with and into the Second Merger Sub, with Second Merger Sub being the surviving entity of the Second Merger, upon the terms and subject to the conditions set forth in the Merger Agreement (together, the "Merger").

WHEREAS, as of the date hereof, the Stockholder is the beneficial owner (as defined in Rule 13d-3 under the Exchange Act) of such number of shares of Parent Common Stock as indicated in Appendix A.

WHEREAS, as an inducement to the willingness of the Company to enter into the Merger Agreement, the Company has required that Stockholder enter into this Agreement.

NOW, THEREFORE, intending to be legally bound, the parties hereby agree as follows:

1. Certain Definitions. Capitalized terms used but not otherwise defined herein shall have the meanings ascribed thereto in the Merger Agreement. For all purposes of this Agreement, the following terms shall have the following respective meanings:

(a) "Constructive Sale" means, with respect to any security, a short sale with respect to such security, entering into or acquiring a derivative contract with respect to such security, entering into or acquiring a futures or forward contract to deliver such security or entering into any other hedging or other derivative transaction that has the effect of either directly or indirectly materially changing the economic benefits or risks of ownership of such security.

(b) "Parent Stockholder Matters" means the approval of the Merger Agreement and the Contemplated Transactions and the Parent Charter Amendment and, if deemed necessary by Parent the approval of the Parent Legacy Transaction.

(c) "Shares" means (i) all shares of Parent Common Stock owned, beneficially or of record, by the Stockholder as of the date hereof, and (ii) all additional shares of Parent Common Stock acquired by the Stockholder, beneficially owned or of record, during the period commencing with the execution and delivery of this Agreement and expiring on the Closing Date.

(d) "Transfer" or "Transferred" means, with respect to any security, the direct or indirect assignment, sale, transfer, tender, exchange, pledge or hypothecation, or the grant, creation or suffrage of a lien, security interest or encumbrance in or upon, or the gift, grant or placement in trust, or the Constructive Sale or other disposition of such security (including transfers by testamentary or intestate succession, by domestic relations order or other court order, or otherwise by operation of law) or any right, title or interest therein (including any right or power to vote to which the holder thereof may be entitled, whether such right or power is granted by proxy or otherwise), or the record or beneficial ownership thereof, the offer to make such a sale, transfer, Constructive Sale or other disposition, and each agreement, arrangement or understanding, whether or not in writing, to effect any of the foregoing.

2. Transfer and Voting Restrictions. The Stockholder covenants to Parent and the Company as follows:

(a) Except as otherwise permitted by Section 2(c), during the period commencing with the execution and delivery of this Agreement and expiring on the Expiration Date (as defined below), the Stockholder shall not Transfer any of the Stockholder's Shares, or publicly announce its intention to Transfer any of its Shares.

(b) Except as otherwise permitted by this Agreement or otherwise permitted or required by order of a court of competent jurisdiction or a Governmental Authority, the Stockholder will not commit any act that would restrict the Stockholder's legal power, authority and right to vote all of the Shares held by the Stockholder or otherwise prevent or disable the Stockholder from performing any of his, her or its obligations under this Agreement. Without limiting the generality of the foregoing, except for this Agreement, and as otherwise permitted by this Agreement, the Stockholder shall not enter into any voting agreement with any person or entity with respect to any of the Stockholder's Shares, grant any person or entity any proxy (revocable or irrevocable) or power of attorney with respect to any of the Shares, deposit any Shares in a voting trust or otherwise enter into any agreement or arrangement with any person or entity in each case, which has the effect of limiting or affecting the Stockholder's legal power, authority or right to vote the Stockholder's Shares in favor of the Parent Stockholder Matters and against any competing proposals.

(c) Notwithstanding anything else herein to the contrary, the Stockholder may, at any time, Transfer Shares (i) by will or other testamentary document or by intestacy, (ii) to such Stockholder's Affiliates (in each case, directly or indirectly) (iii) to any member of the Stockholder's immediate family (or, if the Stockholder is a corporation, partnership or other entity, to an immediate family member of a beneficial owner of the Shares held by the Stockholder), (iv) to any trust or other entity for the direct or indirect benefit of the Stockholder or the immediate family of the Stockholder (or, if the Stockholder is a corporation, partnership or other entity, for the direct or indirect benefit of an immediate family member of a beneficial owner of the Shares held by the Stockholder) or otherwise for estate tax or estate planning purposes, (v) in the case of a Stockholder who is not a natural person, by pro rata distributions from the Stockholder to its members, partners, or shareholders pursuant to the Stockholder's organizational documents, (vi) purchased from the Company on or about the Closing Date but prior to the Closing (including any shares of the Company issued upon conversion of any pre-funded Company Warrants), (vii) to the extent required by applicable Law and (viii) pursuant to the exercise of any option to purchase any Parent Common Stock, including in order to pay the exercise price of such option or satisfy taxes applicable thereto; provided, that in the cases of clauses (i)-(v), (x) such Transferred Shares shall continue to be bound by this Agreement and (y) the applicable direct transferee (if any) of such Transferred Shares shall have executed and delivered to Parent and the Company a support agreement substantially identical to this Agreement upon consummation of the Transfer if not already a party thereto.

(d) Notwithstanding anything to the contrary herein, nothing in this Agreement shall obligate the Stockholder to exercise any option or any other right to acquire any shares of Parent Common Stock.

3. Agreement to Vote Shares. The Stockholder covenants to the Company as follows:

(a) Until the Expiration Date (as defined below), at any meeting of the stockholders of Parent called to vote upon the Parent Stockholder Matters, however called, and at every adjournment or postponement thereof, and on every action or approval by written consent of the stockholders of Parent, the Stockholder shall be present (in person or by proxy) and vote, or exercise its right to consent with respect to, all Shares held by the Stockholder (A) in favor of the Parent Stockholder Matters, and (B) against any Acquisition Proposal.

(b) If the Stockholder is the beneficial owner, but not the record holder, of Shares, the Stockholder agrees to take all actions necessary to cause the record holder and any nominees to be present (in person or by proxy) and vote all the Stockholder's Shares in accordance with this Section 3.

(c) In the event of a stock split, stock dividend or distribution, or any change in the capital stock of Parent by reason of any split-up, reverse stock split, recapitalization, combination, reclassification, reincorporation, exchange of shares or the like, the term "Shares" shall be deemed to refer to and include such shares as well as all such stock dividends and distributions and any securities into which or for which any or all of such shares may be changed or exchanged or which are received in such transaction.

4. Action in Stockholder Capacity Only. The Stockholder is entering into this Agreement solely in the Stockholder's capacity as a record holder and beneficial owner, as applicable, of its Shares and not in the Stockholder's capacity as a director or officer of Parent. Nothing herein shall limit or affect the Stockholder's ability to act as an officer or director of Parent.

5. Irrevocable Proxy. The Stockholder hereby revokes (or agrees to cause to be revoked) any proxies that the Stockholder has heretofore granted with respect to its Shares. In the event and to the extent that the Stockholder fails to vote the Shares in accordance with Section 3 at any applicable meeting of the stockholders of Parent or pursuant to any applicable written consent of the stockholders of Parent, the Stockholder shall be deemed to have irrevocably granted to, and appointed, Parent, and any individual designated in writing by it, and each of them individually, as his, her or its proxy and attorney-in-fact (with full power of substitution), for and in its name, place and stead, to vote his, her or its Shares in any action by written consent of Parent stockholders or at any meeting of Parent stockholders called with respect to any of the matters specified in, and in accordance and consistent with, Section 3 of this Agreement. Parent agrees not to exercise the proxy granted herein for any purpose other than the purposes described in this Agreement. Except as otherwise provided for herein, the Stockholder hereby affirms that the irrevocable proxy is coupled with an interest and may under no circumstances be revoked and that such irrevocable proxy is executed and intended to be irrevocable. Notwithstanding any other provisions of this Agreement, the irrevocable proxy granted hereunder shall automatically terminate on the Expiration Date.

6. No Solicitation. The Stockholder agrees not to directly or indirectly, including through any of its officers, directors or agents, take any action that Parent is prohibited from taking pursuant to Section 5.4 of the Merger Agreement and Section 5.4 of the Merger Agreement is hereby incorporated by reference *mutatis mutandis*.

7. Documentation and Information. The Stockholder shall permit and hereby authorizes Parent and the Company to publish and disclose in all documents and schedules filed with the SEC, and any press release or other disclosure document that Parent or the Company reasonably determines to be necessary in connection with the Merger and any of the Contemplated Transactions, a copy of this Agreement, the Stockholder's identity and ownership of the Shares and the nature of the Stockholder's commitments and obligations under this Agreement. Each of Parent and the Company is an intended third-party beneficiary of this Section 7.

8. Representations and Warranties of the Stockholder. The Stockholder hereby represents and warrants to Parent and the Company as follows:

(a) (i) The Stockholder is the beneficial or record owner of the shares of Parent Common Stock indicated in Appendix A (each of which shall be deemed to be "held" by the Stockholder for purposes of Section 3 unless otherwise expressly stated with respect to any shares in Appendix A), free and clear of any and all Encumbrances (except for any Encumbrance that may be imposed pursuant to this Agreement), and Encumbrances arising under applicable securities or community property laws; and (ii) the Stockholder does not beneficially own any securities of Parent other than the shares of Parent Common Stock and rights to purchase shares of Parent Common Stock set forth in Appendix A.

(b) Except as otherwise provided in this Agreement, the Stockholder has full power and authority to (i) make, enter into and carry out the terms of this Agreement and (ii) vote all of its Shares in the manner set forth in this Agreement without the consent or approval of, or any other action on the part of, any other person or entity (including any Governmental Authority). Without limiting the generality of the foregoing, the Stockholder has not entered into any voting agreement (other than this Agreement) with any person with respect to any of the Stockholder's Shares, granted any person any proxy (revocable or irrevocable) or power of attorney with respect to any of the Stockholder's Shares, deposited any of the Stockholder's Shares in a voting trust or entered into any arrangement or agreement with any person limiting or affecting the Stockholder's legal power, authority or right to vote the Stockholder's Shares on any matter.

(c) This Agreement has been duly and validly executed and delivered by the Stockholder and (assuming the due authorization, execution and delivery by the other parties hereto) constitutes a valid and binding agreement of the Stockholder enforceable against the Stockholder in accordance with its terms, subject to the Enforceability Exceptions. The execution and delivery of this Agreement by the Stockholder and the performance by the Stockholder of the agreements and obligations hereunder will not result in any breach or violation of or be in conflict with or constitute a default under any term of any Contract or if applicable any provision of an organizational document (including a certificate of incorporation) to or by which the Stockholder is a party or bound,

or any applicable law to which the Stockholder (or any of the Stockholder's assets) is subject or bound, except for any such breach, violation, conflict or default which, individually or in the aggregate, would not reasonably be expected to materially impair or adversely affect the Stockholder's ability to perform its obligations under this Agreement.

(d) The execution, delivery and performance of this Agreement by the Stockholder do not and will not require any consent, approval, authorization or permit of, action by, filing with or notification to, any Governmental Authority, except for any such consent, approval, authorization, permit, action, filing or notification the failure of which to make or obtain, individually or in the aggregate, has not and would not materially impair the Stockholder's ability to perform its obligations under this Agreement.

(e) The Stockholder has had the opportunity to review the Merger Agreement and this Agreement with counsel of the Stockholder's own choosing. The Stockholder has had an opportunity to review with its own tax advisors the tax consequences of the Merger and the Contemplated Transactions. The Stockholder understands that it must rely solely on its advisors and not on any statements or representations made by Parent, the Company or any of their respective agents or representatives with respect to the tax consequences of the Merger and the Contemplated Transactions. The Stockholder understands that such Stockholder (and not Parent, the Company or the Surviving Corporation) shall be responsible for such Stockholder's tax liability that may arise as a result of the Merger or the Contemplated Transactions. The Stockholder understands and acknowledges that the Company, Parent and Merger Sub are entering into the Merger Agreement in reliance upon the Stockholder's execution, delivery and performance of this Agreement.

(f) With respect to the Stockholder, as of the date hereof, there is no action, suit, investigation or proceeding pending against, or, to the knowledge of the Stockholder, threatened against, the Stockholder or any of the Stockholder's properties or assets (including the Shares) that would reasonably be expected to prevent or materially delay or impair the ability of the Stockholder to perform its obligations hereunder or to consummate the transactions contemplated hereby.

9. Termination. This Agreement shall terminate and shall cease to be of any further force or effect as of the earliest of (a) such date and time as the Merger Agreement shall have been terminated pursuant to the terms thereof as in effect on the date of this Agreement (and without giving effect to any amendments thereto unless consented to by the Stockholder), (b) the Effective Time and (c) the time this Agreement is terminated upon the written agreement of the Stockholder, the Company and Parent (the "***Expiration Date***"); provided, however, that (i) Section 10 shall survive the termination of this Agreement, and (ii) the termination of this Agreement shall not relieve any party hereto from any liability for any material and willful breach of this Agreement prior to the Effective Time.

10. Miscellaneous Provisions.

(a) Amendments. No amendment of this Agreement shall be effective against any party unless it shall be in writing and signed by each of the parties hereto.

(b) Entire Agreement; Counterparts; Exchanges by Electronic Transmission or Facsimile. This Agreement constitutes the entire agreement between the parties to this Agreement and supersedes all other prior agreements, arrangements and understandings, both written and oral, among the parties with respect to the subject matter hereof. This Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument. The exchange of a fully executed Agreement (in counterparts or otherwise) by all parties by facsimile or electronic transmission in PDF format shall be sufficient to bind the parties to the terms and conditions of this Agreement.

(c) Applicable Law; Jurisdiction. This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of laws. In any action or proceeding between any of the parties arising out of or relating to this Agreement, each of the parties: (i) irrevocably and unconditionally consents and submits to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware or, to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, (ii) agrees that all claims in respect of such action or proceeding shall be heard and determined exclusively in accordance with clause (i) of this Section 10(c), (iii) waives any objection to laying

venue in any such action or proceeding in such courts, (iv) waives any objection that such courts are an inconvenient forum or do not have jurisdiction over any party, (v) agrees that service of process upon such party in any such action or proceeding shall be effective if notice is given in accordance with Section 10(h) of this Agreement and (vi) irrevocably and unconditionally waives the right to trial by jury.

(d) Assignment. This Agreement shall be binding upon, and shall be enforceable by and inure solely to the benefit of, the parties and their respective successors and permitted assigns; provided, however, that neither this Agreement nor any of a party's rights or obligations hereunder may be assigned or delegated (except by the Merger) by such party without the prior written consent of the other party, and any attempted assignment or delegation of this Agreement or any of such rights or obligations by such party without the other party's prior written consent shall be void and of no effect.

(e) No Third Party Rights. Nothing in this Agreement, express or implied, is intended to or shall confer upon any Person any right, benefit or remedy of any nature whatsoever under or by reason of this Agreement.

(f) Severability. Any term or provision of this Agreement that is invalid or unenforceable in any situation in any jurisdiction shall not affect the validity or enforceability of the remaining terms and provisions of this Agreement or the validity or enforceability of the offending term or provision in any other situation or in any other jurisdiction. If a final judgment of a court of competent jurisdiction declares that any term or provision of this Agreement is invalid or unenforceable, the Parties agree that the court making such determination shall have the power to limit such term or provision, to delete specific words or phrases or to replace such term or provision with a term or provision that is valid and enforceable and that comes closest to expressing the intention of the invalid or unenforceable term or provision, and this Agreement shall be valid and enforceable as so modified. In the event such court does not exercise the power granted to it in the prior sentence, the Parties agree to replace such invalid or unenforceable term or provision with a valid and enforceable term or provision that will achieve, to the extent possible, the economic, business and other purposes of such invalid or unenforceable term or provision.

(g) Specific Performance. Except as otherwise provided herein, any and all remedies herein expressly conferred upon a party will be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy will not preclude the exercise of any other remedy. The parties agree that irreparable damage for which monetary damages, even if available, would not be an adequate remedy, would occur in the event that any of the provisions of this Agreement were not performed in accordance with their specific terms (including failing to take such actions as are required of it hereunder to consummate this Agreement) or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Agreement and to enforce specifically the terms and provisions hereof the Court of Chancery of the State of Delaware or, to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, this being in addition to any other remedy to which they are entitled at law or in equity, and each of the parties waives any bond, surety or other security that might be required of any other party with respect thereto. Each of the parties further agrees that it will not oppose the granting of an injunction, specific performance or other equitable relief on the basis that any other party has an adequate remedy at law or that any award of specific performance is not an appropriate remedy for any reason at law or in equity.

(h) Notices. All notices and other communications hereunder shall be in writing and shall be deemed duly delivered (i) one (1) Business Day after being sent for next Business Day delivery, fees prepaid, via a reputable international overnight courier service, (ii) upon delivery in the case of delivery by hand or (iii) on the date delivered in the place of delivery if sent by email or facsimile (with a written or electronic confirmation of delivery) prior to 6:00 p.m. (New York City time), otherwise on the next succeeding Business Day, (A) if to the Company or Parent, to the address, electronic mail address or facsimile provided in Section 11.7 of the Merger Agreement, including to the persons designated therein to receive copies; and/or (B) if to the Stockholder, to the Stockholder's address, electronic mail address or facsimile shown below Stockholder's signature to this Agreement.

(i) Confidentiality. Except to the extent required by applicable Law or regulation, the Stockholder shall hold any non-public information regarding the Company, this Agreement, the Merger Agreement and the Merger in strict confidence and shall not divulge any such information to any third person until the Company and Parent have publicly disclosed their entry into the Merger Agreement and this Agreement; provided, however, that the Stockholder may disclose such information to its Affiliates, attorneys, accountants, consultants, and other advisors (provided that such Persons are subject to confidentiality obligations at least as restrictive as those contained

herein). Neither the Stockholder nor any of its Affiliates (other than Parent, whose actions shall be governed by the Merger Agreement), shall issue or cause the publication of any press release or other public announcement with respect to Parent, this Agreement, the Merger, the Merger Agreement or the other transactions contemplated hereby or thereby without the prior written consent of the Company and Parent, except as may be required by applicable Law in which circumstance such announcing party shall make reasonable efforts to consult with the Company and Parent to the extent practicable.

(j) Interpretation. The words "hereof," "herein" and "hereunder" and words of like import used in this Agreement shall refer to this Agreement as a whole and not to any particular provision of this Agreement. The captions herein are included for convenience of reference only and shall be ignored in the construction or interpretation hereof. References to Sections and Appendixes are to Sections and Appendixes of this Agreement unless otherwise specified. Any capitalized terms used in any Appendix but not otherwise defined therein shall have the meaning as defined in this Agreement. Any singular term in this Agreement shall be deemed to include the plural, and any plural term the singular, the masculine gender shall include the feminine and neuter genders; the feminine gender shall include the masculine and neuter genders; and the neuter gender shall include masculine and feminine gender. Whenever the words "include," "includes" or "including" are used in this Agreement, they shall be deemed to be followed by the words "without limitation," whether or not they are in fact followed by those words or words of like import. The word "or" is not exclusive. "Writing," "written" and comparable terms refer to printing, typing and other means of reproducing words (including electronic media) in a visible form. References to any agreement or Contract are to that agreement or Contract as amended, modified or supplemented from time to time in accordance with the terms hereof and thereof. References to any Person include the successors and permitted assigns of that Person. References to any statute are to that statute and to the rules and regulations promulgated thereunder, in each case as amended, modified, re-enacted thereof, substituted, from time to time. References to "$" and "dollars" are to the currency of the United States. All accounting terms used herein will be interpreted, and all accounting determinations hereunder will be made, in accordance with GAAP unless otherwise expressly specified. References from or through any date shall mean, unless otherwise specified, from and including or through and including, respectively. All references to "days" shall be to calendar days unless otherwise indicated as a "Business Day." Except as otherwise specifically indicated, for purposes of measuring the beginning and ending of time periods in this Agreement (including for purposes of "Business Day" and for hours in a day or Business Day), the time at which a thing, occurrence or event shall begin or end shall be deemed to occur in the Eastern time zone of the United States. The Parties agree that any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in the construction or interpretation of this Agreement.

[*Remainder of Page Left Intentionally Blank*]

IN WITNESS WHEREOF, the undersigned have caused this Agreement to be duly executed as of the date first above written.

COMPANY:

ORUKA THERAPEUTICS, INC.

_____

By:
Title:

[*Signature Page to Parent Stockholder Support Agreement*]

PARENT:

ARCA BIOPHARMA, INC.

_____

By:
Title:

[*Signature Page to Parent Stockholder Support Agreement*]

[STOCKHOLDER],
in his/her capacity as the Stockholder:

Signature: _____

Address:

_____
_____
_____

[*Signature Page to Parent Stockholder Support Agreement*]

Appendix A

Annex E

FORM OF LOCK-UP AGREEMENT

April 3, 2024

ARCA biopharma, Inc.
10170 Church Ranch Way, Suite 100
Westminster, CO

Ladies and Gentlemen:

The undersigned signatory of this lock-up agreement (this "Lock-Up Agreement") understands that ARCA biopharma, Inc., a Delaware corporation ("Parent"), has entered into an Agreement and Plan of Merger and Reorganization, dated as of April 3, 2024 (as the same may be amended from time to time, the "Merger Agreement") with Atlas Merger Sub Corp., a Delaware corporation and a wholly owned subsidiary of Parent, Atlas Merger Sub II LLC, a Delaware limited liability company and a wholly owned subsidiary of Parent, and Oruka Therapeutics, Inc., a Delaware corporation (the "Company"). Capitalized terms used but not otherwise defined herein shall have the respective meanings ascribed to such terms in the Merger Agreement.

