



AVROBIO, INC.
One Kendall Square
Building 300, Suite 201
Cambridge, Massachusetts 02139

NOTICE OF 2019 ANNUAL MEETING OF STOCKHOLDERS
To be held June 11, 2019

Notice is hereby given that the 2019 Annual Meeting of Stockholders, or Annual Meeting, of AVROBIO, Inc. will be held on Tuesday, June 11, 2019 at 8:30 a.m. Eastern Time at the offices of Goodwin Procter LLP, located at 100 Northern Avenue, Boston, MA 02210. The purpose of the Annual Meeting is the following:

1. To elect two class I directors to our board of directors, to serve until the 2022 annual meeting of stockholders and until his or her successor has been duly elected and qualified, or until his or her earlier death, resignation or removal;
2. To ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2019; and
3. To transact any other business properly brought before the Annual Meeting or any adjournment or postponement of the Annual Meeting.

The proposal for the election of directors relates solely to the election of class I directors nominated by the board of directors.

Only AVROBIO, Inc. stockholders of record at the close of business on April 15, 2019, will be entitled to vote at the Annual Meeting and any adjournment or postponement thereof.

We are pleased to take advantage of Securities and Exchange Commission rules that allow companies to furnish their proxy materials over the Internet. We are mailing to our stockholders a Notice of Internet Availability of Proxy Materials, or Notice, instead of a paper copy of our proxy materials and our 2018 Annual Report to Stockholders, or 2018 Annual Report. The Notice contains instructions on how to access those documents and to cast your vote via the Internet. The Notice also contains instructions on how to request a paper copy of our proxy materials and our 2018 Annual Report. This process allows us to provide our stockholders with necessary information on a more timely basis, while reducing the environmental impact and lowering the costs of printing and distributing our proxy materials.

Your vote is important. Whether or not you are able to attend the meeting in person, it is important that your shares be represented. To ensure that your vote is recorded promptly, please vote as soon as possible, even if you plan to attend the meeting, by submitting your proxy via the Internet at the address listed on the proxy card or by signing, dating and returning the proxy card.

By order of the Board of Directors,

A handwritten signature in black ink, appearing to read "Geoff MacKay", written over a white background.

Geoff MacKay
President and Chief Executive Officer

Cambridge, Massachusetts
April 26, 2019

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**AVROBIO, INC.
One Kendall Square
Building 300, Suite 201
Cambridge, Massachusetts 02139**

**PROXY STATEMENT
FOR THE 2019 ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD JUNE 11, 2019**

This proxy statement contains information about the 2019 Annual Meeting of Stockholders, or the Annual Meeting, of AVROBIO, Inc., which will be held on Tuesday, June 11, 2019 at 8:30 a.m. Eastern Time at the offices of Goodwin Procter LLP, located at 100 Northern Avenue, Boston, MA 02210. The board of directors of AVROBIO, Inc. is using this proxy statement to solicit proxies for use at the Annual Meeting. In this proxy statement, the terms “AVROBIO,” “we,” “us,” and “our” refer to AVROBIO, Inc. The mailing address of our principal executive offices is One Kendall Square, Building 300, Suite 201, Cambridge, Massachusetts 02139.

All properly submitted proxies will be voted in accordance with the instructions contained in those proxies. If no instructions are specified, the proxies will be voted in accordance with the recommendation of our board of directors with respect to each of the matters set forth in the accompanying Notice of Meeting. You may revoke your proxy at any time before it is exercised at the meeting by giving our Corporate Secretary written notice to that effect.

We made this proxy statement and our Annual Report to Stockholders for the fiscal year ended December 31, 2018 available to stockholders on April 26, 2019.

We are an “emerging growth company” under applicable federal securities laws and therefore permitted to conform with certain reduced public company reporting requirements. As an emerging growth company, we provide in this proxy statement the scaled disclosure permitted under the Jumpstart Our Business Startups Act of 2012 (the JOBS Act), including the compensation disclosures required of a “smaller reporting company,” as that term is defined in Rule 12b-2 promulgated under the Securities Exchange Act of 1934, as amended (the Exchange Act). In addition, as an emerging growth company, we are not required to conduct votes seeking approval, on an advisory basis, of the compensation of our named executive officers or the frequency with which such votes must be conducted. We will remain an “emerging growth company” until the earliest of (i) the last day of the fiscal year following the fifth anniversary of our initial public offering in June 2018; (ii) the last day of the fiscal year in which our total annual gross revenue is equal to or more than \$1.07 billion; (iii) the date on which we have issued more than \$1 billion in nonconvertible debt during the previous three years; or (iv) the date on which we are deemed to be a large accelerated filer under the rules of the Securities and Exchange Commission. Even after we are no longer an “emerging growth company,” we may remain a “smaller reporting company.”

**Important Notice Regarding the Availability of Proxy Materials for
the Annual Meeting of Stockholders to be Held on June 11, 2019:**

**This proxy statement and our 2018 Annual Report to Stockholders are
available for viewing, printing and downloading at www.proxyvote.com.**

A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, as filed with the Securities and Exchange Commission (SEC), except for exhibits, will be furnished without charge to any stockholder upon written request to AVROBIO, Inc. One Kendall Square, Building 300, Suite 201, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. This proxy statement and our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 are also available on the SEC’s website at www.sec.gov, or on our website at <http://investors.avrobio.com/financial-information/sec-filings>.

AVROBIO, INC.
PROXY STATEMENT
FOR THE 2019 ANNUAL MEETING OF STOCKHOLDERS

GENERAL INFORMATION

When are this proxy statement and the accompanying materials scheduled to be sent to stockholders?

We have elected to provide access to our proxy materials to our stockholders via the Internet. Accordingly, on or about April 26, 2019, we will begin mailing a Notice of Internet Availability of Proxy Materials, or Notice. Our proxy materials, including the Notice of 2019 Annual Meeting of Stockholders, this proxy statement and the accompanying proxy card or, for shares held in street name (i.e. held for your account by a broker or other nominee), a voting instruction form, and the 2018 Annual Report to Stockholders, or 2018 Annual Report, will be mailed or made available to stockholders on the Internet on or about the same date.

Why did I receive a Notice of Internet Availability of Proxy Materials instead of a full set of proxy materials?

Pursuant to rules adopted by the Securities and Exchange Commission, or SEC, for most stockholders, we are providing access to our proxy materials over the Internet rather than printing and mailing our proxy materials. We believe following this process will expedite the receipt of such materials and will help lower our costs and reduce the environmental impact of our annual meeting materials. Therefore, the Notice was mailed to holders of record and beneficial owners of our common stock starting on or about April 26, 2019. The Notice provides instructions as to how stockholders may access and review our proxy materials, including the Notice of 2019 Annual Meeting of Stockholders, this proxy statement, the proxy card and our 2018 Annual Report, on the website referred to in the Notice or, alternatively, how to request that a copy of the proxy materials, including a proxy card, be sent to them by mail. The Notice also provides voting instructions. In addition, stockholders of record may request to receive the proxy materials in printed form by mail or electronically by e-mail on an ongoing basis for future stockholder meetings. Please note that, while our proxy materials are available at the website referenced in the Notice, and our Notice of 2019 Annual Meeting of Stockholders, this proxy statement and our 2018 Annual Report are available on our website, no other information contained on either website is incorporated by reference in or considered to be a part of this proxy statement.

Who is soliciting my vote?

Our board of directors is soliciting your vote for the Annual Meeting.

When is the record date for the Annual Meeting?

The record date for determination of stockholders entitled to vote at the Annual Meeting is the close of business on April 15, 2019.

How many votes can be cast by all stockholders?

There were 24,097,632 shares of our common stock, par value \$0.0001 per share, outstanding on April 15, 2019, all of which are entitled to vote with respect to all matters to be acted upon at the Annual Meeting. Each stockholder of record is entitled to one vote for each share of our common stock held by such stockholder. None of our shares of undesignated preferred stock were outstanding as of April 15, 2019.

How do I vote?

In Person

If you are a stockholder of record, you may vote in person at the Annual Meeting. We will give you a ballot when you arrive. If you hold your shares through a bank or broker and wish to vote in person at the meeting, you must obtain a valid proxy from the firm that holds your shares.

By Proxy

If you do not wish to vote in person or will not be attending the Annual Meeting, you may vote by proxy. You can vote by proxy over the Internet by following the instructions provided in the Notice, or, if you requested printed copies of the proxy materials by mail, you can vote by mailing your proxy as described in the proxy materials. In order to be counted, proxies submitted by Internet must be received by the cutoff time of 11:59 p.m. Eastern Time on June 10, 2019. Proxies submitted by mail must be received before the start of the Annual Meeting.

If you complete and submit your proxy before the Annual Meeting, the persons named as proxies will vote the shares represented by your proxy in accordance with your instructions. If you submit a proxy without giving voting instructions, your shares will be voted in the manner recommended by the board of directors on all matters presented in this proxy statement, and as the persons named as proxies may determine in their discretion with respect to any other matters properly presented at the Annual Meeting. You may also authorize another person or persons to act for you as proxy in a writing, signed by you or your authorized representative, specifying the details of those proxies' authority. The original writing must be given to each of the named proxies, although it may be sent to them by electronic transmission if, from that transmission, it can be determined that the transmission was authorized by you.

If any other matters are properly presented for consideration at the Annual Meeting, including, among other things, consideration of a motion to adjourn the Annual Meeting to another time or place (including, without limitation, for the purpose of soliciting additional proxies), the persons named in your proxy and acting thereunder will have discretion to vote on those matters in accordance with their best judgment. We do not currently anticipate that any other matters will be raised at the Annual Meeting.

How do I revoke my proxy?

You may revoke your proxy by (1) following the instructions on the Notice and entering a new vote by mail that we receive before the start of the Annual Meeting or over the Internet by the cutoff time of 11:59 p.m. Eastern Time on June 10, 2019, (2) attending and voting at the Annual Meeting (although attendance at the Annual Meeting will not in and of itself revoke a proxy), or (3) by filing an instrument in writing revoking the proxy or another duly executed proxy bearing a later date with our Corporate Secretary. Any written notice of revocation or subsequent proxy card must be received by our Corporate Secretary prior to the taking of the vote at the Annual Meeting. Such written notice of revocation or subsequent proxy card should be hand delivered to our Corporate Secretary or sent to our principal executive offices at AVROBIO, Inc., One Kendall Square, Building 300, Suite 201, Cambridge, Massachusetts 02139, Attention: Corporate Secretary.

If a broker, bank, or other nominee holds your shares, you must contact such broker, bank, or nominee in order to find out how to change your vote.

How is a quorum reached?

Our Amended and Restated Bylaws, or bylaws, provide that a majority of the shares entitled to vote, present in person or represented by proxy, will constitute a quorum for the transaction of business at the Annual Meeting.

Under the General Corporation Law of the State of Delaware, shares that are voted "abstain" or "withheld" and broker "non-votes" are counted as present for purposes of determining whether a quorum is present at the Annual Meeting. If a quorum is not present, the meeting may be adjourned until a quorum is obtained.

How is the vote counted?

Under our bylaws, any proposal other than an election of directors is decided by a majority of the votes properly cast for and against such proposal, except where a larger vote is required by law or by our Amended and Restated

Certificate of Incorporation, or certificate of incorporation, or bylaws. Abstentions and broker “non-votes” are not included in the tabulation of the voting results on any such proposal and, therefore, do not have an impact on such proposals. A broker “non-vote” occurs when a nominee holding shares for a beneficial owner does not vote on a particular proposal because the nominee does not have discretionary voting power with respect to that item, and has not received instructions from the beneficial owner.

If your shares are held in “street name” by a brokerage firm, your brokerage firm is required to vote your shares according to your instructions. If you do not give instructions to your brokerage firm, the brokerage firm will still be able to vote your shares with respect to certain “discretionary” items, but will not be allowed to vote your shares with respect to “non-discretionary” items. Proposal No. 1 is a “non-discretionary” item. If you do not instruct your broker how to vote with respect to this proposal, your broker may not vote for this proposal, and those votes will be counted as broker “non-votes.” Proposal No. 2 is considered to be a discretionary item, and your brokerage firm will be able to vote on this proposal even if it does not receive instructions from you.

To be elected, the directors nominated via Proposal No. 1 must receive a plurality of the votes cast and entitled to vote on the proposal, meaning that the director nominees receiving the most votes will be elected. Shares voting “withheld” have no effect on the election of directors.

Who pays the cost for soliciting proxies?

We are making this solicitation and will pay the entire cost of preparing and distributing the Notice and our proxy materials and soliciting votes. If you choose to access the proxy materials or vote over the Internet, you are responsible for any Internet access charges that you may incur. Our officers and employees may, without compensation other than their regular compensation, solicit proxies through further mailings, personal conversations, facsimile transmissions, e-mails, or otherwise. We have hired Broadridge Financial Solutions, Inc. to assist us in the distribution of proxy materials and the solicitation of votes described above. Proxy solicitation expenses that we will pay include those for preparation, mailing, returning, and tabulating the proxies.

How may stockholders submit matters for consideration at an annual meeting?

