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

DIVISION OF
CORPORATION FINANCE

March 12, 2024

Erik Ostrowski
Interim Chief Executive Officer
AVROBIO, Inc.
100 Technology Square
Sixth Floor
Cambridge, MA 02139

Re: AVROBIO, Inc.
Registration Statement on Form S-4
Filed February 14, 2024
File No. 333-277048

Dear Erik Ostrowski:

We have reviewed your registration statement and have the following comments.

Please respond to this letter by amending your registration statement and providing the requested information. If you do not believe a comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to this letter, we may have additional comments.

Registration Statement on Form S-4 Filed February 14, 2024

Cover Page

1. It appears that the shares to be sold in the Tectonic pre-closing private financings are included in the shares to be registered in this registration statement. The investors in the Tectonic pre-closing financing made their investment decision in a private offering and, therefore, the sale must close privately. Please remove the Tectonic pre-closing financing shares from the registration statement.

What are the private financings?, page 2

2. Please revise this Q&A, the summary risks and risk factors, and elsewhere as appropriate to highlight that the closing of the merger is not conditioned upon the closing of the Tectonic private financings in the anticipated aggregate amount of $130.7 million. We note your disclosure to this effect on page 27. Discuss risks and uncertainties if

stockholders are asked to make voting decisions without knowing whether the private financings will close in timely manner, or at all. Discuss the combined company's liquidity position and related risks in the event that the merger closes without the private financings in place.

Why are the two companies proposing to merge?, page 2

3. Please revise your disclosure to clarify the combined company's plans with respect to AVROBIO's legacy business. In this regard, we note your disclosure on page 13 and elsewhere throughout that on July 12, 2023, AVROBIO halted development of its clinical and research programs to explore strategic alternatives which may include, but are not limited to, a divestiture of its legacy business.

What are contingent value rights (CVRs)?, page 5

4. We note that you disclose here and elsewhere that AVROBIO stockholders of record "as of immediately prior to the effective time" will receive one non-transferable CVR for each outstanding share of AVROBIO common stock held by such stockholder on such date. However, disclosure following the first bullet on page 190 states that a record date will be agreed to by AVROBIO and Tectonic prior to the effective time, and disclosure on page 237 states that the record date for the CVR distribution will be the "close of business on the business day immediately prior to the day on which the effective time occurs." Please revise throughout to reconcile your disclosures and clarify the record date for the issuance of CVRs to AVROBIO stockholders.

Will the common stock of the combined company trade on an exchange?, page 7

5. You disclose that AVROBIO intends to file an initial listing application for the combined company's common stock with Nasdaq and that it is expected that such common stock will trade on the exchange. We also note Section 6.10 of the Merger Agreement provides that the approval of the listing of the additional shares of AVROBIO's common stock on Nasdaq shall have been conditionally approved prior to the Effective Time.
   - Please revise the Letter to Stockholders, Q&A, and elsewhere throughout as appropriate to clarify that the closing of the merger is conditioned upon Nasdaq's approval of the listing application.
   - Disclose whether this condition is waivable and if so, by which party or parties.
   - Indicate whether or not Nasdaq's determination will be known at the time that stockholders are asked to vote to approve the merger.
   - Please also include a cross-reference to risk factor disclosure stating that the potential reverse stock split may not result in an increase in the combined company's stock price necessary to satisfy Nasdaq's initial or continued listing requirements for the combined company.