As a condition and inducement to each of the parties to enter into the Merger Agreement and to consummate the transactions contemplated thereby, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned hereby irrevocably agrees that, subject to the exceptions set forth herein, without the prior written consent of Parent, the undersigned will not, during the period commencing upon the Closing and ending on the date that is 180 days after the Closing Date (the "Restricted Period"); provided, that if a registration statement covering the shares of Company Common Stock and pre-funded Company Warrants issued and sold in connection with the Company Pre-Closing Financing (other than any shares or pre-funded Company Warrants held by affiliates of the Company) has not been declared effective by the SEC prior to the end of such 180-day period, then the Restricted Period shall end on such later date upon which such registration statement is first declared effective:

(1) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of Parent Common Stock or any securities convertible into or exercisable or exchangeable for shares of Parent Common Stock (including without limitation, shares of Parent Common Stock or such other securities which may be deemed to be beneficially owned by the undersigned in accordance with the rules and regulations of the SEC and securities of Parent which may be issued upon exercise of an option to purchase shares of Parent Common Stock or a warrant to purchase shares of Parent Common Stock) that are currently or hereafter owned by the undersigned, except as set forth below (collectively, the "Undersigned's Shares");

(2) enter into any swap, short sale, hedge or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the Undersigned's Shares regardless of whether any such transaction described in clause (1) above or this clause (2) is to be settled by delivery of shares of Parent Common Stock or other securities, in cash or otherwise;

(3) make any demand for, or exercise any right with respect to, the registration of any shares of Parent Common Stock or any security convertible into or exercisable or exchangeable for shares of Parent Common Stock (other than such rights set forth in the Merger Agreement); or

(4) publicly disclose the intention to do any of the foregoing.

The restrictions and obligations contemplated by this Lock-Up Agreement shall not apply to:

(a) transfers of the Undersigned's Shares:

(1) (A) to any person related to the undersigned (or to an ultimate beneficial owner of the undersigned) by blood or adoption who is an immediate family member of the undersigned, or by marriage or domestic partnership (each, a "Family Member"), or to a trust formed for the benefit of the undersigned or any of the undersigned's Family Members, (B) to the undersigned's estate, following the death of the undersigned, by

will, intestacy or other operation of Law, (C) as a bona fide gift or a charitable contribution, (D) by operation of Law pursuant to a qualified domestic order or in connection with a divorce settlement or (E) to any partnership, corporation or limited liability company which is controlled by or under common control with the undersigned and/or by any such Family Member(s);

(2) if the undersigned is a corporation, partnership, limited liability company or other entity, (A) to another corporation, partnership, limited liability company or other entity that is a direct or indirect affiliate (as defined under Rule 12b-2 of the Exchange Act) of the undersigned, including investment funds or other entities that controls or manages, is under common control or management with, or is controlled or managed by, the undersigned, (B) as a distribution or dividend to equity holders, current or former general or limited partners, members or managers (or to the estates of any of the foregoing), as applicable, of the undersigned (including upon the liquidation and dissolution of the undersigned pursuant to a plan of liquidation approved by the undersigned's equity holders), (C) as a bona fide gift or a charitable contribution or otherwise to a trust or other entity for the direct or indirect benefit of an immediate family member of a beneficial owner (as defined in Rule 13d-3 of the Exchange Act) of the Undersigned's Shares or (D) transfers or dispositions not involving a change in beneficial ownership; or

(3) if the undersigned is a trust, to any grantors or beneficiaries of the trust;

provided that, in the case of any transfer or distribution pursuant to this clause (a), such transfer is not for value (other than transfers pursuant to 1(A), 1(E) or 2(A)) and each donee, heir, beneficiary or other transferee or distributee shall sign and deliver to Parent a lock-up agreement in the form of this Lock-Up Agreement with respect to the shares of Parent Common Stock or such other securities that have been so transferred or distributed;

(b) the exercise of an option to purchase shares of Parent Common Stock (including a net or cashless exercise of an option to purchase shares of Parent Common Stock), and any related transfer of shares of Parent Common Stock to Parent for the purpose of paying the exercise price of such options or for paying taxes (including estimated taxes) due as a result of the exercise of such options or for paying taxes (including estimated taxes) due as a result of the exercise of such options; provided that, for the avoidance of doubt, the underlying shares of Parent Common Stock shall continue to be subject to the restrictions on transfer set forth in this Lock-Up Agreement;

(c) transfers to Parent in connection with the net settlement of any other equity award that represents the right to receive in the future shares of Parent Common Stock, settled in shares of Parent Common Stock, to pay any tax withholding obligations; provided that, for the avoidance of doubt, the underlying shares of Parent Common Stock shall continue to be subject to the restrictions on transfer set forth in this Lock-Up Agreement;

(d) the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of Parent Common Stock; provided that such plan does not provide for any transfers of shares of Parent Common Stock during the Restricted Period;

(e) transfers by the undersigned of shares of Parent Common Stock purchased by the undersigned on the open market or in a public offering by Parent, in each case following the Effective Time;

(f) pursuant to a bona-fide third party tender offer, merger, consolidation or other similar transaction made to all holders of Parent's capital stock involving a change of control of Parent, provided that in the event that such tender offer, merger, consolidation or other such transaction is not completed, the Undersigned's Shares shall remain subject to the restrictions contained in this Lock-Up Agreement;

(g) pursuant to an order of a court or regulatory agency; or

(h) transfers by the undersigned of shares of Parent Common Stock issued pursuant to the Merger Agreement in respect of shares of the Company (including any shares of the Company issued upon exercise of any pre-funded Company Warrants), if any, purchased from the Company on or about the Closing Date but prior to the Closing.

and provided, further, that, with respect to each of (b), (c), and (d) above, no filing by any party (including any donor, donee, transferor, transferee, distributor or distributee) under Section 16 of the Exchange Act or other public announcement shall be made voluntarily reporting a reduction in beneficial ownership of shares of Parent Common Stock or any securities convertible into or exercisable or exchangeable for Parent Common Stock in connection with such transfer or disposition during the Restricted Period (other than any exit filings) and if any filings under

Section 16(a) of the Exchange Act, or other public filing, report or announcement reporting a reduction in beneficial ownership of shares of Parent Common Stock in connection with such transfer or distribution, shall be legally required during the Restricted Period, such filing, report or announcement shall clearly indicate in the footnotes therein, in reasonable detail, a description of the circumstances of the transfer and that the shares remain subject to the lock-up agreement.

For purposes of this Lock-Up Agreement, "change of control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons, of the Company's voting securities if, after such transfer, the Company's stockholders as of immediately prior to such transfer do not hold a majority of the outstanding voting securities of the Company (or the surviving entity).

Any attempted transfer in violation of this Lock-Up Agreement will be of no effect and null and void, regardless of whether the purported transferee has any actual or constructive knowledge of the transfer restrictions set forth in this Lock-Up Agreement, and will not be recorded on the share register of Parent. In furtherance of the foregoing, the undersigned agrees that Parent and any duly appointed transfer agent for the registration or transfer of the securities described herein are hereby authorized to decline to make any transfer of securities if such transfer would constitute a violation or breach of this Lock-Up Agreement. Parent may cause the legend set forth below, or a legend substantially equivalent thereto, to be placed upon any certificate(s) or other documents, ledgers or instruments evidencing the undersigned's ownership of Parent Common Stock:

> THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO AND MAY ONLY BE TRANSFERRED IN COMPLIANCE WITH A LOCK-UP AGREEMENT, A COPY OF WHICH IS ON FILE AT THE PRINCIPAL OFFICE OF THE COMPANY.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this Lock-Up Agreement. All authority herein conferred or agreed to be conferred and any obligations of the undersigned shall be binding upon the successors, assigns, heirs or personal representatives of the undersigned.

The undersigned understands that if the Merger Agreement is terminated for any reason, the undersigned shall be released from all obligations under this Lock-Up Agreement. The undersigned understands that Parent is proceeding with the transactions contemplated by the Merger Agreement in reliance upon this Lock-Up Agreement.

Except as otherwise provided herein, any and all remedies herein expressly conferred upon a party will be deemed cumulative with and not exclusive of any other remedy conferred hereby, or by law or equity upon such party, and the exercise by a party of any one remedy will not preclude the exercise of any other remedy. The parties agree that irreparable damage for which monetary damages, even if available, would not be an adequate remedy, would occur in the event that any of the provisions of this Lock-Up Agreement were not performed in accordance with their specific terms (including failing to take such actions as are required of it hereunder to consummate this Agreement) or were otherwise breached. It is accordingly agreed that the parties shall be entitled to an injunction or injunctions to prevent breaches of this Lock-Up Agreement and to enforce specifically the terms and provisions hereof in any court of the United States or any state having jurisdiction, this being in addition to any other remedy to which they are entitled at law or in equity, and each of the parties waives any bond, surety or other security that might be required of any other party with respect thereto. Each of the parties further agrees that it will not oppose the granting of an injunction, specific performance or other equitable relief on the basis that any other party has an adequate remedy at law or that any award of specific performance is not an appropriate remedy for any reason at law or in equity.

In the event that any holder of Parent's securities that are subject to a substantially similar agreement entered into by such holder, other than the undersigned, is permitted by Parent to sell or otherwise transfer or dispose of shares of Parent Common Stock for value other than as permitted by this or a substantially similar agreement entered into by such holder (whether in one or multiple releases or waivers), the same percentage of shares of Parent Common Stock held by the undersigned on the date of such release or waiver as the percentage of the total number of outstanding shares of Parent Common Stock held by such holder on the date of such release or waiver that are the subject of such release or waiver shall be immediately and fully released on the same terms from any remaining restrictions set forth herein (the "Pro-Rata Release"); provided, however, that such Pro-Rata Release shall not be applied unless

and until permission has been granted by Parent to an equity holder or equity holders to sell or otherwise transfer or dispose of all or a portion of such equity holders shares of Parent Common Stock in an aggregate amount in excess of 1% of the number of shares of Parent Common Stock subject to a substantially similar agreement. In the event of any Pro-Rata Release, the Company shall promptly (and in any event within two (2) business days of such release) inform each relevant holder of Parent Common Stock or warrants of the terms of such Pro-Rata Release.

Upon the release of any of the Undersigned's Shares from this Lock-Up Agreement, Parent will reasonably cooperate with the undersigned to facilitate the timely preparation and delivery of certificates representing the Undersigned Shares without the restrictive legend above or the withdrawal of any stop transfer instructions by virtue of this Lock-Up Agreement.

This Lock-Up Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of laws. In any action or proceeding between any of the parties arising out of or relating to this Lock-Up Agreement, each of the parties: (i) irrevocably and unconditionally consents and submits to the exclusive jurisdiction and venue of the Court of Chancery of the State of Delaware or, to the extent such court does not have subject matter jurisdiction, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware, (ii) agrees that all claims in respect of such action or proceeding shall be heard and determined exclusively in accordance with foregoing clause (i) of this paragraph, (iii) waives any objection to laying venue in any such action or proceeding in such courts, (iv) waives any objection that such courts are an inconvenient forum or do not have jurisdiction over any party and (v) irrevocably and unconditionally waives the right to trial by jury. This Lock-Up Agreement constitutes the entire agreement between the parties to this Lock-Up Agreement and supersedes all other prior agreements, arrangements and understandings, both written and oral, among the parties with respect to the subject matter hereof. This Lock-Up Agreement may be executed in several counterparts, each of which shall be deemed an original and all of which shall constitute one and the same instrument. The exchange of a fully executed Lock-Up Agreement (in counterparts or otherwise) by all parties by facsimile or electronic transmission in PDF format shall be sufficient to bind the parties to the terms and conditions of this Agreement.

[SIGNATURE PAGE FOLLOWS]

Very truly yours,

Print Name of Stockholder:

_____

Signature (for individuals):

_____

Signature (for entities):

By: _____

Name:

Title:

[Signature Page to Lock-Up Agreement]

Accepted and Agreed
by ARCA biopharma, Inc.:

By: _____
Name:
Title:

[Signature Page to Lock-Up Agreement]

ARCA BIOPHARMA, INC.

**CERTIFICATE OF DESIGNATION OF PREFERENCES,
RIGHTS AND LIMITATIONS
OF
SERIES B NON-VOTING CONVERTIBLE PREFERRED STOCK**

Pursuant to Section 151 of the
General Corporation Law of the State of Delaware

THE UNDERSIGNED DOES HEREBY CERTIFY, on behalf of ARCA biopharma, Inc., a Delaware corporation (the "***Corporation***"), that the following resolution was duly adopted by the Board of Directors of the Corporation (the "***Board of Directors***"), in accordance with the provisions of Section 151 of the General Corporation Law of the State of Delaware (the "***DGCL***"), at a meeting duly called and held on July 15, 2024, which resolution provides for the creation of a series of the Corporation's Preferred Stock, par value $0.001 per share, which is designated as "Series B Non-Voting Convertible Preferred Stock," with the preferences, rights and limitations set forth therein relating to dividends, conversion, redemption, dissolution and distribution of assets of the Corporation.

WHEREAS: the Amended and Restated Certificate of Incorporation of the Corporation (as amended from time to time, the "***Certificate of Incorporation***"), provides for a class of its authorized stock known as Preferred Stock, consisting of 5,000,000 shares, $0.001 par value per share (the "***Preferred Stock***"), issuable from time to time in one or more series.

RESOLVED: that, pursuant to authority conferred upon the Board of Directors by the Certificate of Incorporation, (i) a series of Preferred Stock of the Corporation be, and hereby is, authorized by the Board of Directors, (ii) the Board of Directors hereby authorizes the issuance of shares of "Series B Non-Voting Convertible Preferred Stock" pursuant to the terms of the Agreement and Plan of Merger and Reorganization, dated April 3, 2024, by and among the Corporation, Atlas Merger Sub Corp., a Delaware corporation and wholly owned subsidiary of the Corporation, Atlas Merger Sub II, LLC, a Delaware limited liability company and wholly owned subsidiary of Parent, and Oruka Therapeutics, Inc. (the "***Merger Agreement***"), and (iii) the Board of Directors hereby fixes the designations, powers, preferences and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions thereof, of such shares of such series of Preferred Stock, in addition to any provisions set forth in the Certificate of Incorporation that are applicable to the Preferred Stock of all classes and series, as follows:

TERMS OF SERIES B NON-VOTING CONVERTIBLE PREFERRED STOCK

1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"***Business Day***" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"***Buy-In***" shall have the meaning set forth in Section 6.4.3.

"***Closing Sale Price***" means, for any security as of any date, the last closing trade price for such security immediately prior to 4:00 p.m., New York City time, on the principal Trading Market where such security is listed or traded, as reported by Bloomberg, L.P. (or an equivalent, reliable reporting service), or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, L.P., or, if no last trade price is reported for such security by Bloomberg, L.P., the average of the bid prices of any market makers for such security as reported on the OTC Pink Market by OTC Markets Group, Inc. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as determined in good faith by the Board of Directors.

"***Commission***" means the United States Securities and Exchange Commission.

"***Common Stock***" means the Corporation's common stock, par value $0.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed.

"***Conversion Shares***" means, collectively, the shares of Common Stock issuable upon conversion of the shares of Series B Non-Voting Preferred Stock in accordance with the terms hereof.

"***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

"***Holder***" means a holder of shares of Series B Non-Voting Preferred Stock.

"***Person***" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"***Trading Day***" means a day on which the principal Trading Market is open for business.

"***Trading Market***" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

2. Designation, Amount and Par Value. The series of Preferred Stock shall be designated as the Corporation's Series B Non-Voting Convertible Preferred Stock (the "***Series B Non-Voting Preferred Stock***") and the number of shares so designated shall be . Each share of Series B Non-Voting Preferred Stock shall have a par value of $0.001 per share.

3. Dividends. Holders shall be entitled to receive, and the Corporation shall pay, dividends on shares of the Series B Non-Voting Preferred Stock (on an as-if-converted-to-Common-Stock basis, without regard to the Beneficial Ownership Limitation (as defined below)) equal to and in the same form, and in the same manner, as dividends (other than dividends on shares of the Common Stock payable in the form of Common Stock) actually paid on shares of the Common Stock when, as and if such dividends (other than dividends payable in the form of Common Stock) are paid on shares of the Common Stock. Other than as set forth in the previous sentence, no other dividends shall be paid on shares of Series B Non-Voting Preferred Stock, and the Corporation shall pay no dividends (other than dividends payable in the form of Common Stock) on shares of the Common Stock unless it simultaneously complies with the previous sentence.

4. Voting Rights.

4.1 Except as otherwise provided herein or as otherwise required by the DGCL, the Series B Non-Voting Preferred Stock shall have no voting rights. However, as long as any shares of Series B Non-Voting Preferred Stock are outstanding, the Corporation shall not, without the affirmative vote or written waiver of the holders of a majority of the then outstanding shares of the Series B Non-Voting Preferred Stock: (i) alter or change adversely the powers, preferences or rights given to the Series B Non-Voting Preferred Stock or alter or amend this Certificate of Designation of Preferences, Rights and Limitations of Series B Non-Voting Convertible Preferred Stock (the "***Certificate of Designation***"), amend or repeal any provision of, or add any provision to, the Certificate of Incorporation or Amended and Restated Bylaws of the Corporation, as amended, or file any articles of amendment, certificate of designations, preferences, limitations and relative rights of any series of Preferred Stock, in each case if such action would adversely alter or change the preferences, rights, privileges or powers of, or restrictions provided for the benefit of the Series B Non-Voting Preferred Stock, regardless of whether any of the foregoing actions shall be by means of amendment to the Certificate of Incorporation or by merger, consolidation, recapitalization, reclassification, conversion or otherwise, (ii) issue further shares of Series B Non-Voting Preferred Stock beyond those contemplated for issuance in the Merger Agreement or increase or decrease (other than by conversion) the number of authorized shares of Series B Non-Voting Preferred Stock, (iii) at any time while at least shares of Series B Non-Voting Preferred Stock remains issued and outstanding, consummate either: (A) any Fundamental Transaction (as defined below) or (B) any merger or consolidation of the Corporation with or into another entity or any stock sale to, or other business combination in which the stockholders of the Corporation immediately before such transaction do not hold at least a majority on an as-converted-to-Common Stock basis of the capital stock of the Corporation, immediately after such transaction or (iv) enter into any agreement with respect to any of the foregoing that does not explicitly require the approval contemplated herein to consummate such transaction. Holders of shares of Common Stock acquired upon the conversion of shares of Series B Non-Voting Preferred Stock shall be entitled to the same voting rights as each other holder of Common Stock.

4.2 Any vote required or permitted under Section 4.1 may be taken at a meeting of the Holders or through the execution of an action by written consent in lieu of such meeting or other written waiver by such stockholders, provided that the consent or waiver is executed by Holders representing a majority of the outstanding shares of Series B Non-Voting Preferred Stock.

5. Rank; Liquidation.

5.1 The Series B Non-Voting Preferred Stock shall rank on parity with the Common Stock as to distributions of assets upon liquidation, dissolution or winding up of the Corporation, whether voluntarily or involuntarily (a "***Liquidation***").

5.2 Upon any Liquidation, each Holder shall be entitled to receive out of the assets, whether capital or surplus, of the Corporation the same amount that a holder of Common Stock would receive if the Series B Non-Voting Preferred Stock were fully converted (disregarding for such purpose any Beneficial Ownership Limitations) to Common Stock which amounts shall be paid *pari passu* with all holders of Common Stock, plus an additional amount equal to any dividends declared on but unpaid to such shares. If, upon any such Liquidation, the assets of the Corporation shall be insufficient to pay the Holders of shares of the Series B Non-Voting Preferred Stock the amount required under the preceding sentence, then all remaining assets of the Corporation shall be distributed ratably to the Holders and the holders of Common Stock in accordance with the respective amounts that would be payable on all such securities if all amounts payable thereon were paid in full. For the avoidance of any doubt, a Fundamental Transaction shall not be deemed a Liquidation unless the Corporation expressly declares that such Fundamental Transaction shall be treated as if it were a Liquidation.

6. Conversion.

6.1 Conversion at Option of Holder. Subject to Section 6.3, each share of Series B Non-Voting Preferred Stock then outstanding shall be convertible, at any time and from time to time, at the option of the Holder thereof, into a number of shares of Common Stock equal to the Conversion Ratio, subject to the Beneficial Ownership Limitation (as defined below) (each, an "***Optional Conversion***"). Holders shall effect conversions by providing the Corporation with the form of conversion notice attached hereto as **Annex A** (a "***Notice of Conversion***"), duly completed and executed. Provided the Corporation's transfer agent is participating in the Depository Trust Company ("***DTC***") Fast Automated Securities Transfer program, the Notice of Conversion may specify, at the Holder's election, whether the applicable Conversion Shares shall be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal Agent Commission system (a "***DWAC Delivery***"). The date on which an Optional Conversion shall be deemed effective (the "***Conversion Date***") shall be the Trading Day that the Notice of Conversion, completed and executed, is sent via email to, and received during regular business hours by, the Corporation; provided, that the original certificate(s) (if any) representing such shares of Series B Non-Voting Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation within two (2) Trading Days thereafter. In all other cases, the Conversion Date shall be defined as the Trading Day on which the original certificate(s) (if any) representing such shares of Series B Non-Voting Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation. The calculations set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error.