The required notice must be in writing and received by our Corporate Secretary at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year’s annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year’s annual meeting, or if no annual meeting were held in the preceding year, a stockholder’s notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which public announcement of the date of such meeting is first made.

In addition, any stockholder proposal intended to be included in the proxy statement for the next annual meeting of our stockholders in 2020 must also satisfy the requirements of SEC Rule 14a-8 under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and be received not later than December 28, 2019. If the date of the annual meeting is moved by more than 30 days from the date contemplated at the time of the previous year’s proxy statement, then notice must be received within a reasonable time before we begin to print and send proxy materials. If that happens, we will publicly announce the deadline for submitting a proposal in a press release or in a document filed with the SEC.

How can I know the voting results?

We plan to announce preliminary voting results at the Annual Meeting and will publish final results in a Current Report on Form 8-K to be filed with the SEC within four business days following the Annual Meeting.

PROPOSAL NO. 1 – ELECTION OF CLASS I DIRECTORS

Our board of directors currently consists of seven members. In accordance with the terms of our certificate of incorporation and bylaws, our 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 Christopher Paige, Ph.D. and Philip Vickers, Ph.D. and their terms will expire at the Annual Meeting;
- the class II directors are Ian Clark and Annalisa Jenkins, M.B.B.S., F.R.C.P. and their terms will expire at the annual meeting of stockholders to be held in 2020; and
- the class III directors are Bruce Booth, D.Phil., Phillip Donenberg and Geoff MacKay, and their terms will expire at the annual meeting of stockholders to be held in 2021.

Upon the expiration of the term of a class of directors, directors 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.

Our certificate of incorporation and bylaws provide that the authorized number of directors may be changed only by resolution of our board of directors. Our certificate of incorporation also provides that our directors may be removed only for cause by the affirmative vote of the holders of at least two-thirds (2/3) of the outstanding shares then entitled to vote in an annual election of directors, and that any vacancy on our board of directors, including a vacancy resulting from an enlargement of our board of directors, may be filled only by vote of a majority of our directors then in office.

Our board of directors has nominated Christopher Paige, Ph.D. and Philip Vickers, Ph.D. for election as the class I directors at the Annual Meeting. The nominees are presently directors, and have indicated a willingness to continue to serve as directors, if elected. If the nominees become unable or unwilling to serve, however, the proxies may be voted for a substitute nominee selected by our board of directors.

We have no formal policy regarding board diversity. Our priority in selection of board members is identification of members who will further the interests of our stockholders through consideration of a number of facts and circumstances, including among other things, the skills of the prospective director candidate, his or her depth and breadth of business experience or other background characteristics, his or her independence and the needs of the board of directors.

Nominees for Election as Class I Directors

The following table and narrative information identifies our nominees for class I directors, and sets forth their principal occupation and business experience during the last five years and their ages as of April 15, 2019.

Name	Positions and Offices Held with AVROBIO	Director Since	Age
Christopher Paige, Ph.D.	Director	2016	66
Philip Vickers, Ph.D.	Director	2019	59

Christopher Paige, Ph.D. has served as a member of our board of directors since January 2016. Dr. Paige is a senior scientist at University Health Network and a professor in the departments of medical biophysics and immunology at the University of Toronto, and has served in such roles since 1987. From 1997 to October 2016, he served as the vice president, research of the University Health Network. In 1990, Dr. Paige became the founding director of the Arthritis and Autoimmunity Research Centre as well as director of research at The Wellesley Hospital. He became a member of the Basel Institute for Immunology in Switzerland in 1980 where he worked until joining the Ontario Cancer Institute as a senior scientist in 1987. Dr. Paige earned a B.S. in biology at the University of Notre Dame in 1974 and a Ph.D. in immunology at the Sloan-Kettering Division of Cornell University Graduate School of Medical Sciences in 1979. We believe Dr. Paige is qualified to serve on our board because of his scientific and industry experience in the field in which we operate.

Philip J. Vickers, Ph.D., has served as a member of our board of directors since January 2019. Dr. Vickers is the chief executive officer and a member of the board of directors of Northern Biologics Inc., a biotechnology company, and has served in such roles since November 2017. From October 2013 until June 2017, Dr. Vickers served as global head of research and development and a member of the executive committee of Shire, a biotechnology company focused on the development of therapies for the treatment of rare and specialty conditions. From October 2010 to September 2013, Dr. Vickers served as the SVP, head of research and development, human genetic therapies at Shire. Prior to Shire, Dr. Vickers held positions of increasing responsibility in research and development at Merck, Pfizer, Boehringer-Ingelheim and Resolvix Pharmaceuticals. Dr. Vickers serves on the board of directors of Revance Therapeutics, Inc. (Nasdaq: RVNC), a biotechnology company, and as a scientific advisor to the PTEN Research Foundation. Dr. Vickers obtained his Ph.D. in biochemistry from the University of Toronto, which was followed by postdoctoral research in mechanisms of multidrug resistance in breast cancer at the National Cancer Institute in Bethesda, Maryland. We believe that Dr. Vickers is qualified to serve on our board because of his scientific, executive, and industry experience in the field in which we operate.

The proxies will be voted in favor of the above nominees unless a contrary specification is made in the proxy. The nominees have consented to serve as our directors if elected. However, if the nominees are 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 our board of directors may designate.

The board of directors recommends voting “FOR” the election of Christopher Paige, Ph.D. and Philip Vickers, Ph.D. as the class I directors, to serve for a three-year term ending at the annual meeting of stockholders to be held in 2022.

Directors Continuing in Office

The following table and narrative information identifies our directors continuing in office, and sets forth their principal occupation and business experience during the last five years and their ages as of April 15, 2019.

Name	Positions and Offices Held with AVROBIO	Director Since	Class and Year in Which Term Will Expire	Age
Geoff MacKay	President, Chief Executive Officer and Director	2015	Class III—2021	52
Bruce Booth, D. Phil.	Chairman of the Board of Directors	2016	Class III—2021	45
Ian Clark	Director	2018	Class II—2020	58
Phillip Donenberg	Director	2018	Class III—2021	58
Annalisa Jenkins, M.B.B.S., F.R.C.P.	Director	2018	Class II—2020	53

Class II Directors (Term Expires at 2020 Annual Meeting)

Ian Clark has served as a member of our board of directors since January 2018. Mr. Clark currently serves as an operating partner of Blackstone Life Sciences, a private investment firm focusing on the life sciences sector and an operating unit within The Blackstone Group L.P. Previously, Mr. Clark served as the chief executive officer and head of North American commercial operations and was a member of the board of directors for Genentech, a member of the Roche Group, from 2010 to 2016. He joined Genentech in 2003 as senior vice president and general manager, BioOncology. In August 2005, he became senior vice president, commercial operations of Genentech. In January 2006, Mr. Clark became executive vice president, commercial operations of Genentech and became a member of its executive committee. Mr. Clark was named head of global product strategy and chief marketing officer of Roche in April 2009. Prior to joining Genentech, Mr. Clark held various positions of increasing responsibility at Novartis, Sanofi, Ivax and Searle, working in the USA, UK, Canada, Eastern Europe and France. Mr. Clark currently serves on the board of directors of Agios Pharmaceuticals, Inc. (Nasdaq: AGIO), Corvus Pharmaceuticals, Inc. (Nasdaq: CRVS), Forty Seven, Inc. (Nasdaq: FTSV), Takeda Pharmaceutical

Company Limited (NYSE: TAK), and Guardant Health, Inc. (Nasdaq: GH), where he also serves as the lead independent director. Mr. Clark also serves on the strategic priorities board of BioFulcrum, an initiative within the Gladstone Institutes. Mr. Clark previously served on the board of directors of Shire Plc, Kite Pharma, TerraVia, Dendreon Pharmaceuticals, and Vernalis Therapeutics. He also previously served on the board of directors of the Biotechnology Industry Organization (BIO) and as a member of the economic advisory council of the Federal Reserve Bank of San Francisco. Mr. Clark received a B.S. and honorary doctorate in biological sciences from Southampton University in the United Kingdom. We believe Mr. Clark is qualified to serve on our board because of his industry experience in the field in which we operate and his executive experience with companies in our industry.

Annalisa Jenkins, M.B.B.S., F.R.C.P. has served as a member of our board of directors since March 2018. From November 2017 until April 2019, Dr. Jenkins served as the chief executive officer of PlaqueTec Ltd., a biotechnology company focusing on coronary artery disease treatment and prevention. Previously, Dr. Jenkins served as the chief executive officer and a member of the board of directors of Dimension Therapeutics, Inc., a biotechnology company focused on rare and metabolic diseases associated with the liver, from September 2014 until its sale to Ultragenyx Pharmaceutical Inc. in November 2017. From October 2013 to March 2014, Dr. Jenkins served as executive vice president, head of global research and development for Merck Serono Pharmaceuticals, a biopharmaceutical company. Previously, from September 2011 to October 2013, she served as Merck Serono's executive vice president, global development and medical, and was a member of Merck Serono's executive committee. Prior to that, Dr. Jenkins pursued a 15-year career at Bristol-Myers Squibb Company, a biopharmaceutical company, where, from July 2009 to June 2011, she was a senior vice president and head of global medical affairs. Dr. Jenkins is currently a committee member of the science board to the FDA, which advises FDA leadership on complex scientific and technical issues. Dr. Jenkins serves on the board of directors of AgeX Therapeutics, Inc. (NYSE American: AGE), Ardelyx, Inc. (Nasdaq: ARDX), Oncimmune Holdings plc (LSE: ONC), Sensyne Health plc (LSE: SENS) and a number of privately held biotechnology and life science companies. Dr. Jenkins previously served on the board of Silence Therapeutics. Dr. Jenkins graduated with a degree in medicine from St. Bartholomew's Hospital in the University of London and subsequently trained in cardiovascular medicine in the UK National Health Service. Earlier in her career, Dr. Jenkins served as a medical officer in the British Royal Navy. We believe Dr. Jenkins is qualified to serve on our board based on her industry experience in the field in which we operate and her executive experience with companies in our industry.

Class III Directors (Term Expires at 2021 Annual Meeting)

Geoff MacKay is our co-founder and has been our chief executive officer and director since November 2015. From April 2015 to June 2017, Mr. MacKay served as interim chief executive officer of eGenesis, Inc., a biotechnology company, and from December 2003 to December 2014, he served as chief executive officer of Organogenesis Inc., a biotechnology company. Prior to that, from February 1993 to December 2003, Mr. MacKay served in various senior leadership positions within the global transplantation & immunology franchise at Novartis Canada, Global (Basel), USA. Mr. MacKay has served as chairman of the board of directors of Satellos Bioscience Inc., a regenerative medicine company, since September 2018, and on the board of directors of Talaris Therapeutics, Inc., a cell therapy company, since December 2018. Mr. MacKay previously served as chairman of the board of MassBio, chairman of the board of the Alliance of Regenerative Medicine, and on the advisory council to the Health Policy Commission for Massachusetts. Mr. MacKay holds a B.A. in psychology and a graduate certificate in marketing management from McGill University. We believe Mr. MacKay is qualified to serve on our board because of his executive experience in our industry.

Bruce Booth, D.Phil. has served as the chairman of our board of directors since February 2016. Dr. Booth joined Atlas Venture in 2005, and currently serves as partner. Previously, from 2004 to 2005, Dr. Booth was a principal at Caxton Health Holdings L.L.C., a healthcare-focused investment firm, where he focused on the firm's venture capital activities. Prior to Caxton, from 1999 to 2004, he was an associate principal at McKinsey & Company, a global strategic management consulting firm, where he advised clients on R&D productivity, corporate strategy

and business development issues across the biopharmaceutical sector. Dr. Booth serves on the board of several privately held companies, as well as on the board of Magenta Therapeutics, Inc. (Nasdaq: MGTA) and Unum Therapeutics Inc. (Nasdaq: UMRX), both of which are biotechnology companies. From February 2017 until December 2018, Dr. Booth served as independent chairman of the board of directors of miRagen Therapeutics, Inc. (Nasdaq: MGEN), and from August 2006 until June 2018, Dr. Booth served on the board of directors of Zafgen, Inc. (Nasdaq: ZFGN). As a British Marshall Scholar, Dr. Booth holds a D.Phil. in molecular immunology from Oxford University's Nuffield Department of Medicine and a B.S. in biochemistry, summa cum laude, from Pennsylvania State University. We believe Dr. Booth's extensive leadership, executive, managerial and business experience with life sciences companies, including experience in the formation, development and business strategy of multiple start-up companies in the life sciences sector qualifies him to serve on our board of directors.