What are the material U.S. federal income tax consequences of the merger to U.S. Holders of Tectonic common stock?, page 11

6. We note your representation here and beginning on page 219 that the parties “intend” the merger to qualify as a reorganization within the meaning of Section 368(a) of the U.S. Internal Revenue Code of 1986, as amended (the “Code”). Please revise your disclosure here and throughout, including the sections addressing the tax consequences of the CVRs, to provide counsel’s firm opinion for each material tax consequence, including whether the merger will qualify as a reorganization, or to explain why such opinion cannot be given. If the opinion is subject to uncertainty, please: (1) provide an opinion that reflects the degree of uncertainty (e.g., “should” or “more likely than not”) and explains the facts or circumstances giving rise to the uncertainty; and (2) provide disclosure of the possible alternative tax consequences including risk factor and/or other appropriate disclosure setting forth the risks of uncertain tax treatment to investors. Also, please file the tax opinion as an exhibit to the registration statement. Please refer to Item 601(b)(8) of Regulation S-K and Section III.A. of Staff Legal Bulletin 19, Legality and Tax Opinions in Registered Offerings.

Prospectus Summary
The Companies
AVROBIO, page 13

7. With reference to your disclosure on pages 13 and 17, please revise the Summary and the Q&A to highlight, if true, that if the merger is completed, the combined company will focus on developing Tectonic's product candidates, and it is anticipated that the combined company will not continue to develop AVROBIO's legacy product candidates. Also, revise the Q&A on page 5 to provide context for the discussion of the CVRs.

Tectonic, page 14

8. Please revise the Summary and Tectonic's Business section to provide context and balance to the discussion of Tectonic's proprietary technology platform, GEODe. To the extent you highlight the capabilities of the platform and Tectonic's belief that it can "overcome the existing challenges of GPCR-targeted drug discovery" when engineering product candidates, please also explain that Tectonic has limited experience in therapeutic discovery and development and that the platform may never result in the regulatory approval of a product candidate.

Interests of AVROBIO's Directors and Executive Officers in the Merger, page 20

9. Here and in the parallel sections of the registration statement regarding the interests of Tectonic's directors and executive officers in the merger, please revise to quantify the value of the interests of such parties. For example only, please disclose on an aggregate basis:
   - the value of options to purchase AVROBIO common stock that will be subject to accelerated vesting, and the value of RSUs that will be subject to accelerated vesting and settlement into shares of AVROBIO common stock, including any necessary

assumptions; and
- the amount of additional cash payments or "golden parachute" compensation to be received in connection with the merger due to change in control agreements, employment contract terminations, consulting fees, etc.

10. Here and elsewhere as appropriate, please revise to explain whether any material payments to AVROBIO's executives, such as "golden parachute" compensation that is based on or otherwise relates to the merger, will be excluded from the calculation of "net cash" at the determination time, and if so, disclose the types and aggregate amounts of such payments and explain the impact to other AVROBIO stockholders. In this regard, we note your disclosure regarding the calculation of AVROBIO's net cash beginning on page 216 and your disclosures throughout that under certain circumstances the ownership percentages in the combined company may be adjusted up or down depending on the amount of AVROBIO's net cash as of closing.

Risk Factors

Risks Related to the Proposed Reverse Stock Split, page 38

11. We note your disclosure that the principal purpose of the reverse stock split is to increase AVROBIO's common stock price so that the combined company is able to meet initial Nasdaq listing requirements and the shares of AVROBIO common stock being issued in the merger will be approved for listing. In your risk factors and elsewhere as appropriate:
- Please disclose the minimum size of the reverse split that will be necessary for listing.
- Please indicate the criteria, if any, for the ratio to be used for the reverse stock split. For example, indicate whether you intend to use the minimum ratio or a larger ratio in an attempt for a higher price per share subsequent to the reverse stock split.
- Explain the effects on the proposed transaction and/or the combined company of a failure to comply with the initial listing requirements of Nasdaq. If the Nasdaq listing approval of the combined company is a condition that can be waived, please include a discussion of the potential consequences to investors, including the ability of investors to buy and sell shares of common stock, if the Nasdaq does not approve the listing application of the combined company, but the election is made to waive the closing condition and proceed with the merger.
- You state on page 39 that there can be no assurance that the stock price of the combined company will meet the listing requirements for any meaningful period of time. Please enhance your disclosure to explain the effects on the combined company and its shareholders of a failure to comply with the continued listing requirements of Nasdaq, including the potential delisting of its common stock and its impact. Please similarly revise your summary risk factor on page 30 to explain the effect on combined company if the reverse stock split does not increase the combined company's stock price over both the short- or long-term so as to qualify for Nasdaq listing.