6.2 Conversion Ratio. The "***Conversion Ratio***" for each share of Series B Non-Voting Preferred Stock shall be 1,000 shares of Common Stock issuable upon the conversion (the "***Conversion***") of each share of Series B Non-Voting Preferred Stock (corresponding to a ratio of 1,000:1), subject to adjustment as provided herein.

6.3 Beneficial Ownership Limitation. Notwithstanding anything herein to the contrary, the Corporation shall not effect any conversion of any share of Series B Non-Voting Preferred Stock with respect to a Holder, and a Holder shall not have the right to convert any portion of the Series B Non-Voting Preferred Stock pursuant to Section 6.1, to the extent that, after giving effect to such attempted conversion set forth on an applicable Notice of Conversion with respect to the Series B Non-Voting Preferred Stock, such Holder (or any of such Holder's affiliates or any other Person who would be a beneficial owner of Common Stock beneficially owned by the Holder for purposes of Section 13(d) or Section 16 of the Exchange Act and the applicable rules and regulations of the United States Securities and Exchange Commission (the "***Commission***"), including any "group" of which the Holder is a member (the foregoing, "***Attribution Parties***")) would beneficially own a number of shares

of Common Stock in excess of the Beneficial Ownership Limitation. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by such Holder and its Attribution Parties shall include the number of shares of Common Stock issuable upon conversion of the Series B Non-Voting Preferred Stock subject to the Notice of Conversion with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series B Non-Voting Preferred Stock beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Attribution Parties that are subject to and would exceed a limitation on conversion or exercise similar to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this Section 6.3, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable rules and regulations of the Commission, and the terms "beneficial ownership" and "beneficially own" have the meanings ascribed to such terms therein. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable rules and regulations of the Commission. For purposes of this Section 6.3, in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (A) the Corporation's most recent periodic or annual filing with the Commission, as the case may be, (B) a more recent public announcement by the Corporation that is filed with the Commission, or (C) a more recent notice by the Corporation or the Corporation's transfer agent to the Holder setting forth the number of shares of Common Stock then outstanding. Upon the written request of a Holder (which may be by email), the Corporation shall, within two (2) Trading Days thereof, confirm in writing to such Holder (which may be via email) the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to any actual conversion or exercise of securities of the Corporation, including shares of Series B Non-Voting Preferred Stock, by such Holder or its Attribution Parties since the date as of which such number of outstanding shares of Common Stock was last publicly reported or confirmed to the Holder. The "***Beneficial Ownership Limitation***" shall initially be [19.99]% of the number of shares of Common Stock outstanding as of the applicable measurement date. The Corporation shall be entitled to rely on representations made to it by the Holder in any Notice of Conversion regarding its Beneficial Ownership Limitation. Notwithstanding the foregoing, by written notice to the Corporation (which may be via email), (i) each Holder may reset the Beneficial Ownership Limitation percentage to a higher percentage applicable to such Holder, not to exceed 19.99%, which increase will not be effective until the sixty-first (61^{st}) day after such written notice is delivered to the Corporation, and (ii) each Holder may reset the Beneficial Ownership Limitation percentage to a lower percentage effective immediately after the delivery of such notice to the Corporation. Upon such an increase by a Holder of the Beneficial Ownership Limitation pursuant to clause (i) applicable to such Holder, not to exceed 19.99%, the Beneficial Ownership Limitation may not be further amended by such Holder without first providing the minimum notice required by this Section 6.3. Notwithstanding the foregoing, (x) at any time following notice of a Fundamental Transaction, each Holder may waive and/or change the Beneficial Ownership Limitation applicable to such Holder effective immediately upon written notice to the Corporation and may reinstitute a Beneficial Ownership Limitation at any time thereafter effective immediately upon written notice to the Corporation (y) at any time that the beneficial ownership of shares of Common Stock of a Holder (together with any of such Holder's Attribution Parties) is equal to or less than 9.00% of the number of shares of Common Stock outstanding as of any given date, then such Holder's Beneficial Ownership Limitation shall automatically be set to 9.99%. The provisions of this Section 6.3 shall be construed, corrected and implemented in a manner so as to effectuate the intended Beneficial Ownership Limitation herein contained and the shares of Common Stock underlying the Series B Non-Voting Preferred Stock in excess of the Beneficial Ownership Limitation shall not be deemed to be beneficially owned by the Holder for any purpose including for purposes of Section 13(d) or Rule 16a-1(a)(1) of the Exchange Act.

6.4 Mechanics of Conversion.

6.4.1 Delivery of Certificate or Electronic Issuance. Upon Conversion not later than two (2) Trading Days after the applicable Conversion Date, or if the Holder requests the issuance of physical certificate(s), two (2) Trading Days after receipt by the Corporation of the original certificate(s) representing such shares of Series B Non-Voting Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion (the "***Share Delivery Date***"), the Corporation shall either: (a) deliver, or cause to be delivered, to the converting Holder a physical certificate or certificates representing the number of Conversion Shares being acquired upon the conversion of shares of Series B Non-Voting Preferred Stock, or (b) in the case of a DWAC Delivery (if so requested by the Holder), electronically transfer such Conversion Shares by crediting the account of the Holder's

prime broker with DTC through its DWAC system. If in the case of any Notice of Conversion such certificate or certificates for the Conversion Shares are not delivered to or as directed by or, in the case of a DWAC Delivery, such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Notice of Conversion by written notice to the Corporation at any time on or before its receipt of such certificate or certificates for Conversion Shares or electronic receipt of such shares, as applicable, in which event the Corporation shall promptly return to such Holder any original Series B Non-Voting Preferred Stock certificate delivered to the Corporation and such Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder through the DWAC system, representing the shares of Series B Non-Voting Preferred Stock unsuccessfully tendered for conversion to the Corporation.

6.4.2 Obligation Absolute. Subject to Section 6.3 and subject to Holder's right to rescind a Notice of Conversion pursuant to Section 6.4.1, the Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Series B Non-Voting Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares. Subject to Section 6.3 and subject to Holder's right to rescind a Notice of Conversion pursuant to Section 6.4.1, in the event a Holder shall elect to convert any or all of its Series B Non-Voting Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or anyone associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and/or enjoining conversion of all or part of the Series B Non-Voting Preferred Stock of such Holder shall have been sought and obtained by the Corporation, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the value of the Conversion Shares into which would be converted the Series B Non-Voting Preferred Stock which is subject to such injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment. In the absence of such injunction, the Corporation shall, subject to Section 6.3 and subject to Holder's right to rescind a Notice of Conversion pursuant to Section 6.4.1, issue Conversion Shares upon a properly noticed conversion.

6.4.3 Buy-In on Failure to Timely Deliver Certificates. If the Corporation fails to deliver to a Holder the applicable certificate or certificates or to effect a DWAC Delivery, as applicable, by the Share Delivery Date pursuant to Section 6.4.1 (other than a failure caused by materially incorrect or incomplete information provided by Holder to the Corporation or the application of the Beneficial Ownership Limitation), and if after such Share Delivery Date such Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by such Holder of the Conversion Shares which such Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "***Buy-In***"), then the Corporation shall (A) pay in cash to such Holder (in addition to any other remedies available to or elected by such Holder) the amount by which (x) such Holder's total purchase price (including any brokerage commissions) for the shares of Common Stock so purchased exceeds (y) the product of (1) the aggregate number of shares of Common Stock that such Holder was entitled to receive from the conversion at issue multiplied by (2) the actual sale price at which the sell order giving rise to such purchase obligation was executed (including any brokerage commissions) and (B) deliver to such Holder the number of shares of Common Stock that would have been issued if the Corporation had timely complied with its delivery requirements under Section 6.4.1. For example, if a Holder purchases shares of Common Stock having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted conversion of shares of Series B Non-Voting Preferred Stock with respect to which the actual sale price (including any brokerage commissions) giving rise to such purchase obligation was a total of $10,000 under clause (A) of the immediately preceding sentence, the Corporation shall be required to pay such Holder $1,000. The Holder shall provide the Corporation written notice, within three (3) Trading Days after the occurrence of a Buy-In, indicating the amounts payable to such Holder in respect of such Buy-In together with applicable confirmations and other evidence reasonably requested by the Corporation. Nothing herein shall limit a Holder's right to pursue any other remedies available to it

hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Corporation's failure to timely deliver certificates representing shares of Common Stock upon conversion of the shares of Series B Non-Voting Preferred Stock as required pursuant to the terms hereof.

6.4.4 Reservation of Shares Issuable Upon Conversion. The Corporation covenants that at all times it will reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Series B Non-Voting Preferred Stock, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holders of the Series B Non-Voting Preferred Stock, not less than such aggregate number of shares of the Common Stock as shall be issuable (taking into account the adjustments of Section 7) upon the conversion of all outstanding shares of Series B Non-Voting Preferred Stock. The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and non-assessable.

6.4.5 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Series B Non-Voting Preferred Stock, no certificates or scrip for any such fractional shares shall be issued and no cash shall be paid for any such fractional shares. Any fractional shares of Common Stock that a Holder of Series B Non-Voting Preferred Stock would otherwise be entitled to receive shall be aggregated with all fractional shares of Common Stock issuable to such Holder and any remaining fractional shares shall be rounded up to the nearest whole share.

6.4.6 Transfer Taxes. The issuance of certificates for shares of the Common Stock upon conversion of the Series B Non-Voting Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the registered Holder(s) of such shares of Series B Non-Voting Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid.

6.5 Status as Stockholder. Upon each Conversion Date, (i) the shares of Series B Non-Voting Preferred Stock being converted shall be deemed converted into shares of Common Stock and (ii) the Holder's rights as a holder of such converted shares of Series B Non-Voting Preferred Stock shall cease and terminate, excepting only the right to receive certificates for such shares of Common Stock and to any remedies provided herein or otherwise available at law or in equity to such Holder because of a failure by the Corporation to comply with the terms of this Certificate of Designation. In all cases, the Holder shall retain all of its rights and remedies for the Corporation's failure to convert Series B Non-Voting Preferred Stock.

7. Certain Adjustments.

7.1 Stock Dividends and Stock Splits. If the Corporation, at any time while this Series B Non-Voting Preferred Stock is outstanding: (A) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of this Series B Non-Voting Preferred Stock) with respect to the then outstanding shares of Common Stock; (B) subdivides outstanding shares of Common Stock into a larger number of shares; or (C) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, then the Conversion Ratio shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately after such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately before such event (excluding any treasury shares of the Corporation). Any adjustment made pursuant to this Section 7.1 shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision or combination.

7.2 Fundamental Transaction. If, at any time while this Series B Non-Voting Preferred Stock is outstanding, (A) the Corporation effects any merger or consolidation of the Corporation with or into another Person or any stock sale to, or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, share exchange or scheme of arrangement) with or into another Person

(other than such a transaction in which the Corporation is the surviving or continuing entity and its Common Stock is not exchanged for or converted into other securities, cash or property), (B) the Corporation effects any sale, lease, transfer or exclusive license of all or substantially all of its assets in one transaction or a series of related transactions, (C) any tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which more than 50% of the Common Stock not held by the Corporation or such Person is exchanged for or converted into other securities, cash or property, or (D) the Corporation effects any reclassification of the Common Stock or any compulsory share exchange pursuant (other than as a result of a dividend, subdivision or combination covered by Section 7.1) to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (in any such case, a "***Fundamental Transaction***"), then, upon any subsequent conversion of this Series B Non-Voting Preferred Stock the Holders shall have the right to receive, in lieu of the right to receive Conversion Shares, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction, the same kind and amount of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had, immediately prior to such Fundamental Transaction, converted the Series B Non-Voting Preferred Stock immediately prior to such Fundamental Transaction (the "***Alternate Consideration***"). For purposes of any such subsequent conversion, the determination of the Conversion Ratio shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall adjust the Conversion Ratio in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holders shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Series B Non-Voting Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new certificate of designations with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The terms of any agreement to which the Corporation is a party and pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 7.2 and insuring that this Series B Non-Voting Preferred Stock (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction. The Corporation shall cause to be delivered to each Holder, at its last address as it shall appear upon the stock books of the Corporation, written notice of any Fundamental Transaction at least 20 calendar days prior to the date on which such Fundamental Transaction is expected to become effective or close. Notwithstanding anything to the contrary herein, any Parent Legacy Transaction (as defined in the Merger Agreement) shall not constitute a Fundamental Transaction.

7.3 Calculations. All calculations under this Section 7 shall be made to the nearest cent or the nearest $1/100^{th}$ of a share, as the case may be. For purposes of this Section 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

8. Redemption. The shares of Series B Non-Voting Preferred Stock shall not be redeemable; provided, however, that the foregoing shall not limit the ability of the Corporation to purchase or otherwise deal in such shares to the extent otherwise permitted hereby and by law.

9. Transfer. A Holder may transfer any shares of Series B Non-Voting Preferred Stock together with the accompanying rights set forth herein, held by such holder without the consent of the Corporation; provided that such transfer is in compliance with applicable securities laws. The Corporation shall in good faith (i) do and perform, or cause to be done and performed, all such further acts and things, and (ii) execute and deliver all such other agreements, certificates, instruments and documents, in each case, as any holder of Series B Non-Voting Preferred Stock may reasonably request in order to carry out the intent and accomplish the purposes of this Section 9. The transferee of any shares of Series B Non-Voting Preferred Stock shall be subject to the Beneficial Ownership Limitation applicable to the transferor as of the time of such transfer.

10. Series B Non-Voting Preferred Stock Register. The Corporation shall maintain at its principal executive offices (or such other office or agency of the Corporation as it may designate by notice to the Holders in accordance with Section 11), a register for the Series B Non-Voting Preferred Stock, in which the Corporation shall record (i) the name, address, and electronic mail address of each holder in whose name the shares

of Series B Non-Voting Preferred Stock have been issued and (ii) the name, address, and electronic mail address of each transferee of any shares of Series B Non-Voting Preferred Stock. The Corporation may deem and treat the registered Holder of shares of Series B Non-Voting Preferred Stock as the absolute owner thereof for the purpose of any conversion thereof and for all other purposes. The Corporation shall keep the register open and available at all times during business hours for inspection by any holder of Series B Non-Voting Preferred Stock or his, her or its legal representatives.

11. Notices. Any notice required or permitted by the provisions of this Certificate of Designation to be given to a Holder of shares of Series B Non-Voting Preferred Stock shall be mailed, postage prepaid, to the post office address last shown on the records of the Corporation, or given by electronic transmission in compliance with the provisions of the DGCL, and shall be deemed sent upon such mailing or electronic transmission.

12. Book-Entry; Certificates. The Series B Non-Voting Preferred Stock will be issued in book-entry form; provided that, if a Holder requests that such Holder's shares of Series B Non-Voting Preferred Stock be issued in certificated form, the Corporation will instead issue a stock certificate to such Holder representing such Holder's shares of Series B Non-Voting Preferred Stock. To the extent that any shares of Series B Non-Voting Preferred Stock are issued in book-entry form, references herein to "certificates" shall instead refer to the book-entry notation relating to such shares.

13. Lost or Mutilated Series B Non-Voting Preferred Stock Certificate. If a Holder's Series B Non-Voting Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Series B Non-Voting Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership hereof reasonably satisfactory to the Corporation.

14. Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation. Any waiver by the Corporation or a Holder must be in writing. Notwithstanding any provision in this Certificate of Designation to the contrary, any provision contained herein and any right of the Holders of Series B Non-Voting Preferred Stock granted hereunder may be waived as to all shares of Series B Non-Voting Preferred Stock (and the Holders thereof) upon the written consent of the Holders of not less than a majority of the shares of Series B Non-Voting Preferred Stock then outstanding, provided, however, that the Beneficial Ownership Limitation applicable to a Holder, and any provisions contained herein that are related to such Beneficial Ownership Limitation, cannot be modified, waived or terminated without the consent of such Holder, provided further, that any proposed waiver that would, by its terms, have a disproportionate and materially adverse effect on any Holder shall require the consent of such Holder(s).

15. Severability. Whenever possible, each provision hereof shall be interpreted in a manner as to be effective and valid under applicable law, but if any provision hereof is held to be prohibited by or invalid under applicable law, then such provision shall be ineffective only to the extent of such prohibition or invalidity, without invalidating or otherwise adversely affecting the remaining provisions hereof.

16. Status of Converted Series B Non-Voting Preferred Stock. If any shares of Series B Non-Voting Preferred Stock shall be converted or redeemed by the Corporation, such shares shall, to the fullest extent permitted by applicable law, be retired and cancelled upon such acquisition, and shall not be reissued as a share of Series B Non-Voting Preferred Stock. Any share of Series B Non-Voting Preferred Stock so acquired shall, upon its retirement and cancellation, and upon the taking of any action required by applicable law, resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series B Non-Voting Preferred Stock.

[*Remainder of Page Intentionally Left Blank*]

IN WITNESS WHEREOF, ARCA biopharma, Inc. has caused this Certificate of Designation of Preferences, Rights and Limitations of Series B Non-Voting Convertible Preferred Stock to be duly executed by its on , 2024.

ARCA BIOPHARMA, INC.

By: _____

Name: _____

Title: _____

ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER IN ORDER TO CONVERT SHARES OF SERIES B NON-VOTING CONVERTIBLE PREFERRED STOCK)

The undersigned Holder hereby irrevocably elects to convert the number of shares of Series B Non-Voting Convertible Preferred Stock ("***Series B Non-Voting Preferred Stock***") indicated below, represented in book-entry form, into shares of common stock, par value $0.001 per share (the "***Common Stock***"), of ARCA biopharma, Inc., a Delaware corporation (the "***Corporation***"), as of the date written below. If securities are to be issued in the name of a Person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto. Capitalized terms utilized but not defined herein shall have the meaning ascribed to such terms in that certain Certificate of Designation of Preferences, Rights and Limitations of Series B Non-Voting Convertible Preferred Stock (the "***Certificate of Designation***") filed by the Corporation with the Secretary of State of the State of Delaware on , 2024.

As of the date hereof, the number of shares of Common Stock beneficially owned by the undersigned Holder (together with such Holder's Attribution Parties), including the number of shares of Common Stock issuable upon conversion of the Series B Non-Voting Preferred Stock subject to this Notice of Conversion, but excluding the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series B Non-Voting Preferred Stock beneficially owned by such Holder or any of its Attribution Parties, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Attribution Parties that are subject to a limitation on conversion or exercise similar to the limitation contained in Section 6.3 of the Certificate of Designation, is _____. For purposes hereof, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission.

CONVERSION CALCULATIONS:

Date to Effect Conversion: _____
Number of shares of Series B Non-Voting Preferred Stock owned prior to Conversion: _____
Number of shares of Series B Non-Voting Preferred Stock to be Converted: _____
Number of shares of Common Stock to be Issued: _____
Address for delivery of physical certificates: _____

For DWAC Delivery, please provide the following:

Broker No.: _____

Account No.: _____

[HOLDER]

By: _____

Name: _____

Title: _____

CERTIFICATE OF AMENDMENT
TO THE
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ARCA BIOPHARMA, INC.

ARCA biopharma, Inc., a corporation organized and existing under the laws of the State of Delaware (the "**Corporation**"), certifies that:

1. The name of the Corporation is ARCA biopharma, Inc. The Corporation's original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on March 16, 2004 under the name "Nuvelo Merger Sub, Inc."

2. The Board of Directors (the "**Board**") of the Corporation duly adopted resolutions proposing to amend the Certificate of Incorporation of the Corporation (the "**Amendment**"), declaring the Amendment to be advisable and in the best interests of the Corporation and its stockholders, and authorizing the appropriate officers of the Corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed Amendment is as follows:

> The first paragraph of Article IV of the Corporation's Amended and Restated Certificate of Incorporation is hereby amended and restated in its entirety as follows:
>
> "The total number of shares of all classes of stock this Corporation shall have authority to issue is 550,000,000, consisting of 545,000,000 shares of Common Stock, par value $0.001 per share, and 5,000,000 shares of Preferred Stock, par value $0.001 per share. The Preferred Stock may be issued from time to time, in one or more series, each series to be appropriately designated by a distinguishing letter or title, prior to the issue of any shares thereof."

3. This Certificate of Amendment was duly adopted by the stockholders of the Corporation in accordance with Section 242 of the General Corporation Law of the State of Delaware.

4. This Certificate of Amendment shall become effective on , 2024 at [a.m./p.m.] Eastern Time.

[*Signature Page Follows*]

IN WITNESS WHEREOF, this Certificate of Amendment is duly executed by the undersigned officer of the Corporation on _____, 2024.

By: _____

Name:

Title:

CERTIFICATE OF AMENDMENT
TO THE
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ARCA BIOPHARMA, INC.

