UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

DIVISION OF
CORPORATION FINANCE

August 6, 2020

Ronald Lloyd
President and Chief Executive Officer
Aziyo Biologics, Inc.
12510 Prosperity Drive, Suite 370
Silver Spring, MD 20904

Re: Aziyo Biologics, Inc.
Draft Registration Statement on Form S-1
Submitted July 10, 2020
CIK No. 0001708527

Dear Mr. Lloyd:

We have reviewed your draft registration statement and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Draft Registration Statement on Form S-1 submitted July 10, 2020

Prospectus Summary
Overview, page 1

1. We note your reference to "partnerships" with major medical device companies including Boston Scientific and Medtronic. Please briefly clarify the nature of these partnerships, and in the appropriate section of the document, explain the form of the partnership, its duration, the rights and obligations of the parties and whether there are formalized agreements in place governing these relationships. If so, please file these as exhibits or tell us why you do not believe they are required to be filed under Regulation S-K Item 601(b)(10).

2. We note your statements here and throughout your document referring to estimates. As a non-exhaustive list of illustrative examples only, we note the following:

   - It is estimated that more than two million patients were either implanted with medical devices...or tissue expanders...in the United States in 2019.
   - In 2019, it is estimated that there were more than 600,000 procedures in the United States to install or replace implantable electronic devices...which represents an estimated $600 million opportunity.
   - It is estimated that there were more than 100,000 procedures in the United States in 2019 using biologic matrices for plastic and reconstructive surgery, which constituted an approximately $500 million market.

   Please revise your disclosure to provide the basis for these estimates, including whether they are based on third-party surveys and data gathering or on management's belief.

3. For each of your products, please revise your disclosure to state the procedures or applications for which your product has been approved as well as the procedures or applications for which you are currently seeking approval.

Soft Tissue Reconstruction Market, page 7

4. Please define the term HADM the first time it is used in your disclosure.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company, page 9

5. Please supplementally provide us with copies of all written communications, as defined in Rule 405 under the Securities Act, that you, or anyone authorized to do so on your behalf, present to potential investors in reliance on Section 5(d) of the Securities Act, whether or not they retain copies of the communications.

Use of Proceeds, page 77

6. Please revise your disclosure to indicate the approximate amount of the proceeds from the offering that is intended to be used for each purpose disclosed.

Management's Discussion and Analysis of Financial Condition and Results of Operations
Net Sales, page 88

7. Given that non-core sales are material to total sales and declined significantly in 2019, please disclose whether there are any known events or circumstances that you expect will cause 2020 non-core sales to decline materially relative to 2019. See Section 501.02 of the Financial Reporting Codification.

Revenue Interest Obligation, page 98

8. Please revise your disclosure to state which of your current products are subject to the Revenue Interest Obligation as well as any product candidates under development that may become subject to the Revenue Interest Obligation.

Business
Implantable Electronic Devices/Cardiovascular Market, page 106

9. We note your disclosure concerning a review of studies covering publications from 1981 through 2019 regarding infection and migration rates for implantable electronic devices. Please revise your disclosure to discuss who conducted the review, how many studies were reviewed, the average infection and migration rates across the studies and how publications were selected to be included in the review.

   Please also explain to us why you decided to include studies from 1981 through 2000.

10. We note your disclosure regarding the lack of provision of long-term stabilization from the TYRX device as well as your claim that any stabilization of the implanted device is provided by scar tissue, which can lead to complications. Please revise your disclosure to state whether these claims are based on third-party studies or on management's belief.

Implantable Electronic Device
Clinical Studies, page 112

11. Please update your description of the SECURE study to state the primary and secondary endpoints of the study; whether any adverse events or serious adverse events were deemed to be related to the CanGaroo envelope and the nature of any such events; and the infection and migration rates for all of the patients in the study that received the Cangaroo envelope.

Orthopedic/Spinal Repair
Pre-clinical Studies, page 113

12. Please present support for your claim that your viable bone matrices were superior in all characteristics examined compared to other products.

Soft Tissue Reconstruction
Pre-clinical Studies, page 113

13. We note your disclosure regarding the preclinical studies conducted for SimpliDerm. Please revise your disclosure to provide the data that supports your claims in this subsection, including the statements that SimpliDerm's structurally intact matrix was closest to the native human dermis among the HADMs evaluated in one study and that SimpliDerm showed less acute and chronic inflammation and less fibrosis than AlloDerm RTU in another study.

Competition, page 114

14. We note your disclosure on page 26 that some of your competitors' products are subject to a simpler reimbursement process. Please update your disclosure to further discuss the reimbursement process for your products and those of your competitors.

Intellectual Property, page 116

15. Please provide the jurisdictions for your owned and in-licensed foreign patents.

License Agreement with Cook Biotech, page 117

16. Please revise to disclose the expected expiration date of the last-to-expire patent.

Principal Stockholders, page 147

17. Please identify the natural persons who are the beneficial owners of the shares held by KeraLink International, Inc.

Note 15, page F-23

18. Please say how the stock split referenced on page 11 impacts this disclosure.

You may contact Tracey McKoy at 202-551-3772 or Al Pavot at 202-551-3738 if you have questions regarding comments on the financial statements and related matters. Please contact Alan Campbell at 202-551-4224 or Mary Beth Breslin at 202-551-3625 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Wesley C. Holmes