Risk Factors

Risks Related to AVROBIO, page 43

12. You state in the risk factor on page 89 that: "In particular, AVROBIO had in-licensed certain intellectual property rights and know-how from the University Health Network (“UHN”) (relevant to AVR-RD-01 and AVROBIO’s Fabry program, which AVROBIO deprioritized in January 2022) and affiliates of Lund University (relevant to AVR-RD-02 and AVROBIO’s Gaucher type 1 and type 3 programs), which license agreement was terminated as of January 4, 2024." Please revise herein as applicable to more clearly disclose, if true, that the termination of the license agreement was only with UHN, as we note the development of AVROBIO's Gaucher disease program with Lund University appears to remain in effect, as indicated on page 321 and elsewhere.

AVROBIO's HSC lentiviral-based gene therapy product candidates are based on a novel technology..., page 53

13. Please revise to remove or revise conclusory statements regarding AVROBIO product candidates' performance. In this regard, we note your reference to "favorable preliminary results observed to date."

Risks Related to Tectonic, page 102

14. In the risk factor on page 105, you disclose that Tectonic concluded that its recurring losses from operations and need for additional financing to fund future operations raise substantial doubt about its ability to continue as a going concern in its financial statements for the year ended December 31, 2022 and the nine months ended September 30, 2023 and that "Similarly, Tectonic’s independent registered public accounting firm included an explanatory paragraph in its report on Tectonic’s financial statements for the year ended December 31, 2022 and the nine months ended September 30, 2023 with respect to this uncertainty." Please revise this sentence to remove the implication that a report was issued by Tectonic's auditor for the nine months ended September 30, 2023.

The bylaws of the combined company will provide that..., page 160

15. Consistent with your risk factor disclosure on page 101, please revise to state that there is uncertainty as to whether a court would enforce the Federal Forum provision in the combined company's bylaws. In this regard, we note that Section 22 of the Securities Act creates concurrent jurisdiction for federal and state courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder.

The Merger
Background of the Merger, page 171

16. You disclose that at the July 6, 2023 meeting, the AVROBIO Board and management identified certain reverse merger candidate criteria ("Critera"), and that such Critera "continued to be discussed, expanded and/or refined at subsequent meetings of the Board

and Transaction Committee." Please revise your background disclosure to explain how and why the Criteria evolved subsequent to the July 6, 2023 meeting, and identify who proposed any expansion, refinement or revision of the Criteria and any material resulting discussion in this regard.

17. With respect to the various starting pools of potential reverse merger transaction candidates:
    - Please revise page 174 to explain how advisor TD Cowen identified and selected the initial 85 companies to which it began distributing process letters on July 18, 2023, including with respect to the Criteria identified by the AVROBIO Board and management at the July 6, 2023 meeting.
    - Revise page 179 to explain how AVROBIO management and its advisors selected the companies with which to engage or re-engage following the termination of discussions with Party O, including with respect to the discussions of initial impressions of quality and actionability across the Critera at the October 23, 2023 meeting.

18. Please revise page 178 to explain Party O's relative strengths in relation to the Criteria that led the Transaction Committe to determine to proceed to a term sheet with Party O.

19. Please revise the November 10, 2023 and November 17, 2023 entries on pages 180 and 181, respectively, to:
    - Summarize the Transaction Committee's discussions of their impressions of the quality and actionability of Tectonic and Party R across the Criteria as reverse merger counterparties.
    - Additionally, please revise pages 180-182 to describe the "uncertainties" and "continued" concerns about Party R’s ability to meet one or more of the Criteria as compared to Tectonic that were discussed at various meetings.
    - Further with respect to the November 17, 2023 entry, explain why the Transaction Committee determined to continue to evaluate and negotiate terms with Company R in light of the Committee's decision the same day to decline to advance other companies' proposals to the term sheet phase due to weaknesses with respect to at least one of the Criteria.