ARCA biopharma, Inc., a corporation organized and existing under the laws of the State of Delaware (the "**Corporation**"), certifies that:

1. The name of the Corporation is ARCA biopharma, Inc. The Corporation's original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on March 16, 2004 under the name "Nuvelo Merger Sub, Inc."

2. The Board of Directors (the "**Board**") of the Corporation duly adopted resolutions proposing to amend the Certificate of Incorporation of the Corporation (the "**Amendment**"), declaring the Amendment to be advisable and in the best interests of the Corporation and its stockholders, and authorizing the appropriate officers of the Corporation to solicit the consent of the stockholders therefor, which resolution setting forth the proposed Amendment is as follows:

> Article IV of the Corporation's Amended and Restated Certificate of Incorporation is hereby amended to add the following paragraph at the end of Article IV:
>
> "Upon the effectiveness of the Certificate of Amendment to the Amended and Restated Certificate of Incorporation adding this paragraph (the "Effective Time"), each six (6) to twelve (12) shares of Common Stock issued immediately prior to the Effective Time shall automatically be combined into one (1) validly issued, fully paid and nonassessable share of Common Stock, without any further action by the Corporation or any holder thereof, the exact ratio within the six-to-one (6:1) to twelve-to-one (12:1) range to be determined by the Board of Directors of the Corporation prior to the Effective Time and publicly announced by the Corporation, subject to the treatment of fractional share interests as described below (the "Reverse Stock Split"). No fractional shares of Common Stock shall be issued in connection with the Reverse Stock Split. Each certificate that immediately prior to the Effective Time represented shares Common Stock, as applicable (the "Old Certificates"), shall, until surrendered to the Corporation in exchange for a certificate representing such new number of shares of Common Stock, automatically represent that number of shares of Common Stock into which the shares of Common Stock represented by the Old Certificate shall have been combined, subject to the elimination of fractional share interests as described above."

3. On , 2024, the Board of Directors of the Corporation determined that each shares of the Corporation's Common Stock, par value $0.001 per share (the "Common Stock"), issued immediately prior to the Effective Time shall automatically be combined into one (1) validly issued, fully paid and nonassessable share of Common Stock. The Corporation publicly announced this ratio on , 2024.

4. This Certificate of Amendment was duly adopted by the stockholders of the Corporation in accordance with Section 242 of the General Corporation Law of the State of Delaware.

5. This Certificate of Amendment shall become effective on , 2024 at [a.m./p.m.] Eastern Time.

[*Signature Page Follows*]

IN WITNESS WHEREOF, this Certificate of Amendment is duly executed by the undersigned officer of the Corporation on _____, 2024.

By: _____

Name:
Title:

Annex I

CERTIFICATE OF AMENDMENT TO THE
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF ARCA BIOPHARMA, INC.

ARCA biopharma, Inc. (the "**Corporation**"), a corporation organized and existing under and by virtue of the provisions of the General Corporation Law of the State of Delaware (the "**General Corporation Law**"), does hereby certify:

1. The current name of the Corporation is ARCA biopharma, Inc. The date of filing of the original Certificate of Incorporation of ARCA biopharma, Inc. with the Secretary of State of the State of Delaware was March 16, 2004 under the name Nuvelo Merger Sub, Inc.

2. The Amended and Restated Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on March 18, 2004 (as amended, the "**Certificate of Incorporation**").

3. The existing Certificate of Incorporation is hereby amended to add Article XIII to the Certificate of Incorporation to read as follows:

"**XIII.**

To the fullest extent permitted by the Delaware General Corporation Law, as the same exists or as may hereafter be amended, an officer of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as an officer.

Neither any amendment nor repeal of this Article XIII, nor the adoption of any provision of this Certificate of Incorporation inconsistent with this Article XIII, shall eliminate or reduce the effect of this Article XIII in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article XIII, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision."

4. All other provisions of the Certificate of Incorporation shall remain in full force and effect.

5. The amendment of the Certificate of Incorporation herein certified has been duly adopted in accordance with the provisions of 242 of the General Corporation Law.

6. This Certificate of Amendment shall become effective as of _____, 2024 at _____ Eastern Time.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the Corporation has caused this Certificate of Amendment to be executed by the undersigned authorized officer of the Corporation as of this _____ day of _____, 2024.

By: _____

Name:
Title:

Appraisal Rights (Section 262 of the Delaware General Corporation Law)

§ 262. Appraisal rights

(a) Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger, consolidation, or conversion, who has otherwise complied with subsection (d) of this section and who has neither voted in favor of the merger, consolidation or conversion nor consented thereto in writing pursuant to § 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section. As used in this section, the word "stockholder" means a holder of record of stock in a corporation; the words "stock" and "share" mean and include what is ordinarily meant by those words; the words "depository receipt" mean a receipt or other instrument issued by a depository representing an interest in 1 or more shares, or fractions thereof, solely of stock of a corporation, which stock is deposited with the depository; the words "beneficial owner" mean a person who is the beneficial owner of shares of stock held either in voting trust or by a nominee on behalf of such person; and the word "person" means any individual, corporation, partnership, unincorporated association or other entity.

(b) Appraisal rights shall be available for the shares of any class or series of stock of a constituent or converting corporation in a merger, consolidation or conversion to be effected pursuant to § 251 (other than a merger effected pursuant to § 251(g) of this title), § 252, § 254, § 255, § 256, § 257, § 258, § 263, § 264 or § 266 of this title (other than, in each case and solely with respect to a domesticated corporation, a merger, consolidation or conversion authorized pursuant to and in accordance with the provisions of § 388 of this title):

(1) Provided, however, that no appraisal rights under this section shall be available for the shares of any class or series of stock, which stock, or depository receipts in respect thereof, at the record date fixed to determine the stockholders entitled to receive notice of the meeting of stockholders, or at the record date fixed to determine the stockholders entitled to consent pursuant to § 228 of this title, to act upon the agreement of merger or consolidation or the resolution providing for conversion (or, in the case of a merger pursuant to § 251(h) of this title, as of immediately prior to the execution of the agreement of merger), were either: (i) listed on a national securities exchange or (ii) held of record by more than 2,000 holders; and further provided that no appraisal rights shall be available for any shares of stock of the constituent corporation surviving a merger if the merger did not require for its approval the vote of the stockholders of the surviving corporation as provided in § 251(f) of this title.

(2) Notwithstanding paragraph (b)(1) of this section, appraisal rights under this section shall be available for the shares of any class or series of stock of a constituent or converting corporation if the holders thereof are required by the terms of an agreement of merger or consolidation, or by the terms of a resolution providing for conversion, pursuant to § 251, § 252, § 254, § 255, § 256, § 257, § 258, § 263, § 264 or § 266 of this title to accept for such stock anything except:

a. Shares of stock of the corporation surviving or resulting from such merger or consolidation, or of the converted entity if such entity is a corporation as a result of the conversion, or depository receipts in respect thereof;

b. Shares of stock of any other corporation, or depository receipts in respect thereof, which shares of stock (or depository receipts in respect thereof) or depository receipts at the effective date of the merger, consolidation or conversion will be either listed on a national securities exchange or held of record by more than 2,000 holders;

c. Cash in lieu of fractional shares or fractional depository receipts described in the foregoing paragraphs (b)(2)a. and b. of this section; or

d. Any combination of the shares of stock, depository receipts and cash in lieu of fractional shares or fractional depository receipts described in the foregoing paragraphs (b)(2)a., b. and c. of this section.

(3) In the event all of the stock of a subsidiary Delaware corporation party to a merger effected under § 253 or § 267 of this title is not owned by the parent immediately prior to the merger, appraisal rights shall be available for the shares of the subsidiary Delaware corporation.

(4) [Repealed.]

(c) Any corporation may provide in its certificate of incorporation that appraisal rights under this section shall be available for the shares of any class or series of its stock as a result of an amendment to its certificate of incorporation, any merger or consolidation in which the corporation is a constituent corporation, the sale of all or substantially all of the assets of the corporation or a conversion effected pursuant to § 266 of this title. If the certificate of incorporation contains such a provision, the provisions of this section, including those set forth in subsections (d), (e), and (g) of this section, shall apply as nearly as is practicable.

(d) Appraisal rights shall be perfected as follows:

(1) If a proposed merger, consolidation or conversion for which appraisal rights are provided under this section is to be submitted for approval at a meeting of stockholders, the corporation, not less than 20 days prior to the meeting, shall notify each of its stockholders who was such on the record date for notice of such meeting (or such members who received notice in accordance with § 255(c) of this title) with respect to shares for which appraisal rights are available pursuant to subsection (b) or (c) of this section that appraisal rights are available for any or all of the shares of the constituent corporations or the converting corporation, and shall include in such notice either a copy of this section (and, if 1 of the constituent corporations or the converting corporation is a nonstock corporation, a copy of § 114 of this title) or information directing the stockholders to a publicly available electronic resource at which this section (and, § 114 of this title, if applicable) may be accessed without subscription or cost. Each stockholder electing to demand the appraisal of such stockholder's shares shall deliver to the corporation, before the taking of the vote on the merger, consolidation or conversion, a written demand for appraisal of such stockholder's shares; provided that a demand may be delivered to the corporation by electronic transmission if directed to an information processing system (if any) expressly designated for that purpose in such notice. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such stockholder's shares. A proxy or vote against the merger, consolidation or conversion shall not constitute such a demand. A stockholder electing to take such action must do so by a separate written demand as herein provided. Within 10 days after the effective date of such merger, consolidation or conversion, the surviving, resulting or converted entity shall notify each stockholder of each constituent or converting corporation who has complied with this subsection and has not voted in favor of or consented to the merger, consolidation or conversion, and any beneficial owner who has demanded appraisal under paragraph (d)(3) of this section, of the date that the merger, consolidation or conversion has become effective; or

(2) If the merger, consolidation or conversion was approved pursuant to § 228, § 251(h), § 253, or § 267 of this title, then either a constituent or converting corporation before the effective date of the merger, consolidation or conversion, or the surviving, resulting or converted entity within 10 days after such effective date, shall notify each stockholder of any class or series of stock of such constituent or converting corporation who is entitled to appraisal rights of the approval of the merger, consolidation or conversion and that appraisal rights are available for any or all shares of such class or series of stock of such constituent or converting corporation, and shall include in such notice either a copy of this section (and, if 1 of the constituent corporations or the converting corporation is a nonstock corporation, a copy of § 114 of this title) or information directing the stockholders to a publicly available electronic resource at which this section (and § 114 of this title, if applicable) may be accessed without subscription or cost. Such notice may, and, if given on or after the effective date of the merger, consolidation or conversion, shall, also notify such stockholders of the effective date of the merger, consolidation or conversion. Any stockholder entitled to appraisal rights may, within 20 days after the date of giving such notice or, in the case of a merger approved pursuant to § 251(h) of this title, within the later of the consummation of the offer contemplated by § 251(h) of this title and 20 days after the date of giving such notice, demand in writing from the surviving or resulting entity the appraisal of such holder's shares; provided that a demand may be delivered to such entity by electronic transmission if directed to an information processing system (if any) expressly designated for that purpose in such notice. Such demand will be sufficient if it reasonably informs such entity of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such holder's shares. If such notice did not notify stockholders of the effective date of the merger, consolidation or conversion, either (i) each such constituent corporation or the converting corporation shall send a second notice before the effective date of the merger, consolidation or conversion notifying each of the holders of any class or series of stock of such constituent or converting corporation that are entitled to appraisal rights of the effective date of the merger, consolidation or conversion or (ii) the surviving, resulting or converted entity shall send such a second notice to all such holders on or within 10 days after such effective date; provided, however, that if such second notice is sent more than 20 days following the sending of the first notice or, in the case of a merger approved pursuant to § 251(h) of this title, later than the later of the consummation of the offer contemplated by § 251(h) of this title and 20 days following the sending of the first notice, such second notice need

only be sent to each stockholder who is entitled to appraisal rights and who has demanded appraisal of such holder's shares in accordance with this subsection and any beneficial owner who has demanded appraisal under paragraph (d)(3) of this section. An affidavit of the secretary or assistant secretary or of the transfer agent of the corporation or entity that is required to give either notice that such notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. For purposes of determining the stockholders entitled to receive either notice, each constituent corporation or the converting corporation may fix, in advance, a record date that shall be not more than 10 days prior to the date the notice is given, provided, that if the notice is given on or after the effective date of the merger, consolidation or conversion, the record date shall be such effective date. If no record date is fixed and the notice is given prior to the effective date, the record date shall be the close of business on the day next preceding the day on which the notice is given.

(3) Notwithstanding subsection (a) of this section (but subject to this paragraph (d)(3)), a beneficial owner may, in such person's name, demand in writing an appraisal of such beneficial owner's shares in accordance with either paragraph (d)(1) or (2) of this section, as applicable; provided that (i) such beneficial owner continuously owns such shares through the effective date of the merger, consolidation or conversion and otherwise satisfies the requirements applicable to a stockholder under the first sentence of subsection (a) of this section and (ii) the demand made by such beneficial owner reasonably identifies the holder of record of the shares for which the demand is made, is accompanied by documentary evidence of such beneficial owner's beneficial ownership of stock and a statement that such documentary evidence is a true and correct copy of what it purports to be, and provides an address at which such beneficial owner consents to receive notices given by the surviving, resulting or converted entity hereunder and to be set forth on the verified list required by subsection (f) of this section.

(e) Within 120 days after the effective date of the merger, consolidation or conversion, the surviving, resulting or converted entity, or any person who has complied with subsections (a) and (d) of this section hereof and who is otherwise entitled to appraisal rights, may commence an appraisal proceeding by filing a petition in the Court of Chancery demanding a determination of the value of the stock of all such stockholders. Notwithstanding the foregoing, at any time within 60 days after the effective date of the merger, consolidation or conversion, any person entitled to appraisal rights who has not commenced an appraisal proceeding or joined that proceeding as a named party shall have the right to withdraw such person's demand for appraisal and to accept the terms offered upon the merger, consolidation or conversion. Within 120 days after the effective date of the merger, consolidation or conversion, any person who has complied with the requirements of subsections (a) and (d) of this section hereof, upon request given in writing (or by electronic transmission directed to an information processing system (if any) expressly designated for that purpose in the notice of appraisal), shall be entitled to receive from the surviving, resulting or converted entity a statement setting forth the aggregate number of shares not voted in favor of the merger, consolidation or conversion (or, in the case of a merger approved pursuant to § 251(h) of this title, the aggregate number of shares (other than any excluded stock (as defined in § 251(h)(6)d. of this title)) that were the subject of, and were not tendered into, and accepted for purchase or exchange in, the offer referred to in § 251(h)(2) of this title), and, in either case, with respect to which demands for appraisal have been received and the aggregate number of stockholders or beneficial owners holding or owning such shares (provided that, where a beneficial owner makes a demand pursuant to paragraph (d)(3) of this section, the record holder of such shares shall not be considered a separate stockholder holding such shares for purposes of such aggregate number). Such statement shall be given to the person within 10 days after such person's request for such a statement is received by the surviving, resulting or converted entity or within 10 days after expiration of the period for delivery of demands for appraisal under subsection (d) of this section hereof, whichever is later.

(f) Upon the filing of any such petition by any person other than the surviving, resulting or converted entity, service of a copy thereof shall be made upon such entity, which shall within 20 days after such service file in the office of the Register in Chancery in which the petition was filed a duly verified list containing the names and addresses of all persons who have demanded appraisal for their shares and with whom agreements as to the value of their shares have not been reached by such entity. If the petition shall be filed by the surviving, resulting or converted entity, the petition shall be accompanied by such a duly verified list. The Register in Chancery, if so ordered by the Court, shall give notice of the time and place fixed for the hearing of such petition by registered or certified mail to the surviving, resulting or converted entity and to the persons shown on the list at the addresses therein stated. The forms of the notices by mail and by publication shall be approved by the Court, and the costs thereof shall be borne by the surviving, resulting or converted entity.

(g) At the hearing on such petition, the Court shall determine the persons who have complied with this section and who have become entitled to appraisal rights. The Court may require the persons who have demanded an appraisal for their shares and who hold stock represented by certificates to submit their certificates of stock to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any person fails to comply with such direction, the Court may dismiss the proceedings as to such person. If immediately before the merger, consolidation or conversion the shares of the class or series of stock of the constituent or converting corporation as to which appraisal rights are available were listed on a national securities exchange, the Court shall dismiss the proceedings as to all holders of such shares who are otherwise entitled to appraisal rights unless (1) the total number of shares entitled to appraisal exceeds 1% of the outstanding shares of the class or series eligible for appraisal, (2) the value of the consideration provided in the merger, consolidation or conversion for such total number of shares exceeds $1 million, or (3) the merger was approved pursuant to § 253 or § 267 of this title.

(h) After the Court determines the persons entitled to an appraisal, the appraisal proceeding shall be conducted in accordance with the rules of the Court of Chancery, including any rules specifically governing appraisal proceedings. Through such proceeding the Court shall determine the fair value of the shares exclusive of any element of value arising from the accomplishment or expectation of the merger, consolidation or conversion, together with interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. Unless the Court in its discretion determines otherwise for good cause shown, and except as provided in this subsection, interest from the effective date of the merger, consolidation or conversion through the date of payment of the judgment shall be compounded quarterly and shall accrue at 5% over the Federal Reserve discount rate (including any surcharge) as established from time to time during the period between the effective date of the merger, consolidation or conversion and the date of payment of the judgment. At any time before the entry of judgment in the proceedings, the surviving, resulting or converted entity may pay to each person entitled to appraisal an amount in cash, in which case interest shall accrue thereafter as provided herein only upon the sum of (1) the difference, if any, between the amount so paid and the fair value of the shares as determined by the Court, and (2) interest theretofore accrued, unless paid at that time. Upon application by the surviving, resulting or converted entity or by any person entitled to participate in the appraisal proceeding, the Court may, in its discretion, proceed to trial upon the appraisal prior to the final determination of the persons entitled to an appraisal. Any person whose name appears on the list filed by the surviving, resulting or converted entity pursuant to subsection (f) of this section may participate fully in all proceedings until it is finally determined that such person is not entitled to appraisal rights under this section.

(i) The Court shall direct the payment of the fair value of the shares, together with interest, if any, by the surviving, resulting or converted entity to the persons entitled thereto. Payment shall be so made to each such person upon such terms and conditions as the Court may order. The Court's decree may be enforced as other decrees in the Court of Chancery may be enforced, whether such surviving, resulting or converted entity be an entity of this State or of any state.

(j) The costs of the proceeding may be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances. Upon application of a person whose name appears on the list filed by the surviving, resulting or converted entity pursuant to subsection (f) of this section who participated in the proceeding and incurred expenses in connection therewith, the Court may order all or a portion of such expenses, including, without limitation, reasonable attorney's fees and the fees and expenses of experts, to be charged pro rata against the value of all the shares entitled to an appraisal not dismissed pursuant to subsection (k) of this section or subject to such an award pursuant to a reservation of jurisdiction under subsection (k) of this section.

(k) From and after the effective date of the merger, consolidation or conversion, no person who has demanded appraisal rights with respect to some or all of such person's shares as provided in subsection (d) of this section shall be entitled to vote such shares for any purpose or to receive payment of dividends or other distributions on such shares (except dividends or other distributions payable to stockholders of record at a date which is prior to the effective date of the merger, consolidation or conversion); provided, however, that if no petition for an appraisal is filed within the time provided in subsection (e) of this section, or if a person who has made a demand for an appraisal in accordance with this section shall deliver to the surviving, resulting or converted entity a written withdrawal of such person's demand for an appraisal in respect of some or all of such person's shares in accordance with subsection (e) of this section, then the right of such person to an appraisal of the shares subject to the withdrawal shall cease. Notwithstanding the foregoing, no appraisal proceeding in the Court of Chancery shall be dismissed as to any person without the approval of the Court, and such approval may be conditioned upon such

terms as the Court deems just, including without limitation, a reservation of jurisdiction for any application to the Court made under subsection (j) of this section; provided, however that this provision shall not affect the right of any person who has not commenced an appraisal proceeding or joined that proceeding as a named party to withdraw such person's demand for appraisal and to accept the terms offered upon the merger, consolidation or conversion within 60 days after the effective date of the merger, consolidation or conversion, as set forth in subsection (e) of this section.

(l) The shares or other equity interests of the surviving, resulting or converted entity to which the shares of stock subject to appraisal under this section would have otherwise converted but for an appraisal demand made in accordance with this section shall have the status of authorized but not outstanding shares of stock or other equity interests of the surviving, resulting or converted entity, unless and until the person that has demanded appraisal is no longer entitled to appraisal pursuant to this section.

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ORUKA THERAPEUTICS, INC.
2024 STOCK INCENTIVE PLAN

1. Purpose

The purpose of this Oruka Therapeutics, Inc. 2024 Stock Incentive Plan (the "***Plan***") is to promote and closely align the interests of employees, officers, non-employee directors and other individual service providers of Oruka Therapeutics, Inc. and its stockholders by providing stock-based compensation and other performance-based compensation. The objectives of the Plan are to attract and retain the best available employees, officers, non-employee directors and other individual service providers for positions of substantial responsibility and to motivate Participants to optimize the profitability and growth of the Company through incentives that are consistent with the Company's goals and that link the personal interests of Participants to those of the Company's stockholders. The Plan provides for the grant of Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units and Other Stock-Based Awards and for Incentive Bonuses, which may be paid in cash, Common Stock or a combination thereof, as determined by the Committee.