Phillip B. Donenberg has served as a member of our board of directors and audit committee chair since June 2018. Since January 2019, Mr. Donenberg has served as a financial consultant for Aptinyx, Inc. (Nasdaq: APTX), a biopharmaceutical company. From July 2018 to November 2018, Mr. Donenberg served as the Chief Financial Officer and Senior Vice President of Assertio Therapeutics, Inc. (Nasdaq: ASRT), a pharmaceutical company. Previously, Mr. Donenberg served at AveXis, Inc., a gene therapy company, as the Senior Vice President and Chief Financial Officer from October 2017 to June 2018 and as Vice President, Corporate Controller of AveXis, Inc. from September 2016 to October 2017. He was the chief financial officer of RestorGenex Corporation from May 2014 to January 2016, when RestorGenex merged with Diffusion Pharmaceuticals LLC, a pharmaceutical company, and served as the merged company's consultant CFO until September 2016, and the chief financial officer of 7wire Ventures LLC, an early stage healthcare venture fund, from September 2013 to May 2014. Prior to that time, Mr. Donenberg served as the chief financial officer of BioSante Pharmaceuticals, Inc. from July 1998 to June 2013, when BioSante merged with ANIP Pharmaceuticals, Inc. Mr. Donenberg also has experience serving on the boards of directors of privately held companies. Mr. Donenberg holds a B.S. in Accountancy from the University of Illinois Champaign-Urbana College of Business and is a Certified Public Accountant. We believe Mr. Donenberg is qualified to serve on our board of directors because of his financial expertise and his experience as an executive of companies in the industry in which we operate.

There are no family relationships between or among any of our directors or executive officers. The principal occupation and employment during the past five years of each of our directors was carried on, in each case except as specifically identified above, with a corporation or organization that is not a parent, subsidiary or other affiliate of us. There is no arrangement or understanding between any of our directors and any other person or persons pursuant to which he or she is to be selected as a director.

There are no material legal proceedings to which any of our directors is a party adverse to us or any of our subsidiaries or in which any such person has a material interest adverse to us or our subsidiaries.

Executive Officers Who Are Not Directors

The following table identifies our executive officers who are not directors, and sets forth their current positions at AVROBIO and their ages as of April 15, 2019.

Name	Position Held with AVROBIO	Officer Since	Age
Erik Ostrowski	Chief Financial Officer and Treasurer	2019	46
Birgitte Volck, M.D., Ph.D.	President of Research and Development	2018	56
Steven Avruch	Vice President, General Counsel and Secretary	2019	58

Erik Ostrowski has been our chief financial officer and treasurer since January 2019. From June 2014 to December 2018, Mr. Ostrowski served as the chief financial officer of Summit Therapeutics plc. Prior to that, he

served as vice president of finance at Organogenesis Inc., a biotechnology company, from 2010 to 2014, and previously worked in investment banking, most recently as a director with Leerink Partners LLC. Mr. Ostrowski began his career as an accountant with Coopers & Lybrand (now PricewaterhouseCoopers) and received a B.S. in accounting and economics from Babson College and an M.B.A. from the University of Chicago Booth School of Business.

Birgitte Volck, M.D., Ph.D. has been our president of research and development since December 2018. From June 2016 to August 2018, she served as senior vice president and head of research and development, Rare Disease at GlaxoSmithKline. Prior to joining GlaxoSmithKline, she served as chief medical officer and SVP, development at Swedish Orphan Biovitrum (SOBI), a biopharmaceutical company, from 2012 to 2016. Dr. Volck received her M.D. and Ph.D. degrees from Copenhagen University, Denmark.

Steven Avruch has been our vice president, general counsel and secretary since January 2019. Prior to joining our company, from May 2018 to December 2018, Mr. Avruch was an independent legal consultant to biotechnology and other companies. Prior to that, Mr. Avruch served at Biogen Inc., a biotechnology company, as Chief Corporation Counsel and Assistant Secretary from January 2015 to December 2017, and as Associate General Counsel from March 2013 to December 2014. Mr. Avruch graduated with an A.B. in Russian Studies from Dartmouth College, and later earned his J.D. from Boston College Law School.

The principal occupation and employment during the past five years of each of our executive officers was carried on, in each case except as specifically identified above, with a corporation or organization that is not a parent, subsidiary or other affiliate of us. There is no arrangement or understanding between any of our executive officers and any other person or persons pursuant to which he was or is to be selected as an executive officer.

There are no material legal proceedings to which any of our executive officers is a party adverse to us or our subsidiaries or in which any such person has a material interest adverse to us or our subsidiaries.

**PROPOSAL NO. 2 – RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG LLP
AS AVROBIO’S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE
FISCAL YEAR ENDING DECEMBER 31, 2019**

AVROBIO’s stockholders are being asked to ratify the appointment by the Audit Committee of the board of directors of Ernst & Young LLP as AVROBIO’s independent registered public accounting firm for the fiscal year ending December 31, 2019. Ernst & Young LLP has served as AVROBIO’s independent registered public accounting firm since 2018.

The Audit Committee is solely responsible for selecting AVROBIO’s independent registered public accounting firm for the fiscal year ending December 31, 2019. Stockholder approval is not required to appoint Ernst & Young LLP as AVROBIO’s independent registered public accounting firm. However, the board of directors believes that submitting the appointment of Ernst & Young LLP to the stockholders for ratification is good corporate governance. If the stockholders do not ratify this appointment, the Audit Committee will reconsider whether to retain Ernst & Young LLP. If the selection of Ernst & Young LLP is ratified, the Audit Committee, at its discretion, may direct the appointment of a different independent registered public accounting firm at any time it decides that such a change would be in the best interest of AVROBIO and its stockholders.

A representative of Ernst & Young LLP is expected to be present at the Annual 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 our stockholders.

The following table sets forth all fees paid or accrued by us for professional audit services and other services rendered by Ernst & Young LLP during the year ended December 31, 2018.

	2018
Audit fees ⁽¹⁾	\$1,351,944
Tax fees ⁽²⁾	11,225
Total fees	\$1,363,169

- (1) Audit fees consist of fees billed for professional services performed by Ernst & Young LLP for the audit of our annual financial statements, the review of interim consolidated financial statements and related services that are normally provided in connection with registration statements, including the registration statement for our initial public offering. Included in the 2018 audit fees is \$799,000 of fees billed in connection with our initial public offering.
- (2) Tax Fees consist of fees for professional services in connection with tax compliance, tax planning, and tax advice, including foreign tax return preparation and requests for rulings or technical advice from tax authorities.

Audit Committee Pre-approval Policy and Procedures

Our Audit Committee has adopted policies and procedures relating to the approval of all audit and non-audit services that are to be performed by our independent registered public accounting firm. This policy provides that we will not engage our independent registered public accounting firm to render audit or non-audit services unless the service is specifically approved in advance by our Audit Committee or the engagement is entered into pursuant to the pre-approval procedure described below.

From time to time, our Audit Committee may pre-approve specified types of services that are expected to be provided to us by our independent registered public accounting firm during the next 12 months. Any such pre-approval details the particular service or type of services to be provided and is also generally subject to a maximum dollar amount.

During our 2018 fiscal year, no services were provided to us by Ernst & Young LLP other than in accordance with the pre-approval policies and procedures described above.

The board of directors recommends voting “FOR” Proposal No. 2 to ratify the appointment of Ernst & Young LLP as AVROBIO’s independent registered public accounting firm for the fiscal year ending December 31, 2019.

CORPORATE GOVERNANCE

Director Nomination Process

Our Nominating and Corporate Governance Committee is responsible for identifying individuals qualified to serve as directors, consistent with criteria approved by our board, and recommending such persons to be nominated for election as directors, except where we are legally required by contract, law or otherwise to provide third parties with the right to nominate.

The process followed by our Nominating and Corporate Governance Committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates, and interviews of selected candidates by management, recruiters, members of the committee and our board. The qualifications, qualities and skills that our Nominating and Corporate Governance Committee believes must be met by a committee-recommended nominee for a position on our board of directors are as follows:

- The nominee shall have experience at a strategic or policymaking level in a business, government, non-profit or academic organization of high standing.
- The nominee shall be highly accomplished in his or her respective field, with superior credentials and recognition.
- The nominee shall be well regarded in the community and shall have a long-term reputation for the high ethical and moral standards.
- The nominee shall have sufficient time and availability to devote to the affairs of the Company, particularly in light of the number of boards of directors on which such nominee may serve.
- To the extent such nominee serves or has previously served on other boards, the nominee shall have a demonstrated history of actively contributing at board meetings.

Stockholders may recommend individuals to the Nominating and Corporate Governance Committee for consideration as potential director candidates. Any such proposals should be submitted to our Corporate Secretary at our principal executive offices no later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the one-year anniversary of the date of the preceding year's annual meeting and should include appropriate biographical and background material to allow the Nominating and Corporate Governance Committee to properly evaluate the potential director candidate and the number of shares of our stock beneficially owned by the stockholder proposing the candidate. Stockholder proposals should be addressed to AVROBIO, Inc., One Kendall Square, Building 300, Suite 201, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. Assuming that biographical and background material has been provided on a timely basis in accordance with our bylaws, any recommendations received from stockholders will be evaluated in the same manner as potential nominees proposed by the Nominating and Corporate Governance Committee. If our board of directors determines to nominate a stockholder-recommended candidate and recommends his or her election, then his or her name will be included on our proxy card for the next annual meeting of stockholders. See "Stockholder Proposals" for a discussion of submitting stockholder proposals.

Director Independence

Applicable Nasdaq Stock Market LLC, or Nasdaq, rules require a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq rules require that, subject to specified exceptions, each member of a listed company's Audit, Compensation and Nominating and Corporate Governance Committees be independent and that Audit Committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act and that Compensation Committee members satisfy independence criteria set forth in Rule 10C-1 under the Exchange Act. Under applicable Nasdaq rules, a director will only qualify as an "independent director" if, in the opinion of the listed company's

board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3, a member of an Audit Committee of a listed company may not, other than in his or her capacity as a member of the Audit Committee, the board of directors, or any other board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries. In addition, in affirmatively determining the independence of any director who will serve on a company's Compensation Committee, Rule 10C-1 under the Exchange Act requires that a company's board of directors must consider all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a Compensation Committee member, including: the source of compensation to the director, including any consulting, advisory or other compensatory fee paid by such company to the director, and whether the director is affiliated with the company or any of its subsidiaries or affiliates.

Our board of directors has determined that all members of the board of directors, except Mr. MacKay, are independent directors, including for purposes of the rules of Nasdaq and the SEC. In making such independence determination, our board of directors considered the relationships that each non-employee director has with us and all other facts and circumstances that our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director. In considering the independence of the directors listed above, our board of directors considered the association of our directors with the holders of more than 5% of our common stock. There are no family relationships among any of our directors or executive officers. Mr. MacKay is not an independent director under these rules because he is an executive officer of the Company.

Board Committees

Our board of directors has established an Audit Committee, a Compensation Committee, and a Nominating and Corporate Governance Committee. Each of the Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee operates under a charter that satisfies the applicable standards of the SEC and Nasdaq. Each such committee reviews its respective charter at least annually. A current copy of the charter for each of the Audit Committee, Compensation Committee, and Nominating and Corporate Governance Committee is posted on the corporate governance section of our website, www.avrobio.com.

Audit Committee

Phillip Donenberg, Annalisa Jenkins and Christopher Paige serve on the Audit Committee, which is chaired by Mr. Donenberg. Our board of directors has determined that each member of the Audit Committee is "independent" for Audit Committee purposes as that term is defined in the rules of the SEC and the applicable Nasdaq rules, and each has sufficient knowledge in financial and auditing matters to serve on the Audit Committee. Our board of directors has designated Mr. Donenberg as an "audit committee financial expert," as defined under the applicable rules of the SEC. During the fiscal year ended December 31, 2018, the Audit Committee met two times. The report of the Audit Committee is included in this proxy statement under "Report of the Audit Committee." The Audit Committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- pre-approving auditing and permissible non-audit services, and the terms of such services, to be provided by our independent registered public accounting firm;
- reviewing the overall audit plan with our independent registered public accounting firm and members of management responsible for preparing our financial statements;
- reviewing and discussing with management and our independent registered public accounting firm our annual and quarterly financial statements and related disclosures as well as critical accounting policies and practices used by us;

- coordinating the oversight and reviewing the adequacy of our internal control over financial reporting;
- establishing policies and procedures for the receipt and retention of accounting-related complaints and concerns;
- recommending based upon the Audit Committee’s review and discussions with management and our independent registered public accounting firm whether our audited financial statements shall be included in our Annual Report on Form 10-K;
- monitoring the integrity of our financial statements and our compliance with legal and regulatory requirements as they relate to our financial statements and accounting matters;
- preparing the Audit Committee report required by SEC rules to be included in our annual proxy statement;
- reviewing all related person transactions for potential conflict of interest situations and approving all such transactions; and
- reviewing quarterly earnings releases.

All audit and non-audit services, other than *de minimis* non-audit services, to be provided to us by our independent registered public accounting firm must be approved in advance by our Audit Committee.

Compensation Committee

Ian Clark, Bruce Booth and Philip Vickers serve on the Compensation Committee, which is chaired by Mr. Clark. Our board of directors has determined that each member of the Compensation Committee is “independent” as defined in the applicable Nasdaq rules. During the fiscal year ended December 31, 2018, the Compensation Committee met three times. The Compensation Committee’s responsibilities include:

- annually reviewing and recommending to the board of directors corporate goals and objectives relevant to the compensation of our chief executive officer;
- evaluating the performance of our chief executive officer in light of such corporate goals and objectives and based on such evaluation, recommending to the board of directors (i) determining the cash compensation of our chief executive officer and (ii) grants and awards to our chief executive officer under equity-based plans;
- reviewing and approving the cash compensation of our other executive officers;
- reviewing and establishing our overall management compensation, philosophy, and policy;
- overseeing and administering our compensation and similar plans;
- evaluating and assessing potential and current compensation advisors in accordance with the independence standards identified in the applicable Nasdaq rules;
- reviewing and approving our policies and procedures for the grant of equity-based awards;
- reviewing and recommending to the board of directors the compensation of our directors;
- preparing our Compensation Committee report if and when required by SEC rules;
- reviewing and discussing annually with management our “Compensation Discussion and Analysis,” if and when required, to be included in our annual proxy statement;
- reviewing and approving the retention or termination of any consulting firm or outside advisor to assist in the evaluation of compensation matters; and
- retaining and approving the compensation of any compensation advisors.