20. Please revise to explain the interactions between the representatives and advisors of AVROBIO and Party R from and after the November 17, 2023 meeting of the AVROBIO Transaction Committee until the November 27, 2023 meeting, at which time it appears that said Committee authorized AVROBIO management to communicate to Party R that AVROBIO would be ending its engagement with Party R toward a strategic transaction.

21. Please revise page 183 to disclose any interaction between representatives of AVROBIO and Party GGG from and after submission of the Party GGG December 7, 2023 Proposal. Describe the Transaction Committee's consideration of this proposal, and when and why Party GGG was eliminated from consideration as a potential reverse merger candidate.

22. With respect to the negotiations between AVROBIO and Tectonic:

- Please revise your disclosure throughout this section to provide greater detail as to how the material terms of the transaction structure and consideration evolved during the negotiations through proposals and counter-proposals. For example, please revise to explain the reason(s) for the inclusion of, and any revisions to, the material terms from the initial non-binding indication of interest AVROBIO received from Tectonic on October 23, 2023 through the Tectonic Term Sheet dated December 13, 2023 to the final Merger Agreement executed January 30, 2024. Explain which party proposed initial terms and requested revised terms, and the reason(s) they did so.

In your revisions, please specifically include a materially complete description of the discussions and/or "negotiations on the economics of a potential reverse merger with Tectonic," particularly the structure, types, and amount of the merger consideration, including but not limited to:

- the acceleration of AVROBIO options and RSUs;
- contingent value rights to be issued to pre-merger AVROBIO stockholders;
- the valuations of the parties, including the additional $12.5 million ascribed by Tectonic to AVROBIO in excess of its ending net cash position;
- the Exchange Ratio;
- the concurrent private financings with Tectonic; and
- the minimum closing cash condition. In this regard, we note your disclosure on pages 18 and 189 that Tectonic’s obligation to complete the merger is conditioned on AVROBIO having at least $50.0 million closing net cash.

Avrobio's Reasons for the Merger, page 187

23. You disclose that among the factors the AVROBIO Board viewed as supporting its decision to approve the Merger Agreement as the Board's belief that Tectonic constituted the "most compelling" reverse merger counterparty as it pertains to each of the Criteria enumerated by the Avrobio board. Please revise in the appropriate place to explain the basis for this belief.

Opinion of Houlihan Lokey to the AVROBIO Board
Material Financial Analyses, page 202

24. Please revise this section as follows:

- Describe in more detail the underlying methodology and selection criteria the advisor used to select the public companies, M&A transactions, IPO transactions, and private financing transactions it deemed relevant. If any companies or transactions otherwise meeting the criteria were excluded, please briefly explain why.
- Disclose the conclusions of the advisor's various analyses relative to Tectonic, including how the results of each analysis formed the basis for selecting an implied enterprise value reference range for Tectonic.

Tectonic - Selected Companies Analysis, page 203

25. Please revise the table on page 203 to include the number of products in the development pipeline for the selected companies. In this regard, we note your disclosure that the advisor reviewed this data in its analysis.

Nasdaq Stock Market Listing, page 222

26. Please revise this section to disclose the “certain period of time” following the proposed reverse stock split wherein the combined company must maintain a minimum bid price of $4.00 in order for the Nasdaq listing application to be accepted.

Conditions to the Completion of the Merger, page 243

27. Please revise this section to clarify which conditions are waivable and by which party or parties. As appropriate, please revise your risk factors to address material risks associated with waivable conditions.

