



DIVISION OF  
CORPORATION FINANCE

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

May 23, 2018

Geoff MacKay  
President and Chief Executive Officer  
AVROBIO, Inc.  
One Kendall Square  
Building 300, Suite 201  
Cambridge, MA 02139

**Re: AVROBIO, Inc.**  
**Amendment No. 1 to Draft Registration Statement on Form S-1**  
**Submitted May 11, 2018**  
**CIK No. 0001681087**

Dear Mr. MacKay:

We have reviewed your amended 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.

Amendment No. 1 to Draft Registration Statement on Form S-1

Prospectus Summary, page 1

1. We acknowledge your revised disclosures in response to prior comment 1. However, please further revise your disclosure to remove the statement that lasting benefits have been observed in ongoing clinical trials of third parties. If you wish to keep the statement in the Business section, please expand your disclosure to specifically discuss results from those third party trials.

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Business

Overview, page 87

2. Please expand your revised disclosure in the second paragraph of this section to explain the term "clinically significant."

You may contact Rolf Sundwall at 202-551-3105 or Jim Rosenberg at 202-551-3679 if you have questions regarding comments on the financial statements and related matters. Please contact Dorrie Yale at 202-551-8776 or Suzanne Hayes at 202-551-3675 with any other questions.

Division of Corporation Finance  
Office of Healthcare & Insurance

cc: James Xu