Nominating and Corporate Governance Committee

Annalisa Jenkins and Christopher Paige serve on the Nominating and Corporate Governance Committee, which is chaired by Dr. Jenkins. Our board of directors has determined that each member of the Nominating and Corporate Governance Committee is “independent” as defined in the applicable Nasdaq rules. During the fiscal year ended December 31, 2018, the Nominating and Corporate Governance Committee did not hold any meetings. The Nominating and Corporate Governance Committee’s responsibilities include:

- developing and recommending to the board of directors criteria for board and committee membership;
- establishing procedures for identifying and evaluating board of director candidates, including nominees recommended by stockholders;
- reviewing the size and composition of the board of directors to ensure that it is composed of members containing the appropriate skills and expertise to advise us;
- identifying individuals qualified to become members of the board of directors;
- recommending to the board of directors the persons to be nominated for election as directors and to each of the board’s committees;
- developing and recommending to the board of directors a set of corporate governance guidelines; and
- overseeing the evaluation of our board of directors and management.

The Nominating and Corporate Governance Committee considers candidates for board of director membership suggested by its members and the chief executive officer. Additionally, in selecting nominees for directors, the Nominating and Corporate Governance Committee will review candidates recommended by stockholders in the same manner and using the same general criteria as candidates recruited by the committee and/or recommended by our board of directors. Any stockholder who wishes to recommend a candidate for consideration by the committee as a nominee for director should follow the procedures described later in this proxy statement under the heading “Stockholder Proposals.” The Nominating and Corporate Governance Committee will also consider whether to nominate any person proposed by a stockholder in accordance with the provisions of our bylaws relating to stockholder nominations as described later in this proxy statement under the heading “Stockholder Proposals.”

Identifying and Evaluating Director Nominees. Our board of directors is responsible for filling vacancies on our board of directors and for nominating candidates for election by our stockholders each year in the class of directors whose term expires at the relevant annual meeting. The board of directors delegates the selection and nomination process to the Nominating and Corporate Governance Committee, with the expectation that other members of the board of directors, and of management, will be requested to take part in the process as appropriate.

Generally, the Nominating and Corporate Governance Committee identifies candidates for director nominees in consultation with management, through the use of search firms or other advisors, through the recommendations submitted by stockholders or through such other methods as the Nominating and Corporate Governance Committee deems to be helpful to identify candidates. Once candidates have been identified, the Nominating and Corporate Governance Committee confirms that the candidates meet all of the minimum qualifications for director nominees established by the Nominating and Corporate Governance Committee. The Nominating and Corporate Governance Committee may gather information about the candidates through interviews, detailed questionnaires, comprehensive background checks or any other means that the Nominating and Corporate Governance Committee deems to be appropriate in the evaluation process. The Nominating and Corporate Governance Committee then meets as a group to discuss and evaluate the qualities and skills of each candidate, both on an individual basis and taking into account the overall composition and needs of our board of directors. Based on the results of the evaluation process, the Nominating and Corporate Governance Committee recommends candidates for the board of directors’ approval to fill a vacancy or as director nominees for election

to the board of directors by our stockholders each year in the class of directors whose term expires at the relevant annual meeting.

Board and Committee Meetings Attendance

The full board of directors met eight times during 2018. During 2018, each member of the board of directors, with the exception of Dr. Jenkins, attended in person or participated in 75% or more of the aggregate of (i) the total number of meetings of the board of directors (held during the period for which such person has been a director) and (ii) the total number of meetings held by all committees of the board of directors on which such person served (during the periods that such person served). Since our initial public offering in June 2018, Dr. Jenkins has attended in person or participated in 75% or more of the aggregate meetings of the board of directors and the committees on which she served.

Director Attendance at Annual Meeting of Stockholders

Directors are responsible for attending the annual meeting of stockholders to the extent practicable. We did not hold an annual meeting of stockholders in 2018.

Policy on Trading, Pledging and Hedging of Company Stock

Certain transactions in our securities (such as purchases and sales of publicly traded put and call options, and short sales) create a heightened compliance risk or could create the appearance of misalignment between management and stockholders. In addition, securities held in a margin account or pledged as collateral may be sold without consent if the owner fails to meet a margin call or defaults on the loan, thus creating the risk that a sale may occur at a time when an officer or director is aware of material, non-public information or otherwise is not permitted to trade in Company securities. Our insider trading policy expressly prohibits short sales and derivative transactions of our stock by our executive officers, directors and designated employees and consultants, including short sales of our securities. Our insider trading policy expressly prohibits purchases or sales of puts, calls, or other derivative securities of the company or any derivative securities that provide the economic equivalent of ownership.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. A current copy of the code is posted on the corporate governance section of our website, which is located at www.avrobio.com. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Board Leadership Structure and Board's Role in Risk Oversight

Currently, the role of chairman of the board is separated from the role of chief executive officer. We believe that separating these positions allows our chief executive officer to focus on our day-to-day business, while allowing the chairman of the board to lead the board of directors in its fundamental role of providing advice to, and independent oversight, of management. Our board of directors recognizes the time, effort, and energy that the chief executive officer is required to devote to his position in the current business environment, as well as the commitment required to serve as our chairman, particularly as the board of directors' oversight responsibilities continue to grow. While our bylaws and our corporate governance guidelines do not require that our chairman and chief executive officer positions be separate, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.

Risk is inherent to every business, and how well a business manages risk can ultimately determine its success. We face a number of risks, including risks relating to our financial condition, development and commercialization activities, operations, strategic direction, and intellectual property. Management is responsible for the day-to-day management of risks we face, while our board of directors, as a whole and through its committees, has responsibility for the oversight of risk management. In its risk oversight role, our board of directors has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed.

The role of the board of directors in overseeing the management of our risks is conducted primarily through committees of the board of directors, as disclosed in the descriptions of each of the committees above and in the charters of each of the committees. The full board of directors (or the appropriate board committee in the case of risks that are under the purview of a particular committee) discusses with management our major risk exposures, their potential impact on us, and the steps we take to manage them. When a board committee is responsible for evaluating and overseeing the management of a particular risk or risks, the chairman of the relevant committee reports on the discussion to the full board of directors during the committee reports portion of the next board meeting. This enables the board of directors and its committees to coordinate the risk oversight role, particularly with respect to risk interrelationships.

Communication with the Directors of AVROBIO

Any interested party with concerns about our company may report such concerns to the board of directors or the chairman of our board of directors and Nominating and Corporate Governance Committee, by submitting a written communication to the attention of such director at the following address:

c/o AVROBIO, Inc.
One Kendall Square
Building 300, Suite 201
Cambridge, Massachusetts 02139
United States

You may submit your concern anonymously or confidentially by postal mail. You may also indicate whether you are a stockholder, customer, supplier, or other interested party.

A copy of any such written communication may also be forwarded to AVROBIO's legal counsel and a copy of such communication may be retained for a reasonable period of time. The director may discuss the matter with AVROBIO's legal counsel, with independent advisors, with non-management directors, or with AVROBIO's management, or may take other action or no action as the director determines in good faith, using reasonable judgment, and applying his or her own discretion.

Communications may be forwarded to other directors if they relate to important substantive matters and include suggestions or comments that may be important for other directors to know. In general, communications relating to corporate governance and long-term corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances, and matters as to which we tend to receive repetitive or duplicative communications.

The Audit Committee oversees the procedures for the receipt, retention, and treatment of complaints received by AVROBIO regarding accounting, internal accounting controls, or audit matters, and the confidential, anonymous submission by employees of concerns regarding questionable accounting, internal accounting controls or auditing matters. AVROBIO has also established a toll-free telephone number for the reporting of such activity, which is 1-866-569-1843.

Board and Committee Evaluations

The Nominating and Corporate Governance Committee oversees the annual board and committee evaluation process. Generally, the board and each committee conduct self-evaluations by means of written questionnaires completed by each director and committee member. The anonymous responses are summarized and provided to the board and each committee at their next meetings in order to facilitate an examination and discussion by the board and each committee of the effectiveness of the board and committees, board and committee structure and dynamics, and areas for possible improvement. The Nominating and Corporate Governance Committee establishes the board and committee evaluation process each year and may determine to use an independent third party evaluation process from time to time in the future.

Director Compensation

The following table presents the total compensation for each person who served as a non-employee member of our board of directors and received compensation for such service during the fiscal year ended December 31, 2018. Other than as set forth in the table and described more fully below, we did not pay any compensation, make any equity awards or non-equity awards to, or pay any other compensation to any of the non-employee members of our board of directors in 2018. We reimburse non-employee members of our board of directors for reasonable travel expenses. Mr. MacKay, our President and Chief Executive Officer, did not receive any compensation for his service as a member of our board of directors in 2018. Mr. MacKay's compensation for service as an employee for fiscal year 2018 is presented in "Executive Compensation—Summary Compensation Table."

<u>NAME</u>	<u>FEES EARNED OR PAID IN CASH (\$)</u>	<u>OPTION AWARDS (\$)</u>	<u>TOTAL (\$)</u>
Bruce Booth, D.Phil.	41,250	—	41,250
Ian Clark ⁽¹⁾	52,500	211,631	264,131
Phillip Donenberg ⁽²⁾	27,500	250,996	278,496
Annalisa Jenkins, M.B.B.S., F.R.C.P. ⁽³⁾ . . .	43,333	276,128	319,461
Christopher Paige, Ph.D.	26,250	—	26,250
Joshua Resnick, M.D. ⁽⁴⁾	13,125	—	13,125
Scott Requadt ⁽⁵⁾	27,500	—	27,500

- (1) Mr. Clark joined our board of directors in January 2018. As of December 31, 2018, Mr. Clark held options to purchase a total of 79,022 shares of our common stock, of which 14,216 shares vested as of such date.
- (2) Mr. Donenberg joined our board of directors in June 2018. As of December 31, 2018, Mr. Donenberg held an option to purchase 18,743 shares of our common stock, of which 3,124 shares vested as of such date.
- (3) Dr. Jenkins joined our board of directors in March 2018. As of December 31, 2018, Dr. Jenkins held an option to purchase 39,511 shares of our common stock, no portion of which was vested as of such date.
- (4) Dr. Resnick resigned from our board of directors in September 2018.
- (5) Mr. Requadt resigned from our board of directors in January 2019.

Non-Employee Director Compensation Policy

Our board of directors adopted a non-employee director compensation policy that is designed to enable us to attract and retain, on a long-term basis, highly qualified non-employee directors. Under the current policy, each director who is not an employee is paid cash compensation, as set forth below:

	NON-CHAIRMAN MEMBER ANNUAL FEE (\$)	CHAIRMAN ANNUAL FEE (\$)
Board of Directors	50,000	80,000
Audit Committee	2,500	5,000
Compensation Committee	2,500	5,000
Nominating and Corporate Governance Committee	2,500	5,000

Effective July 1, 2019, each director who is not an employee will be paid cash compensation, as set forth below:

	NON-CHAIRMAN MEMBER ANNUAL FEE (\$)	CHAIRMAN ANNUAL FEE (\$)
Board of Directors	35,000	65,000
Audit Committee	7,500	15,000
Compensation Committee	5,000	10,000
Nominating and Corporate Governance Committee	4,000	8,000

In addition, in connection with our initial public offering, each non-employee director then or thereafter first appointed to serve on our board of directors was granted 18,743 shares underlying option awards, which vest in equal monthly installments over a three year period, subject to the director's continued service through such vesting date(s). Under the current policy, as amended, each non-employee director first elected or appointed to our board of directors will be granted option awards on the date of such director's election or appointment to the board of directors for the number of shares of our common stock equal to 0.08% of the total shares outstanding of the company on the date of grant, which vest in equal monthly installments over a three year period, subject to the director's continued service through such vesting date(s). On the date of each annual meeting of stockholders of our company, each continuing non-employee director will be granted option awards for the number of shares of our common stock equal to 0.04% of the total shares outstanding of the company on the date of grant, which will vest in full upon the earlier to occur of the first anniversary of the date of grant or the date of our following annual meeting of stockholders, subject to continued service as a director through such vesting date.