Tectonic's Business, page 342

28. Revise this section to discuss the development history of Tectonic's GEODe platform. For instance, discuss whether it was developed internally and whether current Tectonic employees were responsible for such development. Clarify whether the platform is fully developed. Additionally, explain how Tectonic has utilized and plans to utilize this platform to execute its product development strategy. In light of Tectonic's early development stage, provide the basis for the following statements, or revise as appropriate to indicate if such statements are currently aspirational:
    - Tectonic "uses its proprietary GEODe technology platform to overcome the existing challenges of GPCR-targeted drug discovery..." (pages 14, 342 and 391).
    - Tectonic "believes that its GEODe platform holds the potential to consistently generate compelling pipeline assets..." (page 343).

29. We note that the descriptions of Tectonic's identified and potential product candidates and the related preclinical and clinical trials include conclusory statements that such candidates are, or are likely to be, effective. You may present a balanced summary of the objective pre-clinical and clinical data, including whether clinical trials trial met primary and secondary endpoints without including your conclusions related to efficacy. However, please remove or revise all statements throughout that present speculation or conclusions regarding the efficacy of Tectonic's product candidates, as these determinations are solely within the authority of the FDA and comparable regulatory bodies. By way of example only:
    - You state on page 350 that TX45 "demonstrated efficacy" in a rat model of pulmonary hypertension, and the statement beginning on page 354 that Tectonic's GPCR3 antagonist "provides efficacy in a mouse model of HHT."
    - Numerous other statements imply the efficacy of Tectonic candidates, such as those drawing comparison between your product candidates or their mechanisms of action with other unapproved medicinal agents that have been tested for the same

indications. You state on page 347 that PDE5 inhibitors have "shown some benefit" and "shown some efficacy" in HFrEF patients with CpcPH, and you conclude that "the efficacy shown with PDE5 inhibitors in CpcPH suggests the potential of success for engineered Fc-relaxin-fusions such as TX45 in CpCPH, because relaxin activates the same nitric oxide signaling pathway by which PDE5 inhibitors exert their action."

30. We note references to companion diagnostic tests on pages 131, 136 and 374. To the extent material, please revise your description of Tectonic's business to explain whether Tectonic is currently developing, or plans to develop, any companion diagnostic test(s) for use with its therapeutic product candidates. If so, please address the following or otherwise advise:
- Explain in the Summary and Business sections how Tectonic plans to develop and use companion diagnostics in its development strategy. Further explain how, if at all, such use may relate to the patient enrichment strategy you reference with respect to Tectonic's planned Phase 1b trial of TX45 on page 353. Include balancing disclosure regarding any material risks or challenges that the development and/or use of companion diagnostics might pose to Tectonic's business and/or development strategy.
- Disclose whether Tectonic currently anticipates that any or all of its programs will require it to develop and obtain FDA or other regulatory approval of a companion diagnostic.
- As appropriate, include summary risk and corresponding risk factor disclosure addressing the risks and challenges related to any proposed use of companion diagnostic tools.
- As appropriate, revise your discussion of government regulation to include a description of the regulation of companion diagnostics.

31. While it appears that part of Tectonic's business strategy is to perform preclinical and/or clinical trials in various countries to generate data to be used to seek FDA approval in the United States, please revise your disclosure to clarify your development strategy in this regard.
- Depending on clinical trial results, explain whether Tectonic intends to seek approval of any product candidates in the United States before, or concurrently with, seeking approval in other jurisdictions.
- With respect to TX45 and any other product candidate in development, please disclose the location of completed, ongoing, and planned preclinical and clinical trials.
- To the extent known or planned, disclose at what point in the development process Tectonic intends to seek the FDA's input or involvement in the product development and regulatory approval processes for TX45.
- Highlight that before Tectonic can commence clinical trials for any product candidate in the United States, it must be able to support a future Investigational New Drug (“IND”) applications in the United States. Disclose, as you do on page 113,

that Tectonic has not interacted with or submitted any IND to the FDA and all of its clinical trials have, to date, been conducted in Australia. Further, disclose as you do on page 364, that when a foreign clinical trial is not conducted under an IND, the sponsor must ensure that the trial complies with certain regulatory requirements of the FDA in order to use the trial as support for an IND or application for marketing approval. Also highlight that the clinical data Tectonic generates abroad may not be accepted by the FDA or comparable foreign regulatory authorities and if so, may result in the need to conduct additional trials.