2. Definitions

As used in the Plan, the following terms shall have the meanings set forth below:

(a) "***Act***" means the Securities Exchange Act of 1934, as amended.

(b) "***Affiliate***" means any entity in which the Company has a substantial direct or indirect equity interest, as determined by the Committee from time to time.

(c) "***Award***" means an Option, Stock Appreciation Right, Restricted Stock, Restricted Stock Unit, Other Stock-Based Award or Incentive Bonus, or any combination of these, granted to a Participant pursuant to the provisions of the Plan, any of which may be subject to performance conditions.

(d) "***Award Agreement***" means a written or electronic agreement or other instrument as may be approved from time to time by the Committee and designated as such implementing the grant of each Award. An Award Agreement may be in the form of an agreement to be executed by both the Participant and the Company (or an authorized representative of the Company) or certificates, notices or similar instruments as approved by the Committee and designated as such.

(e) "***Beneficial Owner***" shall have the meaning set forth in Rule 13d-3 under the Act.

(f) "***Board***" means the Board of Directors of the Company.

(g) "***Cause***" has the meaning set forth in the written employment, offer, services or severance agreement or letter between the Participant and the Company or an Affiliate, or in any severance plan in which the Participant participates, or if there is no such agreement or plan or no such term is defined in such agreement or plan, means a Participant's (i) dishonest statements or acts with respect to the Company or any Affiliate, or any current or prospective customers, suppliers, vendors or other third parties with which such entity does business that results in or is reasonably anticipated to result in material harm to the Company; (ii) conviction or plea of guilty or no contest to: (A) a felony or (B) any misdemeanor involving moral turpitude, deceit, dishonesty or fraud; (iii) failure to perform in all material respects the Participant's assigned duties and responsibilities; (iv) gross negligence, willful misconduct that results in or is reasonably anticipated to result in material harm to the Company; (v) violation of any material provision of any agreement(s) between the Participant and the Company; or (vi) material violation of any written Company policies.

(h) "***Change in Control***" means, except as otherwise provided in an Award Agreement, the occurrence of any one of the following events:

(i) any Person is or becomes the Beneficial Owner, directly or indirectly, of securities of the Company (not including the securities beneficially owned by such Person or any securities acquired directly from the Company or its Affiliates) representing 50% or more of the combined voting power of the Company's then outstanding securities, excluding any Person who becomes such a Beneficial Owner in connection with a transaction described in Section 2(h)(iii)(A) below;

(ii) the following individuals cease for any reason to constitute a majority of the number of directors then serving: (A) individuals who, on the Effective Date (as defined below), constitute the Board and (B) any new director (other than a director whose initial assumption of office is in connection with an actual or threatened election contest, including a consent solicitation, relating to the election of directors of the Company) whose appointment or election by the Board or nomination for election by the Company's stockholders was approved or recommended by a vote of at least a majority of the directors then still in office who were either directors on the Effective Date or whose appointment, election or nomination for election was previously so approved or recommended;

(iii) there is consummated a merger or consolidation of the Company or any direct or indirect subsidiary of the Company with any other entity, other than (A) a merger or consolidation which would result in the holders of the voting securities of the Company outstanding immediately prior to such merger or consolidation continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or any parent thereof) at least 50% of the combined voting power of the securities of the Company or such surviving entity or any parent thereof outstanding immediately after such merger or consolidation;

(iv) the implementation of a plan of complete liquidation or dissolution of the Company; or

(v) there is consummated a sale or disposition by the Company of all or substantially all of the Company's assets, other than a sale or disposition by the Company of all or substantially all of the Company's assets to an entity, at least 50% of the combined voting power of the voting securities of which is owned by stockholders of the Company in substantially the same proportions as their ownership of the Company immediately prior to such sale.

(i) "***Code***" means the Internal Revenue Code of 1986, as amended from time to time, and the rulings and regulations issued thereunder.

(j) "***Committee***" means the Compensation Committee of the Board (or any successor committee) or such other committee as designated by the Board to administer the Plan under Section 6.

(k) "***Common Stock***" means the common stock of the Company, $0.001 par value per share, or such other class or kind of shares or other securities as may be applicable under Section 16.

(l) "***Company***" means Oruka Therapeutics, Inc., a Delaware corporation, and except as utilized in the definition of Change in Control, any successor corporation.

(m) "***Disability***" has the meaning set forth in a written employment, offer, services or severance agreement or letter between the Participant and the Company or an Affiliate, or in any severance plan in which the Participant participates, or if there is no such agreement or plan or no such term is defined in such agreement or plan, means the inability of the Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment. A determination of Disability shall be made by the Committee on the basis of such medical evidence as the Committee deems warranted under the circumstances, and in this respect, Participants shall submit to an examination by a physician upon request by the Committee.

(n) "***Dividend Equivalent***" means an amount payable in cash or Common Stock, as determined by the Committee, equal to the dividends that would have been paid to the Participant if the share of Common Stock with respect to which the Dividend Equivalent relates had been owned by the Participant.

(o) "***Effective Date***" means the date on which the Plan takes effect, as defined pursuant to Section 4.

(p) "***Eligible Person***" any current or prospective employee, officer, non-employee director or other individual service provider of the Company or any Subsidiary; *provided, however*, that Incentive Stock Options may only be granted to employees of the Company or any of its "subsidiary corporations" within the meaning of Section 424 of the Code.

(q) "***Fair Market Value***" means as of any date, the value of the Common Stock determined as follows: (i) if the Common Stock is listed on any established stock exchange, system or market, its Fair Market Value shall be the closing price of a share of Common Stock as quoted on such exchange, system or market as reported in the Wall Street Journal or such other source as the Committee deems reliable (or, if no sale of Common Stock is reported for such date, on the next preceding date on which any sale shall have been reported); and (ii) in the absence of an

established market for the Common Stock, the Fair Market Value thereof shall be determined in good faith by the Committee by the reasonable application of a reasonable valuation method, taking into account factors consistent with Treas. Reg. § 409A-1(b)(5)(iv)(B) as the Committee deems appropriate.

(r) "***Incentive Bonus***" means a bonus opportunity awarded under Section 12 pursuant to which a Participant may become entitled to receive an amount based on satisfaction of such performance criteria established for a specified performance period as specified in the Award Agreement.

(s) "***Incentive Stock Option***" means an Option that is intended to qualify as an "incentive stock option" within the meaning of Section 422 of the Code.

(t) "***Merger Agreement***" means that Agreement and Plan of Merger and Reorganization dated April 3, 2024 by and between the Company (f/k/a ARCA biopharma, Inc.) and Oruka Therapeutics Operating Company, LLC (f/k/a Oruka Therapeutics, Inc.).

(u) "***Nonqualified Stock Option***" means an Option that is not intended to qualify as an "incentive stock option" within the meaning of Section 422 of the Code.

(v) "***Option***" means a right to purchase a number of shares of Common Stock at such exercise price, at such times and on such other terms and conditions as are specified in or determined pursuant to an Award Agreement. Options granted pursuant to the Plan may be Incentive Stock Options or Nonqualified Stock Options.

(w) "***Other Stock-Based Award***" means an Award granted to an Eligible Person under Section 11.

(x) "***Outstanding Common Stock***" means the sum of (i) the shares of Common Stock outstanding, (ii) the shares of Common Stock underlying unexercised pre-funded warrants, and (iii) the shares of Common Stock underlying the Company's preferred stock, par value $0.001 (determined on an as-converted basis without regard to any limitations on such conversion).

(y) "***Participant***" means any Eligible Person to whom Awards have been granted from time to time by the Committee and any authorized transferee of such individual.

(z) "***Person***" shall have the meaning given in Section 3(a)(9) of the Act, as modified and used in Sections 14(d) and 15(d) thereof, except that such term shall not include (i) the Company or any of its Affiliates, (ii) a trustee or other fiduciary holding securities under an employee benefit plan of the Company or any of its Subsidiaries, (iii) an underwriter temporarily holding securities pursuant to an offering of such securities or (iv) a corporation owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company.

(aa) "***Restricted Stock***" means an Award or issuance of Common Stock the grant, issuance, vesting and/or transferability of which is subject during specified periods of time to such conditions (including continued employment or engagement or performance conditions) and terms as the Committee deems appropriate.

(bb) "***Restricted Stock Unit***" means an Award denominated in units of Common Stock under which the issuance of shares of such Common Stock (or cash payment in lieu thereof) is subject to such conditions (including continued employment or engagement or performance conditions) and terms as the Committee deems appropriate.

(cc) "***Separation from Service***" or "***Separates from Service***" means a Termination of Employment that constitutes a "separation from service" within the meaning of Section 409A of the Code.

(dd) "***Stock Appreciation Right***" or "***SAR***" means a right granted that entitles the Participant to receive, in cash or Common Stock or a combination thereof, as determined by the Committee, value equal to the excess of (i) the Fair Market Value of a specified number of shares of Common Stock at the time of exercise over (ii) the exercise price of the right, as established by the Committee on the date of grant.

(ee) "***Subsidiary***" means any business association (including a corporation or a partnership, other than the Company) in an unbroken chain of such associations beginning with the Company if each of the associations other than the last association in the unbroken chain owns equity interests (including stock or partnership interests) possessing 50% or more of the total combined voting power of all classes of equity interests in one of the other associations in such chain.

(ff) "***Substitute Awards***" means Awards granted or Common Stock issued by the Company in assumption of, or in substitution or exchange for, awards previously granted, or the right or obligation to make future awards, by a company acquired by the Company or any Subsidiary or with which the Company or any Subsidiary combines.

(gg) "***Termination of Employment***" means ceasing to serve as an employee of the Company and its Subsidiaries or, with respect to a non-employee director or other service provider, ceasing to serve as such for the Company and its Subsidiaries, except that with respect to all or any Awards held by a Participant (i) the Committee may determine that a leave of absence (including as a result of a Participant's short-term or long-term disability or other medical leave) or employment on a less than full-time basis is considered a "Termination of Employment," (ii) the Committee may determine that a transition from employment to service with a partnership, joint venture or corporation not meeting the requirements of a Subsidiary in which the Company or a Subsidiary is a party is not considered a "Termination of Employment," (iii) service as a member of the Board shall constitute continued service with respect to Awards granted to a Participant while he or she served as an employee, (iv) service as an employee of the Company or a Subsidiary shall constitute continued employment with respect to Awards granted to a Participant while he or she served as a member of the Board or other service provider, and (v) the Committee may determine that a transition from employment with the Company or a Subsidiary to service to the Company or a Subsidiary other than as an employee shall constitute a "Termination of Employment". The Committee shall determine whether any corporate transaction, such as a sale or spin-off of a division or Subsidiary that employs or engages a Participant, shall be deemed to result in a Termination of Employment with the Company and its Subsidiaries for purposes of any affected Participant's Awards, and the Committee's decision shall be final and binding.

3. Eligibility

Any Eligible Person is eligible for selection by the Committee to receive an Award.

4. Effective Date and Termination of Plan

This Plan became effective on the Closing Date (as defined in the Merger Agreement) (the "***Effective Date***"). The Plan shall remain available for the grant of Awards until July 20, 2034. Notwithstanding the foregoing, the Plan may be terminated at such earlier time as the Board may determine. Termination of the Plan will not affect the rights and obligations of the Participants and the Company arising under Awards theretofore granted.

5. Shares Subject to the Plan and to Awards

(a) *Aggregate Limits*. The aggregate number of shares of Common Stock issuable under the Plan shall be equal to (i) 10% of the total number of shares of Outstanding Common Stock immediately following the closing of the transactions set forth in the Merger Agreement, *plus* (ii) any shares of Common Stock added as a result of the following sentence (collectively, the "***Share Pool***"). The Share Pool will automatically increase on January 1 of each year beginning in 2025 and ending with a final increase on January 1, 2034 in an amount equal to 5% of the Outstanding Common Stock on the preceding December 31; *provided, however*, that the Committee may provide that there will be no January 1 increase in the Share Pool for any such year or that the increase in the Share Pool for any such year will be a smaller number of shares of Common Stock than would otherwise occur pursuant to this sentence. The aggregate number of shares of Common Stock available for grant under this Plan and the number of shares of Common Stock subject to Awards outstanding at the time of any event described in Section 16 shall be subject to adjustment as provided in Section 16. The shares of Common Stock issued under this Plan may be shares that are authorized and unissued or shares that were reacquired by the Company, including shares purchased in the open market or in private transactions.

(b) *Issuance of Shares*. For purposes of Section 5(a), the aggregate number of shares of Common Stock issued under this Plan at any time shall equal only the number of shares of Common Stock actually issued upon exercise or settlement of an Award. Shares of Common Stock subject to Awards that have been canceled, expired, forfeited or otherwise not issued under an Award and shares of Common Stock subject to Awards settled in cash shall not count as shares of Common Stock issued under this Plan. The aggregate number of shares available for issuance under this Plan at any time shall not be reduced by (i) shares subject to Awards that have been terminated, expired unexercised, forfeited or settled in cash, (ii) shares subject to Awards that have been retained or withheld by the Company in payment or satisfaction of the exercise price, purchase price or tax withholding obligation of an Award, or (iii) shares subject to Awards that otherwise do not result in the issuance of shares in connection with payment or settlement thereof. In addition, shares that have been delivered (either actually or by attestation) to the Company in payment or satisfaction of the exercise price, purchase price or tax withholding obligation of an Award shall be available for issuance under this Plan.

(c) *Substitute Awards*. Substitute Awards shall not reduce the shares of Common Stock authorized for issuance under the Plan or authorized for grant to a Participant in any calendar year. Additionally, in the event that a company acquired by the Company or any Subsidiary, or with which the Company or any Subsidiary combines, has shares available under a pre-existing plan approved by stockholders and not adopted in contemplation of such acquisition or combination, the shares available for grant pursuant to the terms of such pre-existing plan (as adjusted, to the extent appropriate, using the exchange ratio or other adjustment or valuation ratio or formula used in such acquisition or combination to determine the consideration payable to the holders of common stock of the entities party to such acquisition or combination) may be used for Awards under the Plan and shall not reduce the shares of Common Stock authorized for issuance under the Plan; *provided, however*, that Awards using such available shares (i) shall not be made after the date awards or grants could have been made under the terms of the pre-existing plan, absent the acquisition or combination, (ii) shall only be made to individuals who were not employees or service providers of the Company or its Affiliates at the time of such acquisition or combination, and (iii) shall comply with the requirements of any stock exchange or market or quotation system on which the Common Stock is traded, listed or quoted.

(d) *Tax Code Limits*. The aggregate number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options granted under this Plan shall be equal to 10,000,000, which number shall be calculated and adjusted pursuant to Section 16 only to the extent that such calculation or adjustment will not affect the status of any Option intended to qualify as an Incentive Stock Option under Section 422 of the Code.

(e) *Limits on Non-Employee Director Compensation.* The aggregate dollar value of equity-based (based on the grant date Fair Market Value of equity-based Awards) and cash compensation granted under this Plan or otherwise to any non-employee director shall not exceed $750,000 during any calendar year; *provided, however*, that in the calendar year in which a non-employee director first joins the Board or during any calendar year in which a non-employee director is designated as Chairman of the Board or Lead Director, the maximum aggregate dollar value of equity-based and cash compensation granted to the non-employee director may be up to $1,000,000.

6. Administration of the Plan

(a) *Administrator of the Plan*. The Plan shall be administered by the Committee. The Board shall fill vacancies on, and from time to time may remove or add members to, the Committee. The Committee shall act pursuant to a majority vote or unanimous written consent. Any power of the Committee may also be exercised by the Board, except to the extent that the grant or exercise of such authority would cause any Award or transaction to become subject to (or lose an exemption under) the short-swing profit recovery provisions of Section 16 of the Act. To the extent that any permitted action taken by the Board conflicts with action taken by the Committee, the Board action shall control. To the maximum extent permissible under applicable law, the Committee (or any successor) may by resolution delegate any or all of its authority to one or more subcommittees composed of one or more directors and/or officers of the Company, and any such subcommittee shall be treated as the Committee for all purposes under this Plan. Notwithstanding the foregoing, if the Board or the Committee (or any successor) delegates to a subcommittee comprised of one or more officers of the Company the authority to grant Awards, no such subcommittee shall designate any officer serving thereon or any officer (within the meaning of Section 16 of the Act) or non-employee director of the Company as a recipient of any Awards granted under such delegated authority. The Committee hereby delegates to and designates the Senior Vice President of Finance of the Company (or such other officer with similar authority), and to his or her delegates or designees, the authority to assist the Committee in the day-to-day administration of the Plan and of Awards granted under the Plan, including those powers set forth in Section 6(b)(v) through (xi) and to execute Award Agreements or other documents entered into under this Plan on behalf of the Committee or the Company. The Committee may further designate and delegate to one or more additional officers or employees of the Company or any Subsidiary, and/or one or more agents, authority to assist the Committee in any or all aspects of the day-to-day administration of the Plan and/or of Awards granted under the Plan.

(b) *Powers of Committee*. Subject to the express provisions of this Plan, the Committee shall be authorized and empowered to do all things that it determines to be necessary or appropriate in connection with the administration of this Plan, including:

(i) to prescribe, amend and rescind rules and regulations relating to this Plan and to define terms not otherwise defined herein;

(ii) to determine which Persons are Eligible Persons, to which of such Eligible Persons, if any, Awards shall be granted hereunder and the timing of any such Awards;

(iii) to prescribe and amend the terms of the Award Agreements, to grant Awards and determine the terms and conditions thereof;

(iv) to reduce the exercise price of a previously awarded Option or Stock Appreciation Right or cancel and re-grant or exchange such Option or Stock Appreciation Right for cash or a new Award with a lower (or no) exercise price with any such determination made by the Committee in its sole discretion, in each case, without stockholder approval;

(v) to adopt such procedures and sub-plans as are necessary or appropriate (A) to permit or facilitate participation in this Plan by Eligible Persons who are not citizens of, or subject to taxation by, the United States or who are employed outside the United States or (B) to allow Awards to qualify for special tax treatment in a jurisdiction other than the United States; *provided, however*, that Board approval will not be necessary for immaterial modifications to this Plan or any Award Agreement that are required for compliance with the laws of the relevant jurisdiction;

(vi) to establish and verify the extent of satisfaction of any performance goals or other conditions applicable to the grant, issuance, retention, vesting, exercisability or settlement of any Award;

(vii) to prescribe and amend the terms of or form of any document or notice required to be delivered to the Company by Participants under this Plan;

(viii) to determine the extent to which adjustments are required pursuant to Section 16;

(ix) to interpret and construe this Plan, any rules and regulations under this Plan and the terms and conditions of any Award granted hereunder, and to make exceptions to any such provisions if the Committee, in good faith, determines that it is appropriate to do so;

(x) to approve corrections in the documentation or administration of any Award; and

(xi) to make all other determinations deemed necessary or advisable for the administration of this Plan.

Notwithstanding anything in this Plan to the contrary, with respect to any Award that is "deferred compensation" under Section 409A of the Code, the Committee shall exercise its discretion in a manner that causes such Awards to be compliant with or exempt from the requirements of Section 409A of the Code. Without limiting the foregoing, unless expressly agreed to in writing by the Participant holding such Award, the Committee shall not take any action with respect to any Award which constitutes (x) a modification of a stock right within the meaning of Treas. Reg. § 1.409A-1(b)(5)(v)(B) so as to constitute the grant of a new stock right, (y) an extension of a stock right, including the addition of a feature for the deferral of compensation within the meaning of Treas. Reg. § 1.409A-1 (b)(5)(v)(C), or (z) an impermissible acceleration of a payment date or a subsequent deferral of a stock right subject to Section 409A of the Code within the meaning of Treas. Reg. § 1.409A-1(b)(5)(v)(E).

The Committee may, in its sole and absolute discretion, without amendment to the Plan but subject to the limitations otherwise set forth in Section 20, waive or amend the operation of Plan provisions respecting exercise after Termination of Employment. The Committee or any member thereof may, in its sole and absolute discretion, except as otherwise provided in Section 20, waive, settle or adjust any of the terms of any Award so as to avoid unanticipated consequences or address unanticipated events (including any temporary closure of an applicable stock exchange, disruption of communications or natural catastrophe).

(c) *Determinations by the Committee*. All decisions, determinations and interpretations by the Committee regarding the Plan, any rules and regulations under the Plan, and the terms and conditions of, or operation of, any Award granted hereunder, shall be final and binding on all Participants, beneficiaries, heirs, assigns or other persons holding or claiming rights under the Plan or any Award. The Committee shall consider such factors as it deems relevant, in its sole and absolute discretion, to making such decisions, determinations and interpretations, including the recommendations or advice of any officer or other employee of the Company and such attorneys, consultants and accountants as it may select. Members of the Board and members of the Committee acting under the Plan shall be fully protected in relying in good faith upon the advice of counsel and shall incur no liability except for as a result of gross negligence or willful misconduct in the performance of their duties.