Executive Compensation

As an emerging growth company, we have opted to comply with the executive compensation disclosure rules applicable to "smaller reporting companies," as such term is defined in the rules promulgated under the Securities Act. This section provides an overview of the compensation awarded to, earned by, or paid to our principal executive officer and our next two most highly compensated executive officers in respect of their service to our company for our fiscal year ended December 31, 2018 and up to two additional individuals for whom disclosure would have been provided but for the fact that the individual was not serving as an executive officer as of December 31, 2018. We refer to these individuals as our 2018 named executive officers. Our 2018 named executive officers are:

- Geoff MacKay, our President and Chief Executive Officer;
- Birgitte Volck, M.D., Ph.D., our President of Research and Development;

- Katina Dorton, our former Chief Financial Officer; and
- Nerissa Kreher, M.D., our former Chief Medical Officer.

Our executive compensation program is based on a pay for performance philosophy. Compensation for our executive officers is composed primarily of the following main components: base salary; bonus; and equity incentives in the form of options. Our executive officers, like all full-time employees, are eligible to participate in our health and welfare benefit plans.

Summary Compensation Table

The following table sets forth information regarding compensation awarded to, earned by, or paid to each of our named executive officers for services rendered to us in all capacities during the fiscal year ended December 31, 2018. The following table also presents information regarding the compensation awarded to, and earned by, and paid to each such individual during the fiscal year ended December 31, 2017, to the extent such individual was a named executive officer for such year.

<u>Name</u>	<u>Year</u>	<u>Salary (\$)</u>	<u>Bonus (\$)⁽¹⁾⁽²⁾</u>	<u>Option awards (\$)⁽³⁾</u>	<u>All other compensation (\$)</u>	<u>Total (\$)</u>
Geoff MacKay ⁽⁴⁾	2018	462,267	250,000	2,153,797	370 ⁽⁵⁾	2,866,434
<i>President and Chief Executive Officer</i>	2017	408,000	163,200	30,306	—	601,506
Birgitte Volck, M.D., Ph.D. ⁽⁶⁾	2018	19,861	—	4,364,411	—	4,384,272
<i>President of Research and Development</i>	2018	344,057	129,479 ⁽⁸⁾	584,299	599,942 ⁽⁹⁾	1,657,777
Katina Dorton ⁽⁷⁾	2017	113,333	37,917	286,705	24,856	462,811
<i>Former Chief Financial Officer</i>	2018	366,380	109,695 ⁽¹¹⁾	418,838	3,960 ⁽¹²⁾	898,873
Nerissa Kreher, M.D. ⁽¹⁰⁾	2017	336,600	84,150	18,165	—	438,915
<i>Former Chief Medical Officer</i>						

- (1) The 2017 amounts reflect the discretionary bonus paid in 2018 for performance during 2017.
- (2) The 2018 amounts reflect the discretionary bonus paid in 2019 for performance during 2018, as discussed under “Narrative to Summary Compensation Table – Annual Bonus”.
- (3) Amounts reflect the grant date fair value of option awards granted or modified in 2018 and 2017 in accordance with the Financial Accounting Standards Board’s Accounting Standards Codification Topic 718, or ASC 718. Such grant date fair value does not take into account any estimated forfeitures related to service-vesting conditions. See Note 10 of “Notes to Consolidated Financial Statements” in our Annual Report on Form 10-K filed with the SEC on March 25, 2019 for a discussion of assumptions made by the Company in determining the aggregate grant date fair value of our option awards. These amounts do not correspond to the actual value that may be recognized by the 2018 named executive officers upon vesting of applicable awards.
- (4) Effective upon our initial public offering Mr. MacKay’s annualized base salary was increased from \$420,240 to \$500,000.
- (5) Amount reflects the dollar value of life insurance premiums paid by us on behalf of Mr. MacKay.
- (6) Dr. Volck joined our Company in December 2018 initially under a consulting arrangement. For 2018, her monthly consulting fee was approximately \$38,000 per month.
- (7) Ms. Dorton commenced her employment with us in August 2017. For 2017, her annualized base salary was \$325,000. Effective upon our initial public offering Ms. Dorton’s annualized base salary was increased from \$328,250 to \$360,000. Ms. Dorton departed her position as an executive officer of our company in December 2018.
- (8) Pursuant to her separation agreement, Ms. Dorton received her target annual bonus equal to 40% of her base salary for 2018.
- (9) Amount reflects the following: (a) our reimbursement of travel and relocation expenses (\$39,834); (b) severance payments and accelerated vesting of stock-based awards in connection with Ms. Dorton’s

Separation Agreement dated December 17, 2018 (\$272,870); and (3) the dollar value of 401(k) contributions and life insurance premiums paid by us on behalf of Ms. Dorton (\$3,238).

(10) Dr. Kreher departed her position as an executive officer of our company in December 2018.

(11) Pursuant to her separation agreement, Dr. Kreher received her target annual bonus of 30% of her base salary for 2018.

(12) Amount reflects our reimbursement of commuting expenses and the dollar value of life insurance premiums paid by us on behalf of Dr. Kreher.

Narrative to Summary Compensation Table

Our board of directors and Compensation Committee review compensation annually for all employees, including our executives. In setting executive base salaries and bonuses and granting equity incentive awards, we consider compensation for comparable positions in the market, the historical compensation levels of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders, and a long-term commitment to our company. We target a general competitive position, based on independent third-party benchmark analytics to inform the mix of compensation of base salary, bonus or long-term incentives.

Our Compensation Committee has historically reviewed and made recommendations to our board of directors regarding the compensation to be paid to our chief executive officer and determined the compensation of our other executive officers. Our Compensation Committee typically reviews and discusses management's proposed compensation with the chief executive officer for all executives other than the chief executive officer. Based on those discussions and its discretion, taking into account the factors noted above, the Compensation Committee then approves the compensation of our executive officers other than the chief executive officer without members of management present. Our board of directors discusses the Compensation Committee's recommendations and ultimately approves the compensation of our chief executive officer without members of management present. In 2018, the Compensation Committee retained the services of Nancy Arnosti as its external compensation consultant, and the board of directors and the Compensation Committee considered Ms. Arnosti's input on certain compensation matters as they deemed appropriate. Ms. Arnosti served at the discretion of the Compensation Committee and did not provide any other services to the Company during fiscal year 2018 other than those for which they were engaged by the Compensation Committee. Our Compensation Committee requires that its compensation consultants be independent of Company management and performs an annual assessment of the compensation consultants' independence to determine whether the consultants are independent. Our Compensation Committee has determined that Ms. Arnosti is independent and that her work has not raised any conflict of interests.

Base Salary

We use base salaries to recognize the experience, skills, knowledge and responsibilities required of all our employees, including our 2018 named executive officers. Base salaries for our named executive officers are reviewed annually by our Compensation Committee, typically in connection with our annual performance review process, and adjusted from time to time, based on the recommendation of the Compensation Committee, to realign salaries with market levels after taking into account individual responsibilities, performance and experience. None of our 2018 named executive officers is currently party to an employment agreement or other agreement or arrangement that provides for automatic or scheduled increases in base salary.

During 2018, the annual base salaries for each of Mr. MacKay and Dr. Kreher were \$500,000 and \$365,650, respectively. Prior to her departure from the Company, Ms. Dorton was receiving an annual base salary of \$360,000.

Annual Bonus

We currently have a Senior Executive Cash Incentive Bonus Plan. In addition, our employment agreements with our 2018 named executive officers provide that the executive may be eligible to earn an annual performance

bonus of up to a target percentage of the executive's base salary, as described further below under the section entitled "—Employment Arrangements with our Named Executive Officers." From time to time, our board of directors or Compensation Committee may approve annual bonuses for our named executive officers based on individual performance, company performance or as otherwise determined appropriate.

With respect to performance in fiscal year 2018, the target bonus opportunity as a percentage of base salary for each of Mr. MacKay, Dr. Kreher and Ms. Dorton were 50%, 30% and 40%, respectively. Dr. Volck was not eligible to receive an annual bonus in 2018.

Equity Compensation

Although we do not have a formal policy with respect to the grant of equity incentive awards to our executive officers, or any formal equity ownership guidelines applicable to them, we believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our executives and our stockholders. In addition, we believe that equity grants with a time-based vesting feature promote executive retention because this feature incentivizes our executive officers to remain in our employment during the vesting period. Accordingly, our board of directors periodically reviews the equity incentive compensation of our named executive officers and from time to time may grant equity incentive awards to them in the form of stock options.

We typically grant stock option awards at the start of employment to each executive and our other employees. We award our stock options on the date our board of directors approves the grant. We set the option exercise price and grant date fair value based on our per-share estimated valuation on the date of grant. For grants in connection with initial employment, vesting begins on the initial date of employment. To date, we have not maintained a practice of granting additional equity on an annual basis, but we have retained discretion to provide additional targeted grants in certain circumstances.

On December 17, 2018, we granted Dr. Volck non-qualified stock options to purchase 293,000 shares of our common stock with an exercise price of \$21.76, as a material inducement to her provision of services to us. These stock options vest over four years from the grant date, with 25% of the shares underlying the stock option vesting on December 17, 2019 and the remaining 75% vesting in equal monthly installments over the following three-year period. These stock options, while granted outside of our 2018 Stock Option and Incentive Plan, are subject to the terms of our 2018 Stock Option and Incentive Plan.

401(k) Plan

We maintain a tax-qualified retirement plan that provides eligible employees with an opportunity to save for retirement on a tax-advantaged basis. All participants' interests in their contributions are 100% vested when contributed. Contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. The retirement plan is intended to qualify under Section 401(a) of the Internal Revenue Code of 1986, as amended, or the Code. Matching contributions to the plan are made at the discretion of our board of directors.

Employment arrangements with our named executive officers

We have entered into employment agreements with each of Geoff MacKay and Birgitte Volck, M.D., Ph.D. which set forth the initial terms and conditions of each executive's employment with us, including base salary, target annual bonus opportunity and standard employee benefit plan participation. These employment agreements provide for "at will" employment. We have also entered into a consulting agreement with Dr. Volck and a separation and release agreement with each of Nerissa Kreher, M.D., our former Chief Medical Officer and Katina Dorton, our former Chief Financial Officer. The material terms of the employment agreements, consulting agreement and separation agreements with our 2018 named executive officers are described below. The terms "change of control," "cause" and "good reason" referred to below are defined in the applicable employment agreement or separation agreement.

Employment Agreement with Geoff MacKay

Effective upon the closing of our initial public offering in June 2018, we entered into an amended employment agreement with Geoff MacKay, our President and Chief Executive Officer. Under the terms of the employment agreement, Mr. MacKay is entitled to receive an annual base salary of \$500,000 and an annual target bonus of 50% of his annual base salary based upon our board of directors' assessment of Mr. MacKay's performance and our attainment of targeted goals as set by the board of directors in its sole discretion. Mr. MacKay also previously entered into a Confidentiality and IP Assignment Agreement with us, the terms of which are incorporated into his employment agreement.

Mr. MacKay's employment agreement provides that, in the event that his employment is terminated by us without "cause" or Mr. MacKay resigned with "good reason," subject to the execution and effectiveness of a separation agreement and release, he will be entitled to receive (i) an amount equal to 100% of his base salary, provided that Mr. MacKay has not breached any of the confidentiality, noncompetition or cooperation provisions set forth in, or incorporated into, the new employment agreement, payable on our normal payroll cycle, and (ii) reimbursement of COBRA premiums for health benefit coverage, up to an amount equal to the monthly employer contribution that we would have made to provide health insurance to Mr. MacKay had he remained employed with us for up to 12 months. Additionally, all stock options and other stock based awards held by Mr. MacKay that would have vested if he had remained employed by us for an additional 12 months following the date of termination will vest and become exercisable or non-forfeitable as of the date of termination.

Under the employment agreement, in the event of a "change in control" all stock options and other stock-based awards granted to Mr. MacKay at least 12 months prior to the effective date of the employment agreement shall accelerate and become fully exercisable or non-forfeitable immediately prior to the change in control. In addition, in the event that Mr. MacKay is terminated by us without "cause" or Mr. MacKay resigns for "good reason" within three months prior to or 18 months after a change in control, subject to the execution and effectiveness of a separation agreement and release, he will be entitled to receive (i) an amount equal to 150% of the sum of his base salary plus target bonus for that year, and (ii) reimbursement of COBRA premiums for health benefit coverage, up to an amount equal to the monthly employer contribution that we would have made to provide health insurance to Mr. MacKay had he remained employed with us for up to 18 months. Additionally, all then unvested stock options and other stock-based awards granted to Mr. MacKay will vest and become exercisable or non-forfeitable as of the date of termination.

Employment Agreement with Nerissa Kreher, M.D.

Effective upon the closing of our initial public offering in June 2018, we entered into an employment agreement with Dr. Nerissa Kreher, our then Chief Medical Officer. Under the terms of the employment agreement, Dr. Kreher was entitled to receive an annual base salary of \$365,650 and an annual target bonus of 25% of her annual base salary based upon our board of directors' assessment of Dr. Kreher's performance and our attainment of targeted goals as set by the board of directors in its sole discretion. In August 2018, our Compensation Committee agreed to increase Dr. Kreher's annual bonus target to 35% of her base salary. Dr. Kreher also previously entered into a Confidentiality and IP Assignment Agreement with us, the terms of which were incorporated into her employment agreement.