32. In light of your disclosure that Tectonic is very early in its development efforts, and that Tectonic currently has only identified lead asset TX45 for clinical development and that candidate is still in Phase 1 clinical trials, please review this section and revise statements such as those in the non-exhaustive list below to provide context for your beliefs and expectations regarding Tectonic's business and the potential performance of the Tectonic product candidates under development. Where appropriate, qualify such statements, or revise to clarify those that are currently aspirational.
- Tectonic has elected to prioritize development of TX45 in Group 2 PH/HfpEF in part because the physiological actions of relaxin "will likely address the key pathophysiology of the disease" (page 343).
- Tectonic's single-chain engineering "streamlines the scale-up manufacturing process" (page 345).
- Tectonic has also identified an indication, Group 2 PH / HFpEF, that "appears to be the ideal setting in which to fully realize the therapeutic potential of relaxin" (page 345).
- "GEODeTM has overcome the challenges of GPCR targeted biologics..." (page 356).

Testing of Group 1 PH (PAH) Drugs as Treatments for Group 2 PH - Implications of PDE5i Results, page 347

33. Please review and revise throughout where appropriate to remove premature conclusory references, such as to results that "should" or "would" occur in prelinical or clinical testing of Tectonic product candidates. In this regard, refer to the following non-exhaustive list of examples:
- TX45, a single-chain relaxin-Fc fusion protein, "should be compatible with chronic administration via intermitted subcutaneous injection" (page 345).
- Relaxin's pulmonary and systemic vasodilatory activity "should unload the left ventricle, while relaxin’s anti-fibrotic and anti-inflammatory activities should promote reverse remodeling of the left ventricle in HFpEF" (page 347).
- Relaxin’s ability to relax the heart muscle "should improve diastolic filling in HFpEf..." (page 347); and
- These benefits would also extend to IpcPH patients and thus to the entire Group 2 PH/HFpEF population" (page 347).

34. We note that Figure 3 on page 347, as well as numerous other figures throughout the Tectonic Business section, includes text that is too small to be read. Please review and

revise your figures and graphics throughout to ensure that the text in each, including subscript or other notations, are clearly legible.

Background on TX45, page 349

35. We note that Figure 5 on page 349 purports to compare the pharmacokinetic profile of TX45 with an earlier TX parent compound and a "different Fc-relaxin fusion described in the literature." Please revise to clarify whether the comparison of Tectonic compounds and the comparator was conducted on a head-to-head basis. If you did not conduct a head-to-head trial, please revise to clearly disclose that fact. If you intend to retain disclosure regarding the comparator relaxin therapeutic, please expand your disclosure to include a citation or citations to the scientific literature to which you refer, and provide the underlying data regarding the comparator.

36. Please remove all claims or conclusions related to efficacy and focus your disclosure on the objective data resulting from preclinical studies and clinical trials. With respect to any trials with TX45, you may compare the objective results without concluding the trials demonstrated your candidate is "superior." In this regard, please remove or revise your references to TX45's "superior PK profile" and "superior tissue penetration" in Figure 5 and Figure 7, respectively.

TX45 Pharmacology Studies, page 350

37. Please expand your discussion of your preclinical animal studies as follows:
- Briefly describe the number of animal models used, the number of tests conducted, the number of animals tested, the range of results or effects observed in these tests and how such results were measured.
- Disclose whether or not the data from any preclinical model was found to be statistically significant. Include the p-value, and at first use, please provide a brief explanation regarding how p-values are used to measure statistical significance and the p-value that you have to achieve to conclude a statistically significant result.
- State whether you have published the data for any of your preclinical studies.