(d) *Subsidiary Awards*. In the case of a grant of an Award to any Participant employed by a Subsidiary, such grant may, if the Committee so directs, be implemented by the Company issuing any subject shares of Common Stock to the Subsidiary, for such lawful consideration as the Committee may determine, upon the condition or understanding that the Subsidiary will transfer the shares of Common Stock to the Participant in accordance with the terms of the Award specified by the Committee pursuant to the provisions of the Plan. Notwithstanding any other provision hereof, such Award may be issued by and in the name of the Subsidiary and shall be deemed granted on such date as the Committee shall determine.

7. Plan Awards

(a) *Terms Set Forth in Award Agreement*. Awards may be granted to Eligible Persons as determined by the Committee at any time and from time to time prior to the termination of the Plan. The terms and conditions of each Award shall be set forth in an Award Agreement in a form approved by the Committee for such Award, subject to and incorporating by reference or otherwise the applicable terms and conditions of the Plan, which Award Agreement may contain such terms and conditions as specified from time to time by the Committee, provided such other terms and conditions do not conflict with the Plan. The Award Agreement for any Award (other than Restricted Stock Awards) shall include the time or times at or within which and the consideration, if any, for which any shares of Common Stock or cash, as applicable, may be acquired from the Company. The terms of Awards may vary among Participants, and the Plan does not impose upon the Committee any requirement to make Awards subject to uniform terms. Accordingly, the terms of individual Award Agreements may vary.

(b) *Termination of Employment*. Subject to the express provisions of the Plan, the Committee shall specify before, at, or after the time of grant of an Award the provisions governing the effect(s) upon an Award of a Participant's Termination of Employment.

(c) *Rights of a Stockholder*. A Participant shall have no rights as a stockholder with respect to shares of Common Stock covered by an Award (including voting rights) until the date the Participant becomes the holder of record of such shares of Common Stock. No adjustment shall be made for dividends or other rights for which the record date is prior to such date, except as provided in Sections 10(b), 11(b) or 16 of this Plan or as otherwise provided by the Committee.

(d) *No Fractional Shares*. No fractional shares of Common Stock shall be issued pursuant to an Award or in settlement thereof.

8. Options

(a) *Grant, Term and Price*. The grant, issuance, retention, vesting and/or settlement of any Option shall occur at such time and be subject to such terms and conditions as determined by the Committee or under criteria established by the Committee, which may include conditions based on continued employment or engagement, passage of time, attainment of age and/or service requirements, and/or satisfaction of performance conditions. The term of an Option shall in no event be greater than 10 years; *provided, however*, the term of an Option (other than an Incentive Stock Option) shall be automatically extended if, at the time of its scheduled expiration, the Participant holding such Option is prohibited by law or the Company's insider trading policy from exercising the Option, which extension shall expire on the 30th day following the date such prohibition no longer applies. The Committee will establish the price at which Common Stock may be purchased upon exercise of an Option, which in no event will be less than the Fair Market Value of such shares on the date of grant; *provided, however*, that the exercise price per share of Common Stock with respect to an Option that is granted as a Substitute Award may be less than the Fair Market Value of the shares of Common Stock on the date such Option is granted if such exercise price is based on a formula set forth in the terms of the options held by such optionees or in the terms of the agreement providing for such merger or other acquisition that satisfies the requirements of (i) Section 409A of the Code, if such options held by such optionees are not intended to qualify as "incentive stock options" within the meaning of Section 422 of the Code, and (ii) Section 424(a) of the Code, if such options held by such optionees are intended to qualify as "incentive stock options" within the meaning of Section 422 of the Code. The exercise price of any Option may be paid in cash to the Company or such other method as determined by the Committee, including an irrevocable commitment by a broker to pay over such amount from a sale of the shares of Common Stock issuable under an Option, the delivery of previously owned shares of Common Stock or withholding of shares of Common Stock otherwise deliverable upon exercise.

(b) *No Reload Grants*. Options shall not be granted under the Plan in consideration for, and shall not be conditioned upon the delivery of, shares of Common Stock to the Company in payment of the exercise price and/or tax withholding obligation under any other employee stock option.

(c) *Incentive Stock Options*. Notwithstanding anything to the contrary in this Section 8, in the case of the grant of an Incentive Stock Option, if the Participant owns stock possessing more than 10% of the combined voting power of all classes of stock of the Company, the exercise price of such Option must be at least 110% of the Fair Market Value of the shares of Common Stock on the date of grant and the Option must expire within a period of not more than five years from the date of grant. Notwithstanding anything in this Section 8 to the contrary, Options designated as Incentive Stock Options shall not be eligible for treatment under the Code as Incentive Stock Options (and will be deemed to be Nonqualified Stock Options) to the extent that either (i) the aggregate Fair Market Value of shares of Common Stock (determined as of the time of grant) with respect to which such Options are exercisable for the first time by the Participant during any calendar year (under all plans of the Company and any Subsidiary) exceeds $100,000, taking Options into account in the order in which they were granted, or (ii) such Options otherwise remain exercisable but are not exercised within three months (or such other period of time provided in Section 422 of the Code) of separation of service (as determined in accordance with Section 3401(c) of the Code and the regulations promulgated thereunder).

(d) *No Stockholder Rights*. Participants shall have no voting rights and will have no rights to receive dividends or Dividend Equivalents in respect of an Option or any shares of Common Stock subject to an Option until the Participant has become the holder of record of such shares.

9. Stock Appreciation Rights

(a) *General Terms*. The grant, issuance, retention, vesting and/or settlement of any Stock Appreciation Right shall occur at such time and be subject to such terms and conditions as determined by the Committee or under criteria established by the Committee, which may include conditions based on continued employment or engagement, passage of time, attainment of age and/or service requirements, and/or satisfaction of performance conditions. The term of a Stock Appreciation Right shall in no event be greater than 10 years; *provided, however*, the term of a Stock Appreciation Right shall be automatically extended if, at the time of its scheduled expiration, the Participant holding such Stock Appreciation Right is prohibited by law or the Company's insider trading policy from exercising the Stock Appreciation Right which extension shall expire on the 30th day following the date such prohibition no longer applies. Stock Appreciation Rights may be granted to Participants from time to time either in tandem with or as a component of Options granted under the Plan ("***tandem SARs***") or not in conjunction with other Awards ("***freestanding SARs***"). Upon exercise of a tandem SAR as to some or all of the shares covered by the grant, the related Option shall be canceled automatically to the extent of the number of shares covered by such exercise. Conversely, if the related Option is exercised as to some or all of the shares covered by the grant, the related tandem SAR, if any, shall be canceled automatically to the extent of the number of shares covered by the Option exercise. Any Stock Appreciation Right granted in tandem with an Option may be granted at the same time such Option is granted or at any time thereafter before exercise or expiration of such Option, provided that the Fair Market Value of Common Stock on the date of the SAR's grant is not greater than the exercise price of the related Option. All freestanding SARs shall be granted subject to the same terms and conditions applicable to Options as set forth in Section 8 and all tandem SARs shall have the same exercise price as the Option to which they relate. Subject to the provisions of Section 8 and the immediately preceding sentence, the Committee may impose such other conditions or restrictions on any Stock Appreciation Right as it shall deem appropriate. Stock Appreciation Rights may be settled in Common Stock, cash, Restricted Stock or a combination thereof, as determined by the Committee and set forth in the applicable Award Agreement.

(b) *No Stockholder Rights*. Participants shall have no voting rights and will have no rights to receive dividends or Dividend Equivalents in respect of an Award of Stock Appreciation Rights or any shares of Common Stock subject to an Award of Stock Appreciation Rights until the Participant has become the holder of record of such shares.

10. Restricted Stock and Restricted Stock Units

(a) *Vesting and Performance Criteria*. The grant, issuance, vesting and/or settlement of any Award of Restricted Stock or Restricted Stock Units shall occur at such time and be subject to such terms and conditions as determined by the Committee or under criteria established by the Committee, which may include conditions based on continued employment or engagement, passage of time, attainment of age and/or service requirements,

and/or satisfaction of performance conditions. In addition, the Committee shall have the right to grant Restricted Stock or Restricted Stock Unit Awards as the form of payment for grants or rights earned or due under other stockholder-approved compensation plans or arrangements of the Company.

(b) *Dividends and Distributions*. Participants in whose name Restricted Stock is granted shall be entitled to receive all dividends and other distributions paid with respect to those shares of Common Stock, unless determined otherwise by the Committee. The Committee will determine whether any such dividends or distributions will be automatically reinvested in additional shares of Restricted Stock and/or subject to the same restrictions on transferability as the Restricted Stock with respect to which they were distributed or whether such dividends or distributions will be paid in cash. Shares underlying Restricted Stock Units shall be entitled to dividends or distributions only to the extent provided by the Committee.

11. Other Stock-Based Awards

(a) *General Terms.* The Committee is authorized, subject to limitations under applicable law, to grant to Eligible Persons such other Awards that may be denominated or payable in, valued in whole or in part by reference to, or otherwise based on, or related to, Common Stock, as deemed by the Committee to be consistent with the purposes of the Plan. The Committee shall determine the terms and conditions of such Other Stock-Based Awards. Common Stock delivered pursuant to an Other Stock-Based Award in the nature of a purchase right granted under this Section 11 shall be purchased for such consideration, paid for at such times, by such methods, and in such forms, including cash, Common Stock, other Awards, or other property, as the Committee shall determine.

(b) *Dividends and Distributions*. Shares underlying Other Stock-Based Awards shall be entitled to dividends or distributions only to the extent provided by the Committee.

12. Incentive Bonuses

(a) *Vesting Criteria*. The Committee shall establish the vesting conditions applicable to an Incentive Bonus, including any performance criteria and level of achievement versus such criteria that may determine the amount payable under an Incentive Bonus, which may include a target, threshold and/or maximum amount payable and any formula for determining such achievement.

(b) *Timing and Form of Payment*. The Committee shall determine the timing of payment of any Incentive Bonus. Payment of the amount due under an Incentive Bonus may be made in cash or in Common Stock, as determined by the Committee.

(c) *Discretionary Adjustments*. Notwithstanding satisfaction of any performance goals, the amount paid under an Incentive Bonus on may be adjusted by the Committee on the basis of such further considerations as the Committee shall determine.

13. Performance Awards

The Committee may establish performance criteria and level of achievement versus such criteria that shall determine the number of shares of Common Stock, Restricted Stock Units, Other Stock-Based Awards or cash to be granted, retained, vested, issued or issuable under or in settlement of or the amount payable pursuant to an Award (any such Award, a "***Performance Award***"). A Performance Award may be identified as "Performance Share," "Performance Equity," "Performance Unit" or other such term as chosen by the Committee.

14. Deferral of Payment

The Committee may, in an Award Agreement or otherwise, provide for the deferred delivery of Common Stock or cash upon settlement, vesting or other events with respect to Restricted Stock Units, Other Stock-Based Awards or in payment or satisfaction of an Incentive Bonus. Notwithstanding anything herein to the contrary, in no event will any election to defer the delivery of Common Stock or any other payment with respect to any Award be allowed if the Committee determines, in its sole discretion, that the deferral would result in the imposition of the additional tax under Section 409A(a)(1)(B) of the Code. No Award shall provide for deferral of compensation that does not comply with Section 409A of the Code. The Company, any Subsidiary or Affiliate which is in existence or hereafter comes into existence, the Board and the Committee shall have no liability to a Participant, or any other party, if an Award that is intended to be exempt from, or compliant with, Section 409A of the Code is not so exempt or compliant or for any action taken by the Board or the Committee in respect thereof.

15. Conditions and Restrictions Upon Securities Subject to Awards

The Committee may provide that the Common Stock issued upon exercise of an Option or Stock Appreciation Right or otherwise subject to or issued under an Award shall be subject to such further agreements, restrictions, conditions or limitations as the Committee in its discretion may specify prior to the exercise of such Option or Stock Appreciation Right or the grant, vesting or settlement of such Award, including conditions on vesting or transferability, forfeiture or repurchase provisions and method of payment for the Common Stock issued upon exercise, vesting or settlement of such Award (including the actual or constructive surrender of Common Stock already owned by the Participant) or payment of taxes arising in connection with an Award. Without limiting the foregoing, such restrictions may address the timing and manner of any resales by the Participant or other subsequent transfers by the Participant of any shares of Common Stock issued under an Award, including (a) restrictions under an insider trading policy or pursuant to applicable law, (b) restrictions designed to delay and/or coordinate the timing and manner of sales by the Participant and holders of other Company equity compensation arrangements, (c) restrictions as to the use of a specified brokerage firm for such resales or other transfers and (d) provisions requiring Common Stock be sold on the open market or to the Company in order to satisfy tax withholding or other obligations.

16. Adjustment of and Changes in the Stock

(a) The number and kind of shares of Common Stock available for issuance under this Plan (including under any Awards then outstanding), and the number and kind of shares of Common Stock subject to the limits set forth in Section 5, shall be equitably adjusted by the Committee to reflect any reorganization, reclassification, combination of shares, stock split, reverse stock split, spin-off, dividend or distribution of securities, property or cash (other than regular, quarterly cash dividends), or any other event or transaction that affects the number or kind of shares of Outstanding Common Stock. Such adjustment may be designed to comply with Section 424 of the Code or may be designed to treat the shares of Common Stock available under the Plan and subject to Awards as if they were all outstanding on the record date for such event or transaction or to increase the number of such shares of Common Stock to reflect a deemed reinvestment in shares of Common Stock of the amount distributed to the Company's securityholders. The terms of any outstanding Award shall also be equitably adjusted by the Committee as to price, number or kind of shares of Common Stock subject to such Award, vesting, performance criteria, and other terms to reflect the foregoing events, which adjustments need not be uniform as between different Awards or different types of Awards. No fractional shares of Common Stock shall be issued or issuable pursuant to such an adjustment.

(b) In the event there shall be any other change in the number or kind of outstanding shares of Common Stock, or any stock or other securities into which such Common Stock shall have been changed, or for which it shall have been exchanged, by reason of a Change in Control, other merger, consolidation or otherwise, then the Committee shall determine the appropriate and equitable adjustment to be effected, which adjustments need not be uniform between different Awards or different types of Awards. In addition, in the event of such change described in this paragraph, the Committee may accelerate the time or times at which any Award may be exercised, consistent with and as otherwise permitted under Section 409A of the Code, and may provide for cancellation of such accelerated Awards that are not exercised within a time prescribed by the Committee in its sole discretion.

(c) In the event of a Change in Control, the Committee, acting in its sole discretion without the consent or approval of any Participant, may take one or more of the following actions, which may vary among individual Participants and/or among Awards held by any individual Participant: (i) arrange for the assumption of an outstanding Award by the successor or acquiring entity (if any) of such Change in Control (or by its parents, if any), which assumption will be binding on all selected Participants; provided that the exercise price and the number and nature of shares issuable upon exercise of any such Option or Stock Appreciation Right, or any Award that is subject to Section 409A of the Code, will be adjusted appropriately pursuant to Section 424(a) of the Code; (ii) provide for the issuance of substitute awards by the successor or acquiring entity (if any) of such Change in Control (or by its parents, if any) that will substantially preserve the otherwise applicable terms of the outstanding Award as determined by the Committee in its sole discretion; (iii) accelerate vesting or waive any forfeiture conditions; (iv) accelerate the time of exercisability of an Award so that such Award may be exercised in full or in part for a limited period of time on or before a date specified by the Committee, after which specified date all unexercised Awards and all rights of Participants thereunder shall terminate; or (v) make such other adjustments to Awards then outstanding as the Committee deems appropriate to reflect such Change in Control. Notwithstanding anything herein to the contrary, in the event of a Change in Control in which the acquiring or surviving company

in the transaction does not assume or continue outstanding Awards or issue substitute awards upon the Change in Control, unless determined otherwise by the Committee, immediately prior to the Change in Control, all Awards that are not assumed, continued or substituted for shall be treated as follows effective immediately prior to the Change in Control: (A) in the case of an Option or Stock Appreciation Right, the Participant shall have the ability to exercise such Option or Stock Appreciation Right, including any portion of the Option or Stock Appreciation Right not previously exercisable, (B) in the case of any Award the vesting of which is in whole or in part subject to performance criteria or an Incentive Bonus, all conditions to the grant, issuance, retention, vesting or transferability of, or any other restrictions applicable to, such Award shall immediately lapse and the Participant shall have the right to receive a payment based on target level achievement or actual performance through a date determined by the Committee, and (C) in the case of outstanding Restricted Stock, Restricted Stock Units or Other Stock-Based Awards (other than those referenced in subsection (B)), all conditions to the grant, issuance, retention, vesting or transferability of, or any other restrictions applicable to, such Award shall immediately lapse. In no event shall any action be taken pursuant to this Section 16(c) that would change the payment or settlement date of an Award in a manner that would result in the imposition of any additional taxes or penalties pursuant to Section 409A of the Code.

(d) Notwithstanding anything in this Section 16 to the contrary, in the event of a Change in Control, the Committee may provide for the cancellation and cash settlement of all outstanding Awards upon such Change in Control (including the cancellation for no consideration of any Option or Stock Appreciation Right with an exercise price that equals or exceeds the per share consideration in such transaction).

(e) Notwithstanding anything in this Section 16 to the contrary, an adjustment to an Option or Stock Appreciation Right under this Section 16 shall be made in a manner that will not result in the grant of a new Option or Stock Appreciation Right under Section 409A of the Code.

17. Transferability

Each Award may not be sold, transferred for value, pledged, assigned, or otherwise alienated or hypothecated by a Participant other than by will or the laws of descent and distribution, and each Option or Stock Appreciation Right shall be exercisable only by the Participant during his or her lifetime. Notwithstanding the foregoing, (a) outstanding Options may be exercised following the Participant's death by the Participant's beneficiaries or as permitted by the Committee and (b) as permitted by the Committee, a Participant may transfer or assign an Award as a gift to any "family member" (as such term is defined in the Registration Statement on Form S-8) (an "***Assignee Entity***"), provided that such Assignee Entity shall be entitled to exercise assigned Options and Stock Appreciation Rights only during the lifetime of the assigning Participant (or following the assigning Participant's death, by the Participant's beneficiaries or as otherwise permitted by the Committee) and provided further that such Assignee Entity shall not further sell, pledge, transfer, assign or otherwise alienate or hypothecate such Award.

18. Compliance with Laws and Regulations

(a) This Plan, the grant, issuance, vesting, exercise and settlement of Awards hereunder, and the obligation of the Company to sell, issue or deliver shares of Common Stock under such Awards, shall be subject to all applicable foreign, federal, state and local laws, rules and regulations, stock exchange rules and regulations, and to such approvals by any governmental or regulatory agency as may be required. The Company shall not be required to register in a Participant's name or deliver Common Stock prior to the completion of any registration or qualification of such shares under any foreign, federal, state or local law or any ruling or regulation of any government body which the Committee shall determine to be necessary or advisable. To the extent the Company is unable to or the Committee deems it infeasible to obtain authority from any regulatory body having jurisdiction, which authority is deemed by the Company's counsel to be necessary to the lawful issuance and sale of any shares of Common Stock hereunder, the Company and its Subsidiaries shall be relieved of any liability with respect to the failure to issue or sell such shares of Common Stock as to which such requisite authority shall not have been obtained. No Option shall be exercisable and no Common Stock shall be issued and/or transferable under any other Award unless a registration statement with respect to the Common Stock underlying such Option is effective and current or the Company has determined, in its sole and absolute discretion, that such registration is unnecessary.

(b) In the event an Award is granted to or held by a Participant who is employed or providing services outside the United States, the Committee may, in its sole discretion, modify the provisions of the Plan or of such Award as they pertain to such individual to comply with applicable foreign law or to recognize differences in local law, currency or tax policy. The Committee may also impose conditions on the grant, issuance, exercise, vesting, settlement or retention of Awards in order to comply with such foreign law and/or to minimize the Company's obligations with respect to tax equalization for Participants employed outside their home country.

19. Withholding

To the extent required by applicable federal, state, local or foreign law, the Committee may, and/or a Participant shall, make arrangements satisfactory to the Company for the satisfaction of any withholding tax obligations that arise with respect to any Award or the issuance or sale of any shares of Common Stock. The Company shall not be required to recognize any Participant rights under an Award, to issue shares of Common Stock or to recognize the disposition of such shares of Common Stock until such obligations are satisfied. To the extent permitted or required by the Committee, these obligations may or shall be satisfied by the Company withholding cash from any compensation otherwise payable to or for the benefit of a Participant, the Company withholding a portion of the shares of Common Stock that otherwise would be issued to a Participant under such Award or any other Award held by the Participant, or by the Participant tendering to the Company cash or, if allowed by the Committee, shares of Common Stock.

20. Amendment of the Plan or Awards

The Board may amend, alter, suspend or terminate this Plan, and the Committee may amend or alter any Award Agreement or other document evidencing an Award made under this Plan; however, except as provided pursuant to the provisions of Section 16, no such amendment shall, without the approval of the stockholders of the Company:

(a) increase the maximum number of shares of Common Stock for which Awards may be granted under this Plan;

(b) extend the term of this Plan;

(c) change the class of Persons eligible to be Participants; or

(d) otherwise amend the Plan in any manner requiring stockholder approval by law or the rules of any stock exchange or market or quotation system on which the Common Stock is traded, listed or quoted.