Dr. Kreher's employment agreement provided that, in the event that her employment was terminated by us without "cause" or Dr. Kreher resigned with "good reason," subject to the execution and effectiveness of a separation agreement and release, she would be entitled to receive (i) an amount equal to 75% of her base salary, provided that Dr. Kreher had not breached any of the confidentiality, noncompetition or cooperation provisions set forth in, or incorporated into, the new employment agreement, payable on our normal payroll cycle, and (ii) reimbursement of COBRA premiums for health benefit coverage, up to an amount equal to the monthly employer contribution that we would have made to provide health insurance to Dr. Kreher had she remained employed with us for up to nine months. Additionally, all stock options and other stock based awards held by

Dr. Kreher that would have vested if she had remained employed by us for an additional nine months following the date of termination would vest and become exercisable or non-forfeitable as of the date of termination.

Under the employment agreement, in the event of a “change in control” all stock options and other stock-based awards granted to Dr. Kreher at least 12 months prior to the effective date of the employment agreement would accelerate and become fully exercisable or non-forfeitable immediately prior to the change in control. In addition, in the event that Dr. Kreher was terminated by us without “cause” or Dr. Kreher resigned for “good reason” within three months prior to or 18 months after a change in control, subject to the execution and effectiveness of a separation agreement and release, she would be entitled to receive (i) an amount equal to 100% of the sum of her base salary, plus target bonus for that year, and (ii) reimbursement of COBRA premiums for health benefit coverage, up to an amount equal to the monthly employer contribution that we would have made to provide health insurance to Dr. Kreher had she remained employed with us for up to 12 months. Additionally, all then unvested stock options and other stock-based awards granted to Dr. Kreher would vest and become exercisable or non-forfeitable as of the date of termination.

Separation Agreement and Release with Nerissa Kreher

On January 10, 2019, we entered into a separation agreement and release with Nerissa Kreher, M.D., our former Chief Medical Officer. Under the separation agreement, in exchange for granting and not revoking a customary release agreement, during the time Dr. Kreher served as a senior advisor to us, Dr. Kreher (i) continued to receive her most recent base salary of \$365,650, (ii) remained eligible to participate in our group employee benefit plans as a regular full-time employee and (iii) continued to vest in her outstanding equity awards. Dr. Kreher served as a senior advisor to our company until March 6, 2019, at which time her employment with us ended voluntarily (and was not terminated by us for “cause”). At the termination of her employment, and upon the execution and effectiveness of an updated release, Dr. Kreher became entitled to receive (a) an amount equal to nine months of her base salary, payable in substantially equal installments in accordance with our payroll practice over nine months, provided that Dr. Kreher has not breached any of her continuing obligations, (b) her effective target annual bonus of 30% of her base salary for 2018 or the incentive compensation that she otherwise would have received for 2018, whichever is greater and (c) a monthly cash payment for nine months in an amount equal to the monthly employer contribution that we would have made to provide health insurance to Dr. Kreher had she remained employed by us. Additionally, as of Dr. Kreher’s last date of employment, all time-based equity awards held by Dr. Kreher that would have vested had Dr. Kreher remained employed by us for an additional nine months following that date vested and became exercisable or non-forfeitable.

Employment Agreement with Katina Dorton

Effective upon the closing of our initial public offering in June 2018, we entered into an employment agreement with Katina Dorton, our then Chief Financial Officer. Under the terms of the employment agreement, Ms. Dorton was entitled to receive an annual base salary of \$360,000 and an annual target bonus of 40% of her annual base salary based upon our board of directors’ assessment of Ms. Dorton’s performance and our attainment of targeted goals as set by the board of directors in its sole discretion. Ms. Dorton also previously entered into a Confidentiality and IP Assignment Agreement with us, the terms of which were incorporated into her employment agreement.

Pursuant to Ms. Dorton’s employment agreement, Ms. Dorton was entitled to reimbursement of temporary living and travel expenses in connection with traveling to and temporary living in Massachusetts and/or to a one-time relocation payment, together totaling up to an aggregate of \$100,000.

Ms. Dorton’s employment agreement provided that, in the event that her employment was terminated by us without “cause” or Ms. Dorton resigned with “good reason,” subject to the execution and effectiveness of a separation agreement and release, she would be entitled to receive (i) an amount equal to 75% of her base salary, provided that Ms. Dorton had not breached any of the confidentiality, noncompetition or cooperation provisions

set forth in, or incorporated into, the new employment agreement, payable on our normal payroll cycle, and (ii) reimbursement of COBRA premiums for health benefit coverage, up to an amount equal to the monthly employer contribution that we would have made to provide health insurance to Ms. Dorton had she remained employed with us for up to nine months. Additionally, all stock options and other stock based awards held by Ms. Dorton that would have vested if she had remained employed by us for an additional nine months following the date of termination will vest and become exercisable or non-forfeitable as of the date of termination.

Under the employment agreement, in the event of a “change in control” all stock options and other stock-based awards granted to Ms. Dorton at least 12 months prior to the effective date of the employment agreement would accelerate and become fully exercisable or non-forfeitable immediately prior to the change in control. In addition, in the event that Ms. Dorton was terminated by us without “cause” or Ms. Dorton resigned for “good reason” within three months prior to or 18 months after a change in control, subject to the execution and effectiveness of a separation agreement and release, she would be entitled to receive (i) an amount equal to 100% of the sum of her base salary plus target bonus for that year, and (ii) reimbursement of COBRA premiums for health benefit coverage, up to an amount equal to the monthly employer contribution that we would have made to provide health insurance to Ms. Dorton had she remained employed with us for up to 12 months. Additionally, all then unvested stock options and other stock-based awards granted to Ms. Dorton would vest and become exercisable or non-forfeitable as of the date of termination.

Separation Agreement and Release with Katina Dorton

On January 8, 2019, we entered into a separation agreement and release with Katina Dorton, our former Chief Financial Officer. Under the separation agreement, in exchange for granting and not revoking a customary release agreement, Ms. Dorton became entitled to receive (i) an amount equal to nine months of her base salary of \$360,000, payable in substantially equal installments in accordance with our payroll practice over nine months, provided that Ms. Dorton has not breached any of her continuing obligations, (ii) her target annual bonus of 40% of her base salary for 2018 or the incentive compensation that she otherwise would have received for 2018, whichever is greater, (iii) reimbursement of COBRA premiums for health benefit coverage for up to nine months, in an amount equal to the monthly employer contribution that we would have made to provide health insurance to Ms. Dorton had she remained employed with us and (iv) certain costs associated with Ms. Dorton’s apartment in Boston, Massachusetts, less applicable deductions and withholdings. Additionally, all time-based equity awards held by Ms. Dorton that would have vested had Ms. Dorton remained employed by us for an additional nine months following December 17, 2018 vested and became exercisable or non-forfeitable.

Consulting Agreement and Employment Agreement with Birgitte Volck

On December 17, 2018, we entered into a consulting agreement with Dr. Volck, our President of Research and Development. Under the terms of the consulting agreement, we agreed to pay consulting fees of approximately \$38,000 per month to Dr. Volck and reimburse pre-approved expenses incurred in connection with the provision of Dr. Volck’s services. The consulting agreement will terminate on the terms described therein, including upon Dr. Volck’s receipt of an O-1 visa allowing for employment in the United States, upon the one-year anniversary of the consulting agreement, and upon five days’ prior written notice from either us or Dr. Volck to the other.

On December 17, 2018, we also entered into an employment agreement with Dr. Volck which will be effective immediately following the termination of her consulting agreement, provided that Dr. Volck has received an O-1 visa allowing for her employment in the United States. Under the terms of the employment agreement, Dr. Volck will be entitled to receive an annual base salary of \$455,000 and an annual target bonus of 50% of her annual base salary based upon our board of directors’ assessment of Dr. Volck’s performance and our attainment of targeted goals as set by the board of directors in its sole discretion. The employment agreement also provides for certain expense reimbursement benefits in connection with housing, travel from Denmark to the United States, tax advice, legal fees in connection with obtaining her visa and certain other living expenses. In addition, as a material inducement to her entry into the employment agreement, Dr. Volck was granted an option to purchase

293,000 shares of our common stock, which will vest over four years, with 25% of the shares vesting on the one-year anniversary of Dr. Volck's start date and the remaining shares vesting in thirty-six equal monthly installments thereafter, subject to Dr. Volck's continued service to our company through the applicable vesting date. This equity award was granted outside of our current stockholder-approved stock option and incentive plans and is intended to qualify as an "employment inducement award" within the meaning of Nasdaq Listing Rule 5635(c)(4). Dr. Volck also entered into an Employee Confidentiality, Assignment and Noncompetition Agreement with us, the terms of which are incorporated into her employment agreement.

Dr. Volck's employment agreement provides that, in the event that her employment is terminated by us without "cause" or Dr. Volck resigns with "good reason", subject to the execution and effectiveness of a separation agreement and release, she will be entitled to receive (i) an amount equal to 75% of her base salary less any amount paid to Dr. Volck in the same calendar year under the Employee Confidentiality, Assignment and Noncompetition Agreement, provided that Dr. Volck has not breached any of the confidentiality, noncompetition or cooperation provisions set forth in, or incorporated into, the employment agreement, payable on our normal payroll cycle, and (ii) reimbursement of COBRA premiums for health benefit coverage, up to an amount equal to the monthly employer contribution that we would have made to provide health insurance to Dr. Volck had she remained employed with us for up to nine months. Additionally, all stock options and other stock based awards held by Dr. Volck that would have vested if she had remained employed by us for an additional nine months following the date of termination will vest and become exercisable or non-forfeitable as of the date of termination.

Under the employment agreement, in the event of a "change in control" all stock options and other stock-based awards granted to Dr. Volck at least 12 months prior to the effective date of the employment agreement shall accelerate and become fully exercisable or non-forfeitable immediately prior to the change in control. In addition, in the event that Dr. Volck is terminated by us without "cause" or Dr. Volck resigns for "good reason" within three months prior to or 18 months after a "change in control", subject to the execution and effectiveness of a separation agreement and release, she will be entitled to receive (i) an amount equal to 100% of the sum of her base salary plus target bonus for that year, less any amount paid to Dr. Volck in the same calendar year under the Employee Confidentiality, Assignment and Noncompetition Agreement, and (ii) reimbursement of COBRA premiums for health benefit coverage, up to an amount equal to the monthly employer contribution that we would have made to provide health insurance to Dr. Volck had she remained employed with us for up to 12 months. Additionally, all then unvested stock options and other stock-based awards granted to Dr. Volck will vest and become exercisable or non-forfeitable as of the date of termination.

Outstanding Equity Awards at 2018 Fiscal Year-End

The following table sets forth information concerning outstanding equity awards held by our 2018 named executive officers as of December 31, 2018. With the exception of Dr. Volck's option award, all equity awards set forth in the table below were granted under either our Amended and Restated 2015 Stock Option and Grant Plan or our 2018 Stock Option and Incentive Plan.

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock that Have Not Vested (#)	Market Value of Shares or Units that Have Not Vested (\$) ⁽¹³⁾
Geoff MacKay	136,132	105,881 ⁽¹⁾	0.41	4/12/2026	36,302 ⁽⁴⁾	604,428
	17,249	28,750 ⁽²⁾	0.91	6/12/2027	—	—
	—	308,189 ⁽³⁾	5.00	3/15/2028	—	—
Birgitte Volck, M.D., Ph.D.	—	293,000 ⁽⁵⁾	21.76	12/16/2028	—	—
Katina Dorton ⁽¹¹⁾	69,159 ⁽⁶⁾	— ⁽⁸⁾	0.91	3/17/2019	—	—
	31,353 ⁽⁷⁾	— ⁽⁹⁾	5.00	3/17/2019	—	—
Nerissa Kreher, M.D. ⁽¹²⁾	46,536	39,378 ⁽¹⁰⁾	1.20	10/24/2026	—	—
	7,397	17,232 ⁽²⁾	0.91	6/12/2027	—	—
	—	59,932 ⁽³⁾	5.00	3/15/2028	—	—

- (1) The shares underlying this stock option vest as follows: 25% of the shares vested on July 1, 2017 and the remainder vest in equal quarterly installments until the option is fully vested on July 1, 2020, subject to the continued employment of the executive officer through each such vesting date.
- (2) The shares underlying this stock option vest as follows: 25% of the shares vested on June 13, 2018 and the remainder vest in equal monthly installments until the option is fully vested on June 13, 2021, subject to the continued employment of the executive officer through each such vesting date.
- (3) The shares underlying this stock option vest as follows: 25% of the shares vested on March 16, 2019 and the remainder vest in equal monthly installments until the option is fully vested on March 16, 2022, subject to the continued employment of the executive officer through each such vesting date.
- (4) On November 27, 2015, Mr. MacKay transferred his ownership of 72,604 shares to each of his two children, 18,151 shares subject to each transfer remain unvested and subject to vesting as of December 31, 2018, based on Mr. MacKay's continued service to our company through each such vesting date.
- (5) The shares underlying this stock option vest as follows: 25% of the shares vested on December 17, 2019 and the remainder vest in equal monthly installments until the option is fully vested on December 17, 2022, subject to the continued employment of the executive officer through each such vesting date.
- (6) This amount includes accelerated vesting of 29,685 shares pursuant to Ms. Dorton's separation agreement dated December 17, 2018, which are exercisable through March 17, 2019.
- (7) This amount includes accelerated vesting of 31,353 shares pursuant to Ms. Dorton's separation agreement dated December 17, 2018, which are exercisable through March 17, 2019.
- (8) In connection with Ms. Dorton's separation agreement dated December 17, 2018, 79,159 shares were cancelled.
- (9) In connection with Ms. Dorton's separation agreement dated December 17, 2018, 52,255 shares were cancelled.
- (10) The shares underlying this stock option vest as follows: 25% of the shares vested on October 3, 2017 and the remainder vest in equal monthly installments until the option is fully vested on October 3, 2020, subject to the continued employment of the executive officer.
- (11) Ms. Dorton departed her position as an executive officer of our company in December 2018.
- (12) Dr. Kreher departed her position as an executive officer of our company in December 2018 and until March 6, 2019 served as a senior advisor to our company. All time-based equity awards held by Dr. Kreher that would have vested had Dr. Kreher remained employed by us for an additional nine months following March 6, 2019 vested and became exercisable or non-forfeitable as of such date.
- (13) This column represents the fair market value of our common stock as of December 31, 2018, the last trading day of 2018, which was \$16.65 per share.

