

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM S-1  
REGISTRATION STATEMENT**  
*Under  
The Securities Act of 1933*

**AVROBIO, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**2834**  
(Primary Standard Industrial  
Classification Code Number)

**81-0710585**  
(I.R.S. Employer  
Identification Number)

**One Kendall Square  
Building 300, Suite 201  
Cambridge, MA 02139  
(617) 914-8420**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Geoff MacKay  
President and Chief Executive Officer  
One Kendall Square  
Building 300, Suite 201  
Cambridge, MA 02139  
(617) 914-8420**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

*Copies to:*

**Arthur McGivern, Esq.  
James Xu, Esq.  
Goodwin Procter LLP  
100 Northern Avenue  
Boston, Massachusetts 02210  
(617) 570-1000**

**Katina Dorton  
AVROBIO, Inc.  
One Kendall Square  
Building 300, Suite 201  
Cambridge, Massachusetts 02139  
(617) 914-8420**

**Patrick O'Brien, Esq.  
Ropes & Gray LLP  
Prudential Tower  
800 Boylston Street  
Boston, Massachusetts 02199  
(617) 951-7000**

Approximate date of commencement of proposed sale to the public: **As soon as practicable after the effective date of this registration statement.**

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.  333-225213

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large Accelerated Filer

Accelerated Filer

Non-Accelerated Filer (Do not check if a smaller reporting company)

Smaller Reporting Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

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**CALCULATION OF REGISTRATION FEE**

<b>Title of Each Class of Securities to be Registered</b>	<b>Amount to be registered(1)</b>	<b>Proposed maximum aggregate offering price per share</b>	<b>Proposed maximum aggregate offering price</b>	<b>Amount of registration fee(2)</b>
Common stock, \$0.0001 par value per share	961,351	\$19.00	\$18,265,669	\$2,274.08

- (1) Represents only the additional number of shares being registered and includes 125,393 shares of common stock issuable upon exercise of the underwriters' option to purchase additional shares to cover over-allotments, if any. Does not include the securities that the Registrant previously registered on the Registration Statement on Form S-1 (File No. 333-225213).
- (2) The registration fee is calculated in accordance with Rule 457(a) under the Securities Act of 1933, as amended, based on the proposed maximum aggregate offering price. The registrant previously registered securities at an aggregate offering price not to exceed \$91,328,400 on a Registration Statement on Form S-1 (File No. 333-225213), which was declared effective by the Securities and Exchange Commission on June 20, 2018. In accordance with Rule 462(b) under the Securities Act, an additional amount of securities having a proposed maximum aggregate offering price of \$18,265,669 is hereby registered, which includes shares issuable upon the exercise of the underwriters' option to purchase additional shares.

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**The Registration Statement shall become effective upon filing in accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended.**

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**Explanatory note and incorporation by reference**

This Registration Statement is being filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended (the “Securities Act”). The contents of the Registration Statement on Form S-1 (File No. 333-225213) filed by AVROBIO, Inc. with the Securities and Exchange Commission (the “Commission”) pursuant to the Securities Act, which was declared effective by the Commission on June 20, 2018, are incorporated by reference into this Registration Statement.

The required opinion and consents are listed on an Exhibit Index attached hereto and filed herewith.

## EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Exhibit Index</u>
5.1	<a href="#">Opinion of Goodwin Procter LLP</a>
23.1	<a href="#">Consent of Ernst &amp; Young LLP, Independent Registered Public Accounting Firm</a>
23.2	<a href="#">Consent of Goodwin Procter LLP (included in Exhibit 5.1)</a>
24.1*	<a href="#">Power of Attorney</a>

\* Previously filed on the signature page to the Registrant's Registration Statement on Form S-1, as amended (File No. 333-225213), originally filed with the Securities and Exchange Commission on May 25, 2018 and incorporated by reference herein.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Cambridge, Commonwealth of Massachusetts, on the 20th day of June, 2018.

**AVROBIO, INC.**

By: /s/ Geoff MacKay

Name: Geoff MacKay

Title: President, Chief Executive Officer and Principal Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

<b>Name</b>	<b>Title</b>	<b>Date</b>
<u>/s/ Geoff MacKay</u> Geoff MacKay	<i>Director, President, Chief Executive Officer and Principal Executive Officer</i>	June 20, 2018
<u>/s/ Katina Dorton</u> Katina Dorton	<i>Chief Financial Officer and Principal Financial and Accounting Officer</i>	June 20, 2018
<u>*</u> Bruce Booth, D.Phil.	<i>Chairman of the Board of Directors</i>	June 20, 2018
<u>*</u> Ian T. Clark	<i>Director</i>	June 20, 2018
<u>Phillip B. Donenberg</u>	<i>Director</i>	June 20, 2018
<u>*</u> Annalisa Jenkins, M.B.B.S., F.R.C.P.	<i>Director</i>	June 20, 2018
<u>*</u> Christopher Paige, Ph.D.	<i>Director</i>	June 20, 2018
<u>*</u> Scott G. Requadt	<i>Director</i>	June 20, 2018
<u>*</u> Joshua Resnick, M.D.	<i>Director</i>	June 20, 2018

\* Pursuant to Power of Attorney

By: /s/ Geoff MacKay

Geoff MacKay

Attorney-In-Fact

June 20, 2018

AVROBIO, Inc.  
One Kendall Square  
Building 300, Suite 201  
Cambridge, MA 02139

Re: Securities Registered under Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to you in connection with your filing of (i) a Registration Statement on Form S-1 (File No. 333-225213) (as amended or supplemented, the "Initial Registration Statement") pursuant to the Securities Act of 1933, as amended (the "Securities Act"), and (ii) a second Registration Statement on Form S-1 filed pursuant to Rule 462(b) promulgated under the Securities Act (the "462(b) Registration Statement," and together with the Initial Registration Statement, the "Registration Statement"). This opinion letter is furnished to you in connection with your filing of the 462(b) Registration Statement, relating to the registration of the offering by AVROBIO, Inc., a Delaware corporation (the "Company") of up to 961,351 shares (the "Shares") of the Company's Common Stock, \$0.0001 par value per share, including Shares purchasable by the underwriters upon their exercise of an over-allotment option granted to the underwriters by the Company. The Shares are being sold to the several underwriters named in, and pursuant to, an underwriting agreement among the Company and such underwriters (the "Underwriting Agreement").

We have reviewed such documents and made such examination of law as we have deemed appropriate to give the opinions set forth below. We have relied, without independent verification, on certificates of public officials and, as to matters of fact material to the opinions set forth below, on certificates of officers of the Company.

The opinion set forth below is limited to the Delaware General Corporation Law.

Based on the foregoing, we are of the opinion that the Shares have been duly authorized and, upon issuance and delivery against payment therefor in accordance with the terms of the Underwriting Agreement, the Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the 462(b) Registration Statement and to the references to our firm under the caption "Legal Matters" in the Initial Registration Statement. In giving our consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

/s/ GOODWIN PROCTER LLP

GOODWIN PROCTER LLP

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the Registration Statement on Form S-1 filed pursuant to Rule 462(b) of the Securities Act of 1933 of the reference to our firm under the caption “Experts” and to the incorporation by reference of our report dated April 6, 2018 (except for Note 17(b) as to which the date is June 11, 2018), with respect to the consolidated financial statements of AVROBIO, Inc. included in the Registration Statement (Form S-1 No. 333-225213) and related Prospectus of AVROBIO, Inc. for the registration of its common stock.

/s/ Ernst & Young LLP

Boston, Massachusetts  
June 18, 2018