No amendment or alteration to the Plan or an Award or Award Agreement shall be made which would materially impair the rights of the holder of an Award without such holder's consent; *provided*, *however*, that no such consent shall be required if the Committee determines in its sole discretion and prior to the date of any Change in Control that such amendment or alteration either (i) is required or advisable in order for the Company, the Plan or the Award to satisfy any law or regulation or to meet the requirements of, or avoid adverse financial accounting consequences under, any accounting standard, or (ii) is not reasonably likely to significantly diminish the benefits provided under such Award, or that any such diminishment has been adequately compensated.

21. No Liability of Company

The Company, any Subsidiary or Affiliate which is in existence or hereafter comes into existence, the Board, the Committee and any delegate thereof shall not be liable to a Participant or any other person as to: (a) the non-issuance or sale of shares of Common Stock as to which the Company has been unable to obtain from any regulatory body having jurisdiction the authority deemed by the Company's counsel to be necessary to the lawful issuance and sale of any shares of Common Stock hereunder; and (b) any tax consequence expected, but not realized, by any Participant or other person due to the receipt, vesting, exercise or settlement of any Award granted hereunder.

22. Non-Exclusivity of Plan

Neither the adoption of this Plan by the Board nor the submission of this Plan to the stockholders of the Company for approval shall be construed as creating any limitations on the power of the Board or the Committee to adopt such other incentive arrangements as either may deem desirable, including the granting of equity awards otherwise than under this Plan, and such arrangements may be either generally applicable or applicable only in specific cases.

23. Governing Law

This Plan and any agreements or other documents hereunder shall be interpreted and construed in accordance with the laws of the State of Delaware and applicable federal law. Any reference in this Plan or in the agreement or other document evidencing any Awards to a provision of law or to a rule or regulation shall be deemed to include any successor law, rule or regulation of similar effect or applicability.

24. No Right to Employment, Reelection or Continued Service

Nothing in this Plan or an Award Agreement shall interfere with or limit in any way the right of the Company, its Subsidiaries and/or its Affiliates to terminate any Participant's employment, service on the Board or service at any time or for any reason not prohibited by law, nor shall this Plan or an Award itself confer upon any Participant any right to continue his or her employment or service for any specified period of time. Neither an Award nor any benefits arising under this Plan shall constitute an employment contract with the Company, any Subsidiary and/or its Affiliates. Subject to Sections 4 and 20, this Plan and the benefits hereunder may be terminated at any time in the sole and exclusive discretion of the Board without giving rise to any liability on the part of the Company, its Subsidiaries and/or its Affiliates.

25. Specified Employee Delay

To the extent any payment under this Plan is considered deferred compensation subject to the restrictions contained in Section 409A of the Code, such payment may not be made to a specified employee (as determined in accordance with a uniform policy adopted by the Company with respect to all arrangements subject to Section 409A of the Code) upon Separation from Service before the date that is six months after the specified employee's Separation from Service (or, if earlier, the specified employee's death). Any payment that would otherwise be made during this period of delay shall be accumulated and paid on the sixth month plus one day following the specified employee's Separation from Service (or, if earlier, as soon as administratively practicable after the specified employee's death).

26. No Liability of Committee Members

No member of the Committee shall be personally liable by reason of any contract or other instrument executed by such member or on his or her behalf in his or her capacity as a member of the Committee nor for any mistake of judgment made in good faith, and the Company shall indemnify and hold harmless each member of the Committee and each other employee, officer or director of the Company to whom any duty or power relating to the administration or interpretation of the Plan may be allocated or delegated, against any cost or expense (including counsel fees) or liability (including any sum paid in settlement of a claim) arising out of any act or omission to act in connection with the Plan, unless arising out of such Person's own fraud or willful bad faith; *provided, however*, that approval of the Board shall be required for the payment of any amount in settlement of a claim against any such Person. The foregoing right of indemnification shall not be exclusive of any other rights of indemnification to which such Persons may be entitled under the Company's Certificate of Incorporation and Bylaws (as each may be amended from time to time), as a matter of law, pursuant to any individual agreement or otherwise, or any power that the Company may have to indemnify them or hold them harmless.

27. Severability

If any provision of the Plan or any Award is or becomes or is deemed to be invalid, illegal, or unenforceable in any jurisdiction or as to any Person or Award, or would disqualify the Plan or any Award under any law deemed applicable by the Committee, such provision shall be construed or deemed amended to conform to the applicable laws, or if it cannot be construed or deemed amended without, in the determination of the Committee, materially altering the intent of the Plan or the Award, such provision shall be stricken as to such jurisdiction, Person or Award, and the remainder of the Plan and any such Award shall remain in full force and effect.

28. Unfunded Plan

The Plan is intended to be an unfunded plan. Participants are and shall at all times be general creditors of the Company with respect to their Awards. If the Committee or the Company chooses to set aside funds in a trust or otherwise for the payment of Awards under the Plan, such funds shall at all times be subject to the claims of the creditors of the Company in the event of its bankruptcy or insolvency.

29. Clawback/Recoupment

Awards granted under this Plan will be subject to recoupment in accordance with any clawback policy that the Company adopts or is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Rule 10D-1 under the Exchange Act or other applicable law. In addition, the Committee may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Committee determines necessary or appropriate, including a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of misconduct. No recovery of compensation under such a clawback policy will be an event giving rise to a right to resign for "good reason" or be deemed a "constructive termination" (or any similar term) as such terms are used in any agreement between any Participant and the Company.

30. Beneficiary Designation

Participants may designate beneficiaries with respect to Awards under the Plan in accordance with the procedures determined by the Committee. In the absence of a beneficiary designation, a Participant's estate will be the deemed beneficiary.

31. Interpretation

Headings are given to the Sections and subsections of the Plan solely as a convenience to facilitate reference and shall not be deemed in any way material or relevant to the construction or interpretation of the Plan or any provision thereof. Words in the masculine gender shall include the feminine gender, and where appropriate, the plural shall include the singular and the singular shall include the plural. The use herein of the word "including" following any general statement, term or matter shall not be construed to limit such statement, term or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not non-limiting language (such as "without limitation", "but not limited to", or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement, term or matter. References herein to any agreement, instrument or other document means such agreement, instrument or other document as amended, supplemented and modified from time to time to the extent permitted by the provisions thereof and not prohibited by the Plan.

ORUKA THERAPEUTICS, INC.
2024 EMPLOYEE STOCK PURCHASE PLAN

1. Purpose

The purpose of this Oruka Therapeutics, Inc. 2024 Employee Stock Purchase Plan (the "***Plan***") is to provide employees of the Company and its Designated Subsidiaries with an opportunity to purchase Common Stock through accumulated Contributions. The Company's intention is to have the Plan qualify as an "employee stock purchase plan" under Section 423 of the Code. The provisions of the Plan, accordingly, will be construed to extend and limit Plan participation in a uniform and nondiscriminatory basis consistent with the requirements of Section 423 of the Code.

2. Definitions.

As used in the Plan, the following terms shall have the meanings set forth below:

(a) "***Administrator***" means the Compensation Committee of the Board (or any successor committee), or such other committee as designated by the Board to administer the Plan under Section 14.

(b) "***Applicable Laws***" means the requirements relating to the administration of equity-based awards under U.S. state corporate laws, U.S. federal and state securities laws, the Code, any stock exchange or quotation system on which the Common Stock is listed or quoted and the applicable laws of any foreign country or jurisdiction where options are, or will be, granted under the Plan.

(c) "***Board***" means the Board of Directors of the Company.

(d) "***Code***" means the Internal Revenue Code of 1986, as amended from time to time, and the rulings and regulations issued thereunder.

(e) "***Common Stock***" means the common stock of the Company, $0.001 par value per share.

(f) "***Company***" means Oruka Therapeutics, Inc., a Delaware corporation, and any successor corporation.

(g) "***Compensation***" means an Eligible Employee's base salary or base hourly rate of pay before deduction for any salary deferral contributions made by the Eligible Employee to any tax-qualified or nonqualified deferred compensation plan, but excluding commissions, overtime, incentive compensation, bonuses and other forms of compensation. The Administrator, in its discretion, may, on a uniform and nondiscriminatory basis, establish a different definition of Compensation for an Offering Period.

(h) "***Contributions***" means the payroll deductions and any other additional payments that the Administrator may permit to be made by a Participant to fund the exercise of options granted pursuant to the Plan, subject to Section 423 of the Code.

(i) "***Designated Subsidiary***" means any Subsidiary that has been designated by the Administrator from time to time in its sole discretion as eligible to participate in the Plan. As of the date of adoption of the Plan, the Designated Subsidiaries consist exclusively of: Oruka Therapeutics Operating Company, LLC.

(j) "***Effective Date***" means the Closing Date (as defined in that Agreement and Plan of Merger and Reorganization dated April 3, 2024 by and between the Company (f/k/a ARCA biopharma, Inc.) and Oruka Therapeutics Operating Company, LLC (f/k/a Oruka Therapeutics, Inc.)).

(k) "***Eligible Employee***" means any person, including an officer, who is customarily employed by the Company or a Designated Subsidiary (i) for more than 20 hours per week and (ii) for more than five months in any calendar year. For purposes of the Plan, the employment relationship shall be treated as continuing intact while the individual is on sick leave or other leave of absence approved by the Company. Where the period of leave exceeds 90 days and the individual's right to reemployment is not guaranteed either by statute or by contract, the employment relationship shall be deemed to have terminated on the 91st day of such leave. "Eligible Employee" shall not include any person who is a citizen or resident of a foreign jurisdiction if granting them an option under the Plan would violate the law of such jurisdiction, or if compliance with the laws of the jurisdiction would cause the Plan to violate Section 423 of the Code.

(l) "***Employer***" means the Company and each Designated Subsidiary.

(m) "***Enrollment Date***" means the first Trading Day of each Offering Period.

(n) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, including the rules and regulations promulgated thereunder.

(o) "***Exercise Date***" means the last Trading Day of each Offering Period.

(p) "***Fair Market Value***" means as of any date, the value of the Common Stock determined as follows: (i) if the Common Stock is listed on any established stock exchange, system or market, its Fair Market Value shall be the closing price for the Common Stock as quoted on such exchange, system or market as reported in the Wall Street Journal or such other source as the Administrator deems reliable (or, if no sale of Common Stock is reported for such date, on the next preceding date on which any sale shall have been reported); and (ii) in the absence of an established market for the Common Stock, the Fair Market Value thereof shall be determined in good faith by the Administrator.

(q) "***Merger Agreement***" means that Agreement and Plan of Merger and Reorganization dated April 3, 2024 by and between the Company (f/k/a ARCA biopharma, Inc.) and Oruka Therapeutics Operating Company, LLC (f/k/a Oruka Therapeutics, Inc.).

(r) "***New Exercise Date***" means a new Exercise Date if the Administrator shortens any Offering Period then in progress.

(s) "***Offering***" means an offer under the Plan of an option that may be exercised during an Offering Period as further described in Section 4. For purposes of the Plan, the Administrator may designate separate Offerings under the Plan (the terms of which need not be identical) in which Eligible Employees of one or more Employers will participate, even if the dates of the applicable Offering Periods of each such Offering are identical and the provisions of the Plan will separately apply to each Offering. To the extent permitted by Treasury Regulation Section 1.423-2(a)(1), the terms of each Offering need not be identical; *provided, however*, that the terms of the Plan and an Offering together satisfy Treasury Regulation Sections 1.423-2(a)(2) and (a)(3).

(t) "***Offering Periods***" means the periods established by the Administrator (not to exceed 27 months) during which an option granted pursuant to the Plan may be exercised. The duration and timing of Offering Periods may be changed pursuant to Sections 4, 18, and 19. The first Offering Period shall commence on the Effective Date and end on the next December 9 or June 8 that follows the Effective Date, and subsequent Offering Periods shall be each six-month period commencing the day after the prior Offering Period ends and ending on each December 9 and June 8.

(u) "***Outstanding Common Stock***" means the sum of (i) the shares of Common Stock outstanding, (ii) the shares of Common Stock underlying unexercised pre-funded warrants, and (iii) the shares of Common Stock underlying the Company's preferred stock, par value $0.001 (determined on an as-converted basis without regard to any limitations on such conversion).

(v) "***Parent***" means a "parent corporation," whether now or hereafter existing, as defined in Section 424(e) of the Code.

(w) "***Participant***" means an Eligible Employee who elects to participate in the Plan.

(x) "***Purchase Period***" means the period during an Offering Period during which shares of Common Stock may be purchased on a Participant's behalf in accordance with the terms of the Plan. Unless the Administrator determines otherwise, during the first Offering Period, the Purchase Period will begin on the first date of such Offering Period and end on the last day of such Offering Period, and subsequent Purchase Periods shall be each six-month period commencing thereafter. Unless the Administrator determines otherwise, each Purchase Period following the first Purchase Period will be a six-month period.

(y) "***Purchase Price***" means an amount equal to 85% of the Fair Market Value of a share of Common Stock on the Enrollment Date or on the Exercise Date, whichever is lower; *provided, however*, that the Purchase Price may be determined for subsequent Offering Periods by the Administrator subject to compliance with Section 423 of the Code (or any other Applicable Law) or pursuant to Section 18.

(z) "***Subsidiary***" means a "subsidiary corporation," whether now or hereafter existing, as defined in Section 424(f) of the Code.

(z) "***Trading Day***" means a day on which the national stock exchange upon which the Common Stock is listed is open for trading or, if the Common Stock is not listed on a national stock exchange, a business day as determined by the Administrator in good faith.

(aa) "***Treasury Regulations***" means the Treasury regulations of the Code. Reference to a specific Treasury Regulation or Section of the Code shall include such Treasury Regulation or Section, any valid regulation promulgated under such Section, and any comparable provision of any future legislation or regulation amending, supplementing or superseding such Section or regulation.

3. Eligibility.

(a) *Offering Periods*. Any Eligible Employee on a given Enrollment Date will be eligible to participate in the Plan if he or she was employed by the Company for at least 30 calendar days immediately preceding the Enrollment Date, subject to the requirements of Section 5; *provided, however*, that an Eligible Employee who commences employment with the Company or a Designated Subsidiary following such 30-day period will be eligible to participate in the Plan at the beginning of the next Purchase Period to occur that is at least 30 calendar days following the commencement of his or her employment with the Company or a Designated Subsidiary. Eligible Employees who do not elect to participate in the Plan on a given Enrollment Date may elect to participate in the Plan at the beginning of any subsequent Purchase Period, as determined by the Administrator.

(b) *Non-U.S. Employees*. Employees who are citizens or residents of a non-U.S. jurisdiction (without regard to whether they also are citizens or residents of the United States or resident aliens (within the meaning of Section 7701(b)(1)(A) of the Code)) may be excluded from participation in the Plan or an Offering if the participation of such employees is prohibited under the laws of the applicable jurisdiction or if complying with the laws of the applicable jurisdiction would cause the Plan or an Offering to violate Section 423 of the Code. In addition, as provided in Section 14, the Administrator may establish one or more sub-plans of the Plan (which may, but are not required to, comply with the requirements of Section 423 of the Code) to provide benefits to employees of Designated Subsidiaries located outside the United States in a manner that complies with local law. Any such sub-plan will be a component of the Plan and will not be a separate plan.

(c) *Limitations*. Any provisions of the Plan to the contrary notwithstanding, no Eligible Employee will be granted an option under the Plan (i) to the extent that, immediately after the grant, such Eligible Employee (or any other person whose stock would be attributed to such Eligible Employee pursuant to Section 424(d) of the Code) would own capital stock of the Company or any Parent or Subsidiary of the Company and/or hold outstanding options to purchase such stock possessing 5% or more of the total combined voting power or value of all classes of the capital stock of the Company or of any Parent or Subsidiary of the Company, or (ii) to the extent that his or her rights to purchase stock under all employee stock purchase plans (as defined in Section 423 of the Code) of the Company or any Parent or Subsidiary of the Company accrues at a rate that exceeds $25,000 worth of stock (determined at the Fair Market Value of the stock at the time such option is granted) for each calendar year in which such option is outstanding at any time, as determined in accordance with Section 423 of the Code and the regulations thereunder.

4. Offering Periods

The Plan will be implemented by consecutive Offering Periods with new Offering Periods commencing at such times as determined by the Administrator. The Administrator will have the power to change the duration of Offering Periods (including the commencement dates thereof) without stockholder approval.

5. Participation

An Eligible Employee may participate in the Plan by (i) submitting to the Company's Finance department (or its delegate), on or before a date determined by the Administrator prior to an applicable Enrollment Date, a properly completed subscription agreement authorizing Contributions in the form provided by the Administrator for such purpose, or (ii) following an electronic or other enrollment procedure determined by the Administrator.

6. Contributions

(a) At the time a Participant enrolls in the Plan pursuant to Section 5, such Participant will elect to have payroll deductions made on each pay day or other Contributions (to the extent permitted by the Administrator) made during the Offering Period (or portion thereof) in an amount equal to at least 1% but not exceeding 15% of the

Compensation (or such other percentage of Compensation as determined by the Administrator in its sole discretion, prior to the commencement of an applicable Offering Period), that the Participant receives on each pay day during the Offering Period; *provided, however*, that should a pay day occur on an Exercise Date, a Participant will have any payroll deductions made on such day applied to his or her notional account under the subsequent Purchase Period or Offering Period. The minimum permissible projected Contribution by any Participant for an Offering Period shall be $500. The maximum permissible Contribution by any Participant for all Offering Periods during any calendar year shall be $25,000. The Administrator, in its sole discretion and to the extent permitted by Section 423 of the Code, may permit all Participants in a specified Offering to contribute amounts to the Plan through payment by cash, check, or other means set forth in the subscription agreement prior to each Exercise Date of each Purchase Period. A Participant's subscription agreement will remain in effect for successive Offering Periods unless terminated as provided in Section 10.

(b) Payroll deductions for a Participant will commence on the first pay day following the Enrollment Date (or such later date on which a Participant enrolls in the Plan pursuant to Section 5) and will end on the last pay day prior to the Exercise Date of such Purchase Period to which such authorization is applicable, unless sooner terminated by the Participant as provided in Section 10; *provided, however*, that with respect to the first Offering Period, payroll deduction for a Participant will not commence until such time as determined by the Administrator.

(c) All Contributions made for a Participant will be credited to his or her notional account under the Plan and payroll deductions will be made in whole percentages only. Except to the extent permitted by the Administrator pursuant to Section 6(a), a Participant may not make any additional payments into such notional account.

(d) A Participant may discontinue his or her participation in the Plan as provided in Section 10. Participants shall not be permitted to increase or to otherwise decrease their rates of Contributions during a Purchase Period unless otherwise determined by the Administrator in its sole discretion; *provided, however*, that Participants shall be permitted to increase or decrease their rates of Contributions effective as of the beginning of each Purchase Period.

(e) Notwithstanding the foregoing, to the extent necessary to comply with Section 423(b)(8) of the Code, a Participant's Contributions may be decreased to 0% at any time during a Purchase Period. Subject to Section 423(b)(8) of the Code, Contributions will recommence at the rate originally elected by the Participant effective as of the beginning of the first Purchase Period scheduled to end in the following calendar year, unless terminated by the Participant as provided in Section 10.

(f) At the time the option under the Plan is exercised, in whole or in part, or at the time some or all of the Common Stock issued under the Plan is disposed of (or any other time that a taxable event related to the Plan occurs), the Participant must make adequate provision for the Company's or Employer's federal, state, local, or any other tax liability payable to any authority including taxes imposed by jurisdictions outside of the United States, national insurance, social security, or other tax withholding obligations, if any, that arise upon the exercise of the option or the disposition of the Common Stock (or any other time that a taxable event related to the Plan occurs). At any time, the Company or the Employer may, but will not be obligated to, withhold from the Participant's compensation the amount necessary for the Company or the Employer to meet applicable withholding obligations, including any withholding required to make available to the Company or the Employer any tax deductions or benefits attributable to sale or early disposition of Common Stock by the Eligible Employee. In addition, the Company or the Employer may, but will not be obligated to, withhold from the proceeds of the sale of Common Stock or any other method of withholding the Company or the Employer deems appropriate to the extent permitted by Treasury Regulation Section 1.423-2(f).

7. Grant of Option

On the Enrollment Date of each Offering Period, each Eligible Employee participating in such Offering Period (or any Purchase Period within such Offering Period) will be granted an option to purchase on each Exercise Date during such Offering Period (at the applicable Purchase Price) up to a number of shares of Common Stock determined by dividing (i) such Eligible Employee's Contributions accumulated prior to such Exercise Date and retained in the Eligible Employee's notional account as of the Exercise Date by (ii) the applicable Purchase Price; *provided, however*, that in no event will an Eligible Employee be permitted to purchase during each Purchase Period more than 5,000 shares of Common Stock (subject to any adjustment pursuant to Section 18); *provided, further*, that such purchase will be subject to the limitations set forth in Sections 3(c) and 13. The Eligible Employee may accept the grant of such option by electing to participate in the Plan in accordance with the requirements of Section 5.

The Administrator may, for future Offering Periods, increase or decrease, in its absolute discretion, the maximum number of shares of Common Stock that an Eligible Employee may purchase during each Purchase Period of an Offering Period. Exercise of the option will occur as provided in Section 8, unless the Participant has withdrawn pursuant to Section 10. The option will expire on the last day of the Offering Period.