Equity Compensation Plan Information

The following table sets forth information as of December 31, 2018 regarding shares of common stock that may be issued under our equity compensation plans, consisting of our 2015 Amended and Restated Stock Option and Grant Plan, or the 2015 Plan, our 2018 Stock Option and Incentive Plan and our 2018 Employee Stock Purchase Plan. As of the closing of our initial public offering in June 2018, no additional equity awards are made under our 2015 Plan.

<u>Plan Category</u>	<u>Number of Shares of Common Stock to be Issued Upon Exercise of Outstanding Options</u>	<u>Weighted-Average Exercise Price of Outstanding Options</u>	<u>Number of Shares of Common Stock Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in The First Column)</u>
Equity compensation plans approved by security holders ⁽¹⁾	1,871,101	\$ 5.56	608,761 ⁽²⁾
Equity compensation plans not approved by security holders ⁽³⁾	293,000	\$21.76	—
Total	2,164,101	\$ 7.75	608,761 ⁽²⁾

- (1) Includes the following plans: our Amended and Restated 2015 Stock Option and Grant Plan, our 2018 Stock Option and Incentive Plan and our 2018 Employee Stock Purchase Plan.
- (2) Excludes (i) 952,265 additional shares of common stock that may be issued pursuant to our 2018 Stock Option and Incentive Plan pursuant to an automatic annual increase effective on January 1, 2019 and (ii) 238,066 additional shares of common stock that may be issued pursuant to our 2018 Employee Stock Purchase Plan pursuant to an annual increase effective on January 1, 2019.
- (3) In December 2018, we granted non-qualified stock options to Dr. Volck as an inducement award in connection with her commencement of providing services to the Company. These stock options were an inducement grant issued outside of our stockholder approved equity compensation plans in accordance with Nasdaq Listing Rule 5635(c)(4).

Compensation Risk Assessment

We believe that although a portion of the compensation provided to our executive officers and other employees is performance-based, our executive compensation program does not encourage excessive or unnecessary risk taking. Our compensation programs are designed to encourage our executive officers and other employees to remain focused on both short-term and long-term strategic goals, in particular in connection with our pay-for-performance compensation philosophy. As a result, we do not believe that our compensation programs are reasonably likely to have a material adverse effect on us.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Certain Relationships and Transactions

Other than the compensation agreements and other arrangements described under “Executive compensation” and “Director compensation” in this proxy statement and the transactions described below, since January 1, 2017, there has not been and there is not currently proposed, any transaction or series of similar transactions to which we were, or will be, a party in which the amount involved exceeded, or will exceed, \$120,000 (or, if less, 1% of the average of our total assets amounts at December 31, 2017 and 2018) and in which any director, executive officer, holder of five percent or more of any class of our 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.

Participation in our Initial Public Offering

Certain of our existing stockholders, including stockholders affiliated with certain of our directors, purchased an aggregate of approximately \$25 million in shares of our common stock in our initial public offering in June 2018 at the initial public offering price. The underwriting discount for the shares sold to such stockholders in the initial public offering was the same as the underwriting discount for the shares sold to the public.

License Agreements and Related Agreements with University Health Network

On January 27, 2016, we entered into an exclusive license agreement with University Health Network, or UHN, pursuant to which UHN granted us an exclusive license to certain intellectual property rights relating to Interleukin-12 proteins, or IL-12. We entered into an amendment to this agreement on September 28, 2017. Under this agreement, we paid C\$264,000 to UHN upon execution of the agreement which consisted of an upfront license fee and reimbursement of certain patent expenses. We are also obligated to pay an annual license fee as well as payments in connection with the achievement of certain performance and development milestones for an aggregate total of up to C\$19.275 million in milestone payments. Additionally, we will pay a low to mid-single digit royalty percentage on annual sales of licensed products, and a low double digit percentage of all sublicensing revenue. For the years ended December 31, 2018 and 2017, we paid \$41,000 and \$151,000 to UHN under this agreement, respectively. Pursuant to this agreement, UHN also purchased 1,161,665 shares of our common stock for an aggregate purchase price of \$480.00 under a stock purchase agreement. Under the terms of the stock purchase agreement, we paid to UHN \$2 million in July 2018 following the completion of our initial public offering in June 2018, or our IPO.

On January 27, 2016, we entered into an option agreement with UHN pursuant to which UHN granted us an exclusive option to enter into an exclusive license under certain intellectual property rights related to Fabry disease. On November 4, 2016, we executed our option and entered into an exclusive license agreement with UHN. Under this agreement, UHN granted us an exclusive worldwide license under certain intellectual property rights and a non-exclusive worldwide license under certain know-how, in each case subject to certain retained rights, to develop, commercialize and sell products for use in the treatment of Fabry disease. Under the terms of the agreement, we paid to UHN a one-time upfront fee of C\$75,000 and are obligated to pay an annual maintenance fee until the first sale of a licensed product in certain markets. We are also required to make payments to UHN in connection with the achievement of certain development and regulatory milestones in an aggregate amount of up to C\$2.45 million, as well as royalties on a country-by-country basis of a low to mid-single digit percentage on annual sales of licensed products and a lower single digit royalty in certain circumstances. Additionally, we will pay a low double digit percentage of all sublicensing revenue. We also made a philanthropic commitment to donate funds to organizations for the benefit of the Canadian Fabry community in an amount equal to a low double digit percentage of our royalty payments and regulatory milestone payments, up to a maximum of C\$500,000 in any calendar year. For the years ended December 31, 2018 and 2017, we paid \$15,000 and \$16,000 to UHN in connection with this agreement, respectively, which consisted of our license option fee, the upfront fee and maintenance fees. In connection with this agreement, we

also entered into (i) a letter agreement with UHN on November 4, 2016, pursuant to which we agreed to provide certain funding and costs and expenses associated with a clinical trial conducted by UHN for the treatment of Fabry disease, and (ii) a letter agreement with UHN on June 2, 2017, pursuant to which we agreed to provide additional funding and costs and expenses associated with the clinical trial conducted by UHN for the treatment of Fabry disease.

In connection with the above agreements, we have also entered into two separate sponsored research agreements with UHN, one in March 2017 and one in July 2017. The March 2017 agreement was amended and restated and subsequently amended in November 2017. Pursuant to each of these sponsored research agreements, we agreed to fund certain research projects related to IL-12 and Fabry disease, including salaries of certain researchers of up to C\$200,000 and C\$164,652 under the March 2017 and July 2017 agreements, respectively.

At the time we entered into each of the above agreements with UHN, UHN was a greater than 5% beneficial owner of our outstanding capital stock. Additionally, Christopher Paige is a senior scientist at UHN and is currently a member of our board of directors. As an inventor of certain of the intellectual property rights related to IL-12 that we license from UHN, Dr. Paige is entitled to a portion of the consideration that we pay to UHN pursuant to the IL-12 license agreement.

Private Placements of Securities

Series A Preferred Stock Financing

In July 2016, we sold 5,714,286 shares of Series A preferred stock, at a price of \$1.3125 per share, pursuant to a stock purchase agreement entered into with the investors. In March 2017, we amended certain provisions of our Series A preferred stock purchase agreement and issued a preferred stock dividend in the form of 3,720,864 additional shares of Series A preferred stock to such investors, which effectively repriced the outstanding shares of Series A preferred stock and changed the purchase price for future shares of Series A preferred stock to be sold under the Series A preferred stock purchase agreement to \$0.7949 per share. Concurrent with the amendment, we issued 4,403,070 additional shares of Series A preferred stock at a purchase price of \$0.7949 per share. In October 2017, we issued 17,612,279 additional shares of Series A preferred stock in a subsequent closing, at a purchase price of \$0.7949 per share.

The following table summarizes purchases of our Series A preferred stock and the issuance of the preferred stock dividend referenced above by related persons:

<u>STOCKHOLDER</u>	<u>SHARES OF SERIES A PREFERRED STOCK⁽¹⁾</u>	<u>TOTAL PURCHASE PRICE</u>
Atlas Venture Fund X, L.P. ⁽²⁾	12,580,199	\$9,999,999.53
Entities affiliated with SV Life Sciences		
Fund ⁽³⁾⁽⁴⁾	9,435,150	\$7,500,000.91
Clarus Life Sciences III, L.P. ⁽⁵⁾	9,435,150	\$7,500,000.91

- (1) All shares of Series A Preferred Stock automatically converted into common stock on a 4.132-for-1 basis on June 25, 2018.
- (2) Bruce Booth, D.Phil., a partner at Atlas Venture, is a member of our board of directors. Atlas Venture is a holder of five percent or more of our capital stock.
- (3) Joshua Resnick, M.D., a former partner at SV Health Investors, is a former member of our board of directors. SV Health Investors is a holder of five percent or more of our capital stock.
- (4) Consists of (1) 9,122,809 shares of Series A preferred stock held by SV Life Sciences Fund VI, L.P. and (2) 312,341 shares of Series A preferred stock held by SV Life Sciences Fund VI, Strategic Partners L.P.
- (5) Scott G. Requadt, J.D., MBA, a Managing Director at Clarus, is a former member of our board of directors. Clarus is a holder of five percent or more of our capital stock.

Series B Preferred Stock Financing

In January 2018, we sold an aggregate of 28,519,322 shares of our Series B preferred stock at a purchase price of \$2.1389 per share, pursuant to agreements entered into with the investors. The following table summarizes purchases of our Series B preferred stock by related persons:

<u>STOCKHOLDER</u>	<u>SHARES OF SERIES B PREFERRED STOCK⁽¹⁾</u>	<u>TOTAL PURCHASE PRICE</u>
Atlas Venture Fund X, L.P. ⁽²⁾	3,740,239	\$ 7,999,997
Entities affiliated with SV Life Sciences Fund ⁽³⁾⁽⁴⁾	1,870,119	\$ 3,999,998
Clarus Life Sciences III, L.P. ⁽⁵⁾	2,805,179	\$ 5,999,997
Citadel Multi-Strategy Equities Master Fund Ltd. ⁽⁶⁾	5,610,360	\$11,999,999
Cormorant Private Healthcare Fund I, LP ⁽⁷⁾⁽⁸⁾	5,610,360	\$11,999,999

- (1) All shares of Series B Preferred Stock automatically converted into common stock on a 4.132-for-1 basis on June 25, 2018.
- (2) Bruce Booth, D.Phil., a partner at Atlas Venture, is a member of our board of directors. Atlas Venture is a holder of five percent or more of our capital stock.
- (3) Joshua Resnick, M.D., a former partner at SV Health Investors, is a former member of our board of directors. SV Health Investors, is a holder of five percent or more of our capital stock.
- (4) Consists of (i) 1,808,211 shares of Series A preferred stock held by SV Life Sciences Fund VI, L.P. and (ii) 61,908 shares of Series A preferred stock held by SV Life Sciences Fund VI, Strategic Partners L.P.
- (5) Scott G. Requadt, J.D., MBA, a Managing Director at Clarus, is a former member of our board of directors. Clarus is a holder of five percent or more of our capital stock.
- (6) Citadel Multi-Strategy Equities Master Fund Ltd is a holder of five percent or more of our capital stock
- (7) Cormorant Private Healthcare Fund I, LP is a holder of five percent or more of our capital stock
- (8) Consists of (i) 4,366,543 shares, all purchased and received by Cormorant Private Healthcare Fund I, L.P. (ii) 1,005,938 shares, all purchased and received by Cormorant Global Healthcare Master Fund, L.P. and (iii) 237,879 shares, all purchased and received by CRMA SPV, L.P.

Agreements with Stockholders

In connection with our Series Seed, Series A and Series B preferred stock financings, we 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 our preferred stock and certain holders of our common stock. These stockholder agreements terminated upon the closing of our IPO, except for the registration rights granted under our investors' rights agreement.

Indemnification Agreements

We have entered into and in the future plan to enter into agreements to indemnify our directors and executive officers. These agreements, among other things, require us to indemnify these individuals for certain expenses (including attorneys' fees), judgments, fines and settlement amounts reasonably incurred by such person in any action or proceeding, including any action by or in our right, on account of any services undertaken by such person on behalf of our company or that person's status as a member of our board of directors to the maximum extent allowed under Delaware law.