TX45 Clinical Development Studies and Plans, page 352

38. With respect to the Phase 1 study of TX45 in healthy volunteers currently ongoing in Australia and the planned Phase 1b trials of TX45 expected to be conducted in Moldova and the Netherlands in 1H 2024, please disclose additional information regarding the scope and design of such studies, including:
- the number of volunteers or patients being studied, including the number in each cohort;
- duration of treatment;
- dosage information, including the expected timing of participant dosing as well as the amount and frequency; and

- patient enrichment strategies or criteria, as applicable. In this regard, we note your disclosure on page 353 that the planned Phase 1b trial is "designed to enrich the CpcPH population subgroup during enrollment."

TX45 Non-clinical Toxicology Studies, page 352

39. Please revise to define the acronym "NOAEL" at first use, and explain the relevance of the NOAEL to the toxicology study findings discussed on page 352.

Phase 2 6-month Proof of Concept Study in Group 2 PH and HFpEF, page 353

40. We note your disclosure that Tectonic's TX45 Phase 2 proof-of-concept clinical trial in patients with Group 2 PH and HFpEF is expected to begin in the second half of 2024. If true, please revise to clarify that the commencement of such Phase 2 study is dependent upon the results of Tectonic's Phase 1 trials.

Type 2 PH Anticipated Pivotal Development Pathway, page 353

41. Please revise to qualify the first sentence of this paragraph.

Collaboration, License and Services Agreements, page 356

42. Please revise your disclosure regarding the Harvard License Agreement as follows:
- Quantify all material payment terms, including quantification of the upfront license fee and any installments thereof, amounts paid to date in cash or shares of common stock, and aggregate potential milestone payments segregated by development and commercial milestone payments.
- With respect to applicable royalty rates to be paid, disclose such rates within a range of ten percentage points. In this regard, we note your reference to a royalty rate "in the low double digits" on page 357.
- You state that this agreement expires upon the expiration of the last-to-expire royalty term. Please revise to clarify when the patents underlying the royalty term are expected to expire.

43. Please revise this section to include a discussion of the Alloy Therapeutics License Agreement and the Adimab Agreement as you do on page 407, or advise. Additionally, such discussion should conform to the prior comment. File these agreements as exhibits to the registration statement or tell us why you believe they are not required to be filed.

WuXi Master Development and Manufacturing Services Agreement, page 357

44. Please revise to specify the third anniversary of the effective date of the WuXi Biologics Manufacturing Agreement, at which time such agreement may expire.

Intellectual Property, page 360

45. With respect to the second paragraph of this section:
    - We note that a larger number of in-licensed or wholly owned patents are discussed in this this paragraph as compared to the number disclosed in the first sentence. Please reconcile or advise.
    - Also clearly describe on an individual or patent family basis the type of patent protection granted for each product or technology (composition of matter, use, or process) and the jurisdiction(s) of each pending or issued foreign patent.

AVROBIO's Management Discussion and Analysis of Financial Condition and Results of Operations, page 378

Consolidated Results of Operations, page 381

46. We note from page 380 that research and development (R&D) expense attributed to the Gaucher program nearly doubled during the nine months ended September 30, 2023 as compared to September 30, 2022. Please revise the explanation on page 383 to specifically address the reason(s) for this increase, when consolidated R&D decreased during this period.

47. Please revise AVROBIO's consolidated results of operations section to provide an analysis of the changes in the components of results of operations for the year ended December 31, 2022 as compared to the year ended December 31, 2021, as well as providing an analysis of cash flows for those annual periods. Refer to Item 303(b) of Regulation S-K and the Instructions thereto.