8. Exercise of Option

(a) Unless a Participant withdraws from the Plan as provided in Section 10, such Participant's option for the purchase of shares of Common Stock will be exercised automatically on the Exercise Date, and the maximum number of full shares subject to the option will be purchased for such Participant at the applicable Purchase Price with the accumulated Contributions from his or her notional account. No fractional shares of Common Stock will be purchased; unless determined by the Administrator, any Contributions accumulated in a Participant's notional account that are not sufficient to purchase a full share will be retained in the Participant's notional account for the subsequent Purchase Period or Offering Period, subject to earlier withdrawal by the Participant as provided in Section 10. Any other funds left over in a Participant's notional account after the Exercise Date will be returned to the Participant (without interest thereon, except as otherwise required under local laws, as further set forth in Section 12). During a Participant's lifetime, a Participant's option to purchase shares hereunder is exercisable only by him or her.

(b) If the Administrator determines that, on a given Exercise Date, the number of shares of Common Stock with respect to which options are to be exercised may exceed (i) the number of shares of Common Stock that were available for sale under the Plan on the Enrollment Date of the applicable Offering Period, or (ii) the number of shares of Common Stock available for sale under the Plan on such Exercise Date, the Administrator may in its sole discretion (x) provide that the Company will make a pro rata allocation of the shares of Common Stock available for purchase on such Enrollment Date or Exercise Date, as applicable, in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all Participants exercising options to purchase Common Stock on such Exercise Date, and continue all Offering Periods then in effect, or (y) provide that the Company will make a pro rata allocation of the shares available for purchase on such Enrollment Date or Exercise Date, as applicable, in as uniform a manner as will be practicable and as it will determine in its sole discretion to be equitable among all Participants exercising options to purchase Common Stock on such Exercise Date, and terminate any or all Offering Periods then in effect pursuant to Section 19. The Company may make a pro rata allocation of the shares available on the Enrollment Date of any applicable Offering Period pursuant to the preceding sentence, notwithstanding any authorization of additional shares for issuance under the Plan by the Company's stockholders subsequent to such Enrollment Date.

9. Delivery

As soon as reasonably practicable after each Exercise Date on which a purchase of shares of Common Stock occurs, the Company will arrange the delivery to each Participant of the shares purchased upon exercise of his or her option in a form determined by the Administrator (in its sole discretion) and pursuant to rules established by the Administrator. The Company may permit or require that shares be deposited directly with a broker designated by the Company or to a designated agent of the Company, and the Company may utilize electronic or automated methods of share transfer. The Company may require that shares be retained with such broker or agent for a designated period of time and/or may establish other procedures to permit tracking of disqualifying dispositions of such shares. No Participant will have any voting, dividend, or other stockholder rights with respect to shares of Common Stock subject to any option granted under the Plan until such shares have been purchased and delivered to the Participant as provided in this Section 9.

10. Withdrawal

A Participant may withdraw all, but not less than all, the Contributions credited to his or her notional account and not yet used to exercise his or her option under the Plan at any time by (a) submitting to the Company's Finance department (or its delegate) a written notice of withdrawal in the form determined by the Administrator for such purpose, or (b) following an electronic or other withdrawal procedure determined by the Administrator. All the Participant's Contributions credited to his or her notional account will be paid to such Participant as soon as reasonably practicable after receipt of notice of withdrawal and such Participant's option for the Offering Period will be automatically terminated, and no further Contributions for the purchase of shares will be made for such Offering Period. If a Participant withdraws from an Offering Period, Contributions will not resume at the beginning of the succeeding Offering Period, unless the Participant re-enrolls in the Plan in accordance with the provisions of Section 5.

11. Termination of Employment

Upon a Participant's ceasing to be an Eligible Employee, for any reason, he or she will be deemed to have elected to withdraw from the Plan and the Contributions credited to such Participant's notional account during the Offering Period but not yet used to purchase shares of Common Stock under the Plan will be returned to such Participant or, in the case of his or her death, to the person or persons entitled thereto under Section 15, and such Participant's option will be automatically terminated. In no event may a Participant be granted an option under the Plan following his or her termination of employment unless such Participant subsequently becomes an Eligible Employee again.

12. Interest

No interest will accrue on the Contributions of a Participant in the Plan, except as may be required by Applicable Law, as determined by the Company, and if so required by the laws of a particular jurisdiction, shall apply to all Participants in the relevant Offering except to the extent otherwise permitted by Treasury Regulation Section 1.423-2(f).

13. Stock

(a) Subject to adjustment upon changes in capitalization of the Company as provided in Section 18 hereof, the maximum number of shares of Common Stock that will be made available for sale under the Plan shall be equal to (i) a number equal to the lesser of (x) 1,000,000 or (y) 1% of the total number of shares of Outstanding Common Stock immediately following the closing of the transactions set forth in the Merger Agreement, *plus* (ii) any shares of Common Stock added as a result of the following sentence (collectively, the "***Share Pool***"). The Share Pool will automatically increase on January 1 of each year beginning in 2025 and ending with a final increase on January 1, 2034 in an amount equal to 1% of the Outstanding Common Stock on the preceding December 31; *provided, however*, that the Committee may provide that there will be no January 1 increase in the Share Pool for any such year or that the increase in the Share Pool for any such year will be a smaller number of shares of Common Stock than would otherwise occur pursuant to this sentence.

(b) Until the shares are issued (as evidenced by the appropriate entry on the books of the Company or of a duly authorized transfer agent of the Company), a Participant will only have the rights of an unsecured creditor with respect to such shares, and no right to vote or receive dividends or any other rights as a stockholder will exist with respect to such shares.

(c) Shares of Common Stock to be delivered to a Participant under the Plan will be registered in the name of the Participant or in the name of the Participant and his or her spouse.

14. Administration

The Plan shall be administered by the Administrator. The Board shall fill vacancies on, and from time to time may remove or add members to, the Administrator. Any power of the Administrator may also be exercised by the Board. The Administrator will have full and exclusive discretionary authority to construe, interpret, and apply the terms of the Plan, to designate separate Offerings under the Plan, to determine eligibility, to adjudicate all disputed claims filed under the Plan, and to establish such procedures that it deems necessary for the administration of the Plan (including, without limitation, to adopt such procedures and sub-plans as are necessary or appropriate to permit the participation in the Plan by employees who are foreign nationals or employed outside the United States, the terms of which sub-plans may take precedence over other provisions of this Plan, with the exception of Section 13(a), but unless otherwise superseded by the terms of such sub-plan, the provisions of this Plan shall govern the operation of such sub-plan). Unless otherwise determined by the Administrator, the employees eligible to participate in each sub-plan will participate in a separate Offering. Without limiting the generality of the foregoing, the Administrator is specifically authorized to adopt rules and procedures regarding eligibility to participate, the definition of Compensation, handling of Contributions, making of Contributions to the Plan (including, without limitation, in forms other than payroll deductions), establishment of bank or trust accounts to hold Contributions, payment of interest, conversion of local currency, obligations to pay payroll tax, determination of beneficiary designation requirements, withholding procedures, and handling of stock certificates that vary with applicable local requirements. The Administrator also is authorized to determine that, to the extent permitted by Treasury Regulation Section 1.423-2(f), the terms of an option granted under the Plan or an Offering to citizens or residents of a non-U.S.

jurisdiction will be less favorable than the terms of options granted under the Plan or the same Offering to employees resident solely in the United States. The Administrator hereby delegates to and designates the Senior Vice President of Finance of the Company (or such other officer with similar authority), and to his or her delegates or designates, the authority to assist the Administrator in the day-to-day administration of the Plan. The Administrator may also delegate some or all of its responsibilities to one or more other persons (which may include Company personnel) and, to the extent there has been any such delegation, any reference in the Plan to the Administrator shall include the delegate of the Administrator. Every finding, decision, and determination made by the Administrator will, to the full extent permitted by Applicable Laws, be final and binding upon all parties.

15. Designation of Beneficiary

(a) If permitted by the Administrator, a Participant may file a designation of a beneficiary who is to receive any shares of Common Stock and cash, if any, from the Participant's notional account under the Plan in the event of such Participant's death subsequent to an Exercise Date on which the option is exercised but prior to delivery to such Participant of such shares and cash. In addition, if permitted by the Administrator, a Participant may file a designation of a beneficiary who is to receive any cash from the Participant's notional account under the Plan in the event of such Participant's death prior to exercise of the option. If a Participant is married and the designated beneficiary is not the spouse, spousal consent will be required for such designation to be effective.

(b) Such designation of beneficiary may be changed by the Participant at any time by notice in a form determined by the Administrator. In the event of the death of a Participant and in the absence of a beneficiary validly designated under the Plan who is living at the time of such Participant's death, the Company will deliver such shares and/or cash to the executor or administrator of the estate of the Participant, or if no such executor or administrator has been appointed (to the knowledge of the Company), the Company, in its discretion, may deliver such shares and/or cash to the spouse or to any one or more dependents or relatives of the Participant, or if no spouse, dependent, or relative is known to the Company, then to such other person as the Company may designate.

(c) All beneficiary designations will be in such form and manner as the Administrator may designate from time to time. Notwithstanding Sections 15(a) and 15(b), the Company and/or the Administrator may decide not to permit such designations by Participants in non-U.S. jurisdictions to the extent permitted by Treasury Regulation Section 1.423-2(f).

16. Transferability

Neither Contributions credited to a Participant's notional account nor any rights with regard to the exercise of an option or to receive shares of Common Stock under the Plan may be assigned, transferred, pledged, or otherwise disposed of in any way (other than by will, the laws of descent and distribution or as provided in Section 15) by the Participant. Any such attempt at assignment, transfer, pledge, or other disposition will be without effect, except that the Company may treat such act as an election to withdraw funds from an Offering Period in accordance with Section 10 hereof.

17. Use of Funds

The Company may use all Contributions received or held by it under the Plan for any corporate purpose, and the Company will not be obligated to segregate such Contributions except under Offerings in which applicable local law requires that Contributions to the Plan by Participants be segregated from the Company's general corporate funds and/or deposited with an independent third party for Participants in non-U.S. jurisdictions. Until shares of Common Stock are issued, Participants will only have the rights of an unsecured creditor with respect to such shares.

18. Adjustments, Dissolution, Liquidation, Merger or Other Corporate Transaction

(a) *Adjustments*. In the event that any dividend or other distribution (whether in the form of cash, Common Stock, other securities, or other property), recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, spin-off, combination, repurchase, or exchange of Common Stock or other securities of the Company, or other change in the corporate structure of the Company affecting the Common Stock occurs, the Administrator, in order to prevent dilution or enlargement of the benefits or potential benefits intended to be made

available under the Plan, will, in such manner as it may deem equitable, adjust the number and class of Common Stock that may be delivered under the Plan, the Purchase Price per share and the number of shares of Common Stock covered by each option under the Plan that has not yet been exercised, and the numerical limits of Sections 7 and 13.

(b) *Dissolution or Liquidation*. In the event of the proposed dissolution or liquidation of the Company, any Offering Period then in progress will be shortened by setting a New Exercise Date, and will terminate immediately prior to the consummation of such proposed dissolution or liquidation, unless provided otherwise by the Administrator. The New Exercise Date will be before the date of the Company's proposed dissolution or liquidation. The Administrator will notify each Participant in writing or electronically, prior to the New Exercise Date, that the Exercise Date for the Participant's option has been changed to the New Exercise Date and that the Participant's option will be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 10.

(c) *Merger or Other Corporate Transaction*. In the event of a merger, sale, or other similar corporate transaction involving the Company, each outstanding option will be assumed or an equivalent option substituted by the successor corporation or a Parent or Subsidiary of the successor corporation. If the successor corporation refuses to assume or substitute for the option, the Offering Period with respect to which such option relates will be shortened by setting a New Exercise Date on which such Offering Period shall end. The New Exercise Date will occur before the date of the Company's proposed merger, sale, or other similar corporate transaction. The Administrator will notify each Participant in writing or electronically prior to the New Exercise Date, that the Exercise Date for the Participant's option has been changed to the New Exercise Date and that the Participant's option will be exercised automatically on the New Exercise Date, unless prior to such date the Participant has withdrawn from the Offering Period as provided in Section 10.

19. Amendment or Termination

(a) The Administrator, in its sole discretion, may amend, suspend, or terminate the Plan, or any part thereof, at any time and for any reason. If the Plan is terminated, the Administrator, in its discretion, may elect to terminate all outstanding Offering Periods either immediately or upon completion of the purchase of shares of Common Stock on the next Exercise Date (which may be sooner than originally scheduled, if determined by the Administrator in its discretion), or may elect to permit Offering Periods to expire in accordance with their terms (and subject to any adjustment pursuant to Section 18). If the Offering Periods are terminated prior to expiration, all amounts then credited to Participants' notional accounts that have not been used to purchase shares of Common Stock will be returned to the Participants (without interest thereon, except as otherwise required under local laws, as further set forth in Section 12) as soon as administratively practicable.

(b) Without stockholder consent and without limiting Section 19(a), the Administrator will be entitled to change the Offering Periods or Purchase Periods, designate separate Offerings, limit the frequency and/or number of changes in the amount withheld during an Offering Period, establish the exchange ratio applicable to amounts withheld in a currency other than U.S. dollars, permit payroll withholding in excess of the amount designated by a Participant in order to adjust for delays or mistakes in the Company's processing of properly completed withholding elections, establish reasonable waiting and adjustment periods and/or accounting and crediting procedures to ensure that amounts applied toward the purchase of Common Stock for each Participant properly correspond with Contribution amounts, and establish such other limitations or procedures as the Administrator determines in its sole discretion advisable that are consistent with the Plan.

(c) In the event the Administrator determines that the ongoing operation of the Plan may result in unfavorable financial accounting consequences, the Administrator may, in its discretion and, to the extent necessary or desirable, modify, amend, or terminate the Plan to reduce or eliminate such accounting consequence including, but not limited to:

(i) amending the Plan to conform with the safe harbor definition under the Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto), including with respect to an Offering Period underway at the time;

(ii) altering the Purchase Price for any Offering Period or Purchase Period including an Offering Period or Purchase Period underway at the time of the change in Purchase Price;

(iii) shortening any Offering Period or Purchase Period by setting a New Exercise Date, including an Offering Period or Purchase Period underway at the time of the Administrator action;

(iv) reducing the maximum percentage of Compensation a Participant may elect to set aside as Contributions; and

(v) reducing the maximum number of shares of Common Stock a Participant may purchase during any Offering Period or Purchase Period.

Such modifications or amendments will not require stockholder approval or the consent of any Participants.

20. Notices

All notices or other communications by a Participant to the Company under or in connection with the Plan will be deemed to have been duly given when received in the form and manner specified by the Company at the location, or by the person, designated by the Company for the receipt thereof.

21. Conditions Upon Issuance of Shares

(a) Shares of Common Stock will not be issued with respect to an option unless the exercise of such option and the issuance and delivery of such shares pursuant thereto will comply with all applicable provisions of law, domestic or foreign, including the Securities Act of 1933, as amended, the Exchange Act, the rules and regulations promulgated thereunder, and the requirements of any stock exchange upon which the shares may then be listed, and will be further subject to the approval of counsel for the Company with respect to such compliance.

(b) As a condition to the exercise of an option, the Company may require the person exercising such option to represent and warrant at the time of any such exercise that the shares are being purchased only for investment and without any present intention to sell or distribute such shares if, in the opinion of counsel for the Company, such a representation is required by any of the aforementioned applicable provisions of Applicable Law.

22. Term of Plan

The Plan will become effective upon the earlier to occur of its adoption by the Board or its approval by the stockholders of the Company. It will continue in effect until terminated pursuant to Section 19.

23. Stockholder Approval

The Plan will be subject to approval by the stockholders of the Company within 12 months after the date the Plan is adopted by the Board. Such stockholder approval will be obtained in the manner and to the degree required under Applicable Laws.

24. Governing Law

This Plan and any agreements or other documents hereunder shall be interpreted and construed in accordance with the laws of the State of Delaware and applicable federal law. Any reference in this Plan or in any agreements or other documents hereunder to a provision of law or to a rule or regulation shall be deemed to include any successor law, rule, or regulation of similar effect or applicability.

25. Severability

If any provision of the Plan is or becomes or is deemed to be invalid, illegal, or unenforceable for any reason in any jurisdiction or as to any Participant, such invalidity, illegality, or unenforceability shall not affect the remaining parts of the Plan, and the Plan shall be construed and enforced as to such jurisdiction or Participant as if the invalid, illegal, or unenforceable provision had not been included.

26. Interpretation

Headings are given to the Sections and subsections of the Plan solely as a convenience to facilitate reference and shall not be deemed in any way material or relevant to the construction or interpretation of the Plan or any provision thereof. Words in the masculine gender shall include the feminine gender, and where appropriate, the plural shall include the singular and the singular shall include the plural. The use herein of the word "including" following any general statement, term, or matter shall not be construed to limit such statement, term, or matter to the specific items or matters set forth immediately following such word or to similar items or matters, whether or not non-limiting language (such as "without limitation", "but not limited to", or words of similar import) is used with reference thereto, but rather shall be deemed to refer to all other items or matters that could reasonably fall within the broadest possible scope of such general statement, term, or matter. References herein to any agreement, instrument, or other document means such agreement, instrument, or other document as amended, supplemented, and modified from time to time to the extent permitted by the provisions thereof and not prohibited by the Plan.

EXHIBIT A

ORUKA THERAPEUTICS, INC.
2024 EMPLOYEE STOCK PURCHASE PLAN

SUBSCRIPTION AGREEMENT

_____ Original Application Offering Date: _____

_____ Change in Payroll Deduction Rate

1. hereby elects to participate in the Oruka Therapeutics, Inc. 2024 Employee Stock Purchase Plan (the "***Plan***") and subscribes to purchase shares of the Company's Common Stock in accordance with this Subscription Agreement and the Plan. Capitalized terms used but not defined in this Subscription Agreement have the meanings provided under the Plan.

2. I hereby authorize payroll deductions from each paycheck in the amount of ____% of my Compensation on each payday (from 1% to 15%) during the Offering Period in accordance with the Plan, commencing with the next Offering Period; *provided, however*, that, in no event may more than $25,000 of Common Stock be purchased under the Plan in any calendar year. The minimum permissible projected Contribution for the Offering Period is $500. (Please note that no fractional percentages are permitted.)

3. I understand that the payroll deductions will be accumulated for the purchase of shares of Common Stock at the applicable Purchase Price determined in accordance with the Plan. I understand that if I do not withdraw from an Offering Period, any accumulated payroll deductions will be used to automatically exercise my option and purchase Common Stock under the Plan.

4. I have received a copy of the complete Plan and its accompanying prospectus. I understand that my participation in the Plan is in all respects subject to the terms of the Plan.

5. Shares of Common Stock purchased for me under the Plan should be issued in the name(s) of (Eligible Employee or Eligible Employee and Spouse only).

6. I understand that if I dispose of any shares received by me pursuant to the Plan within two years after the Offering Date (the first day of the Offering Period during which I purchased such shares), I will be treated for federal income tax purposes as having received ordinary income at the time of such disposition in an amount equal to the excess of the fair market value of the shares at the time such shares were purchased by me over the price that I paid for the shares. The Company may, but will not be obligated to, withhold from my compensation the amount necessary to meet any applicable withholding obligation including any withholding necessary to make available to the Company any tax deductions or benefits attributable to sale or early disposition of Common Stock by me. If I dispose of such shares at any time after the expiration of the two-year holding period, I understand that I will be treated for federal income tax purposes as having received income only at the time of such disposition, and that such income will be taxed as ordinary income only to the extent of an amount equal to the lesser of (a) the excess of the fair market value of the shares at the time of such disposition over the Purchase Price which I paid for the shares, or (b) 15% of the fair market value of the shares on the first day of the Offering Period. The remainder of the gain, if any, recognized on such disposition will be taxed as capital gain.

7. I hereby agree to be bound by the terms of the Plan. The effectiveness of this Subscription Agreement is dependent upon my eligibility to participate in the Plan.

Employee's Social Security #: _____

Employee's Address: _____

_____

I UNDERSTAND THAT THIS SUBSCRIPTION AGREEMENT WILL REMAIN IN EFFECT THROUGHOUT SUCCESSIVE OFFERING PERIODS UNLESS TERMINATED BY ME.

_____ Date: _____

Signature

EXHIBIT B

ORUKA THERAPEUTICS, INC.
2024 EMPLOYEE STOCK PURCHASE PLAN

NOTICE OF WITHDRAWAL

The undersigned Participant in the Offering Period of the Oruka Therapeutics, Inc. 2024 Employee Stock Purchase Plan that began on _____, _____ (the "***Offering Date***") hereby notifies the Company that he or she hereby withdraws from the Offering Period. He or she hereby directs the Company to pay to the undersigned as soon as reasonably practicable all the payroll deductions credited to his or her notional account with respect to such Offering Period. The undersigned understands and agrees that his or her option for such Offering Period will be automatically terminated. The undersigned understands further that no further payroll deductions will be made for the purchase of shares in the current Offering Period and the undersigned will be eligible to participate in succeeding Offering Periods only by delivering to the Company a new Subscription Agreement.

Participant's Name: _____

Participant's Address: _____

_____

_____ Date: _____
Signature

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