AVROBIO, Inc. Financial Statements for the Nine Months ended September 30, 2023, page F-31

48. Please clarify the interim financial statements are for AVROBIO, Inc.

Tectonic Financial Statements

Independent Auditor's Report, page F-54

49. We note that the audit of the financial statements for Tectonic for the two years December 31, 2022 was conducted in accordance with auditing standards generally accepted in the United States of America (GAAS). If AVROBIO is considered a shell company, please tell us what consideration the Tectonic's auditor gave to conducting the audit in accordance with the standards of the PCAOB given, among other things, the fact that Tectonic's financial statements become those of the registrant upon consummation of the merger. If AVROBIO is not a shell company, please confirm that the auditor report for the historical financial statements presented after the business combination will comply with the PCAOB standards.

2. Summary of Significant Accounting Policies, page F-62

Convertible Preferred Stock, page F-66

50. You state hereunder that Tectonic classifies convertible preferred stock outside of stockholders' deficit on the consolidated balance sheets "as it is redeemable upon the occurrence of certain deemed liquidation events that are not strictly within the Company's control." However, we note the disclosure on pages F-79 and F-99 that the preferred stock "is not subject to mandatory redemption or other redemption provisions for which the events resulting in redemption are not within the Company's control, other than upon occurrence of a Deemed Liquidation Event, defined as (a) a merger or consolidation in which the Company is a constituent party or a subsidiary of the Company is a constituent party and the Company issues shares of its capital stock pursuant to the merger or consolidation and (b) the sale or disposition of the Company or one or more subsidiaries of the Company." Please advise regarding these disclosures which appear contradictory or revise as applicable. To the extent the classification of the preferred stock has changed during the periods presented, please revise to explain how you assessed such change in classification in accordance with ASC 480 and ASC 815-40.

General

51. We note references to Tectonic's Scientific Advisory Board ("SAB") on page 291. If material, please include disclosure in the appropriate section(s) of the registration statement that:
- Describes the role or function of Tectonic's SAB;
- Describes the composition of the SAB, and in light of your disclosure at the bottom of page 143, indicates whether any members of the SAB are or have been clinical investigators in any Tectonic study or trial;
- Describes whether, and if so how, SAB members are compensated; and
- Describes whether any SAB members are party to a consulting or advisory contract with the Company, including any material provisions of such agreements.

52. With reference to your disclosures concerning the current status of AVROBIO's operations, the plans for those operations, and the pro forma accounting treatment for ABROBIO's assets and liabilities beginning on page 422, please provide us an analysis concerning whether AVROBIO is a shell company as defined in Rule 12b-2 of the Exchange Act or whether it could become one prior to Closing. In this regard, we note references to the potential sale, license or other monetization of AVROBIO's legacy business prior to the merger on pages 21, 235, and B-1. For guidance, see Use of Form S-8, Form 8-K, and Form 20-F by Shell Companies, Release No. 33-8587 (July 15, 2005) at n. 32 as reiterated in Special Purpose Acquisition Companies, Shell Companies, and Projections, Release No. 33-11048 (March 30, 2022) at n. 239 and accompanying text.

53. We note that as of September 2023, Tectonic formed a wholly-owned Australian subsidiary, Tectonic Therapeutic Pty Ltd., to conduct various preclinical studies and clinical trials for its product candidates in Australia. Further, it appears based upon other disclosures on pages F-62 and F-89 that Tectonic has another wholly-owned subsidiary, Tectonic Therapeutic Securities Corp. Please tell us why this latter entity does not

appear in Ex 21.1 (List of Subsidiaries of Tectonic Therapeutic, Inc.), or revise.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Jenn Do at 202-551-3743 or Mary Mast at 202-551-3613 if you have questions regarding comments on the financial statements and related matters. Please contact Lauren Hamill at 303-844-1008 or Chris Edwards at 202-551-6761 with any other questions.

Sincerely,

Division of Corporation Finance
Office of Life Sciences

cc: Adam Johnson