Related person transaction policy

Our board of directors reviews and approves transactions with directors, officers and holders of five percent or more of our voting securities and their affiliates, each a related party. We adopted a written related party transactions policy that such transactions must be approved by our Audit Committee. Pursuant to this policy, the Audit Committee has the primary responsibility for reviewing and approving or disapproving “related party transactions,” which are transactions between us and related persons in which the aggregate amount involved exceeds or may be expected to exceed \$120,000 and in which a related person has or will have a direct or indirect material interest. For purposes of this policy, a related person will be defined as a director, executive officer, nominee for director, or greater than 5% beneficial owner of our common stock, in each case since the beginning of the most recently completed year, and their immediate family members.

PRINCIPAL STOCKHOLDERS

The following table sets forth information, to the extent known by us or ascertainable from public filings, with respect to the beneficial ownership of our common stock as of April 15, 2019 by:

- each of our directors;
- each of our named executive officers;
- all of our directors and executive officers as a group; and
- each person, or group of affiliated persons, who is known by us to be a beneficial owner of greater-than-5.0% of our common stock.

The column entitled “Shares Beneficially Owned” is based on a total of 24,097,632 shares of our common stock outstanding as of April 15, 2019.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our common stock. Shares of our common stock subject to options that are currently exercisable or exercisable within 60 days of April 15, 2019 are considered outstanding and beneficially owned by the person holding the options for the purpose of calculating the percentage ownership of that person but not for the purpose of calculating the percentage ownership of any other person. Except as otherwise noted, the persons and entities in this table have sole voting and investing power with respect to all of the shares of our common stock beneficially owned by them, subject to community property laws, where applicable. Except as otherwise indicated in the table below, addresses of named beneficial owners are in care of AVROBIO, Inc., One Kendall Square, Building 300, Suite 201, Cambridge, Massachusetts 02139.

<u>Name and address of beneficial owner</u>	<u>Shares beneficially owned</u>	
	<u>Number</u>	<u>Percentage</u>
5% Stockholders:		
Atlas Venture Fund X, L.P. ⁽¹⁾	4,756,478	19.74%
Clarus Life Sciences III, L.P. ⁽²⁾	2,962,325	12.29%
Affiliates of SV Life Sciences Fund ⁽³⁾	1,930,704	8.01%
Citadel Multi-Strategy Equities Master Fund Ltd ⁽⁴⁾	1,357,783	5.63%
Affiliates of Cormorant ⁽⁵⁾	1,357,784	5.63%
Named Executive Officers and Directors:		
Geoff MacKay ⁽⁶⁾	821,057	3.37%
Katina Dorton	100,268	*
Nerissa Kreher, M.D. ⁽⁷⁾	85,449	*
Birgitte Volck, M.D., Ph.D.	—	—
Bruce Booth, D.Phil.	—	—
Ian T. Clark ⁽⁸⁾	28,125	*
Phillip Donenberg ⁽⁹⁾	5,727	*
Annalisa Jenkins, M.B.B.S., F.R.C.P. ⁽¹⁰⁾	11,523	*
Christopher Paige, Ph.D.	277,512	1.15%
Philip J. Vickers, Ph.D. ⁽¹¹⁾	2,603	*
All executive officers and directors as a group (10 persons)⁽¹²⁾	1,146,547	4.70%

* Represents beneficial ownership of less than one percent.

(1) Based solely on a Schedule 13G filed with the SEC on February 13, 2019. All shares are held directly by Atlas Venture Fund X, L.P. (“Atlas Venture X”). Atlas Venture Associates X, L.P., (“AVA X LP”), is the general partner of Atlas Venture X, and Atlas Venture Associates X, LLC (“AVA X LLC”), is the general partner of AVA X LP. Bruce Booth is a member of AVA X LLC and a member of our board of directors. Dr. Booth disclaims beneficial ownership of such shares, except to the extent of his proportionate pecuniary

interest therein, if any. The address for Atlas Venture X is 400 Technology Square, 10th Floor, Cambridge, MA 02139.

- (2) Based solely on a Schedule 13D filed with the SEC on January 11, 2019, consists of 2,962,325 shares of common stock held by Clarus Lifesciences III, L.P., or Clarus. Clarus Ventures III GP, L.P. is the sole general partner of Clarus. Blackstone Clarus III L.L.C. is the sole general partner of Clarus Ventures III GP, L.P. The sole member of Blackstone Clarus III L.L.C. is Blackstone Holdings II L.P. The sole general partner of Blackstone Holdings II L.P. is Blackstone Holdings I/II GP Inc. The controlling shareholder of Blackstone Holdings I/II GP Inc. is The Blackstone Group L.P. The sole general partner of The Blackstone Group L.P. is Blackstone Group Management L.L.C. Blackstone Group Management L.L.C. is wholly-owned by The Blackstone Group L.P.'s senior managing directors and controlled by its founder, Stephen A. Schwarzman. Each of Clarus Ventures III GP, L.P., Blackstone Clarus III L.L.C., Blackstone Holdings II L.P., Blackstone Holdings I/II GP Inc., The Blackstone Group L.P., Blackstone Group Management L.L.C. and Stephen A. Schwarzman may be deemed to beneficially own the common stock beneficially owned by Clarus and each disclaim beneficial ownership of all shares held by Clarus. The address for the entities is 101 Main Street, Suite 1210, Cambridge, MA 02142.
- (3) Based solely on a Schedule 13D filed with the SEC on January 25, 2019, consists of 1,866,791 shares of common stock held by SV Life Sciences Fund VI, L.P. a Delaware limited partnership ("SVLS VI LP") and 63,913 shares of common stock held by SV Life Sciences Fund VI Strategic Partners, L.P. a Delaware limited partnership ("Strategic Partners"). SV Life Sciences Fund VI (GP), L.P., a Delaware limited partnership ("SVLS VI GP") and general partner of SVLS VI LP and Strategic Partners. SVLSF VI, LLC, a Delaware limited liability company and general partner of SVLS VI GP. SVLS VI LP, Strategic Partners, SVLS VI GP and SVLSF VI, LLC disclaim beneficial ownership of the shares owned directly by SVLS VI LP and Strategic Partners except to the extent of any pecuniary interest therein. The address for each of the entities and individuals listed above is One Boston Place, Suite 3900, 201 Washington Street, Boston, Massachusetts 02108.
- (4) Based solely on a Schedule 13G filed with the SEC on February 14, 2019, consists of 1,357,783 shares of common stock owned by Citadel Multi-Strategy Equity Master Fund Ltd., a Cayman Islands limited company ("CM"), and Citadel Securities LLC, a Delaware limited liability company ("Citadel Securities"). Citadel Advisors LLC ("Citadel Advisors") is the portfolio manager for CM. Citadel Advisors Holdings LP ("CAH") is the sole member of Citadel Advisors. Citadel GP LLC ("CGP") is the general partner of CAH. CALC III LP, a Delaware limited partnership ("CALC3"), is the non-member manager of Citadel Securities. Citadel Securities GP LLC, a Delaware limited liability company ("CSGP"), is the general partner of CALC3. Kenneth Griffin is the President and Chief Executive Officer of CGP, and owns a controlling interest in CGP and CSGP. The address for each of the entities and the individual listed above is 131 S. Dearborn Street, 32nd Floor, Chicago, IL 60603.
- (5) Based solely on a Schedule 13G filed with the SEC on February 14, 2019, consists of 1,357,784 shares of common stock held by entities affiliated with Cormorant Asset Management, LP ("CAM"). Shares reported for CAM represent shares which are beneficially owned by Cormorant Global Healthcare Master Fund, LP (the "Master Fund"), Cormorant Private Healthcare Fund I, LP ("Fund I") and a managed account (the "Account"). Cormorant Global Healthcare GP, LLC and Cormorant Private Healthcare GP, LLC serve as the general partners of the Master Fund and Fund I, respectively. CAM serves as the investment manager to the Master Fund, Fund I and the Account. Bihua Chen serves as the managing member of Cormorant Global Healthcare GP, LLC, Cormorant Private Healthcare GP, LLC and the general partner of CAM. Each of Master Fund, Cormorant Global Healthcare GP, LLC, Fund I, Cormorant Private Healthcare GP, LLC, CAM and Bihua Chen disclaim beneficial ownership of the shares reported except to the extent of its or his pecuniary interest therein. The address of each of the entities and individuals listed above is 200 Clarendon Street, 52nd Floor, Boston, MA 02116.
- (6) Consists of (i) 409,523 shares of common stock, (ii) 72,604 shares of common stock held by Mac MacKay, (iii) 72,604 shares of common stock held by Kali MacKay and (iv) 266,326 shares of common stock issuable upon exercise of options within 60 days of April 15, 2019. Mr. MacKay is the father of Mac MacKay and Kali MacKay. Mr. MacKay may be deemed to have voting and investment power over shares held by Mac MacKay and Kali MacKay.

- (7) Consists of (i) 10,913 shares of common stock and (ii) 74,536 shares of common stock issuable upon exercise of options within 60 days of April 15, 2019.
- (8) Consists of 28,125 shares of common stock issuable upon exercise of options within 60 days of April 15, 2019.
- (9) Consists of 5,727 shares of common stock issuable upon exercise of options within 60 days of April 15, 2019.
- (10) Consists of 11,523 shares of common stock issuable upon exercise of options within 60 days of April 15, 2019.
- (11) Consists of 2,603 shares of common stock issuable upon exercise of options within 60 days of April 15, 2019.
- (12) Includes an aggregate of 314,304 shares issuable upon exercise of stock options within 60 days of April 15, 2019 held by our executive officers and directors as a group.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors, executive officers, and persons holding more than 10% of our common stock to report their initial ownership of the common stock and other equity securities and any changes in that ownership in reports that must be filed with the SEC. The SEC has designated specific deadlines for these reports, and we must identify in this proxy statement those persons who did not file these reports when due.

Based solely on a review of reports furnished to us, or written representations from reporting persons, we believe all directors, executive officers, and 10% owners timely filed all reports regarding transactions in our securities required to be filed for 2018 by Section 16(a) under the Exchange Act.

REPORT OF THE AUDIT COMMITTEE

The Audit Committee is appointed by the board of directors to assist the board of directors in fulfilling its oversight responsibilities with respect to (1) the integrity of AVROBIO's consolidated financial statements and financial reporting process and systems of internal controls regarding finance, accounting, and compliance with legal and regulatory requirements, (2) the qualifications, independence, and performance of AVROBIO's independent registered public accounting firm, (3) the performance of AVROBIO's internal audit function, if any, and (4) other matters as set forth in the charter of the Audit Committee approved by the board of directors.

Management is responsible for the preparation of AVROBIO's consolidated financial statements and the financial reporting process, including its system of internal control over financial reporting and its disclosure controls and procedures. The independent registered public accounting firm is responsible for performing an audit of AVROBIO's consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (PCAOB) and issuing a report thereon. The Audit Committee's responsibility is to monitor and oversee these processes.

In connection with these responsibilities, the Audit Committee reviewed and discussed with management and the independent registered public accounting firm the audited consolidated financial statements of AVROBIO for the fiscal year ended December 31, 2018. The Audit Committee also discussed with the independent registered public accounting firm the matters required to be discussed by the PCAOB's Auditing Standard No. 1301, *Communication with Audit Committees*. In addition, the Audit Committee received written communications from the independent registered public accounting firm confirming their independence as required by the applicable requirements of the PCAOB and has discussed with the independent registered public accounting firm their independence.

Based on the reviews and discussions referred to above, the Audit Committee recommended to the board of directors that the audited consolidated financial statements of AVROBIO be included in AVROBIO's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, that was filed with the U.S. Securities and Exchange Commission (SEC). The information contained in this report shall not be deemed to be (1) "soliciting material," (2) "filed" with the SEC, (3) subject to Regulations 14A or 14C of the Exchange Act, or (4) subject to the liabilities of Section 18 of the Exchange Act. This report shall not be deemed incorporated by reference into any of our other filings under the Exchange Act or the Securities Act, except to the extent that we specifically incorporate it by reference into such filing.

THE AUDIT COMMITTEE OF THE BOARD OF
DIRECTORS OF AVROBIO, INC.

Phillip Donenberg, Chairperson
Annalisa Jenkins, M.B.B.S., F.R.C.P.
Christopher Paige, Ph.D.

April 26, 2019

HOUSEHOLDING

Some banks, brokers and other nominee record holders may be participating in the practice of “householding” proxy statements and annual reports. This means that only one copy of our documents, including the annual report to stockholders and proxy statement, may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of either document to you upon written or oral request to AVROBIO, Inc., One Kendall Square, Building 300, Suite 201, Cambridge, Massachusetts 02139, Attention: Corporate Secretary, telephone: 617-752-7011. If you want to receive separate copies of the proxy statement or annual report to stockholders in the future, or if you are receiving multiple copies and would like to receive only one copy per household, you should contact your bank, broker or other nominee record holder, or you may contact us at the above address and phone number.

STOCKHOLDER PROPOSALS

A stockholder who would like to have a proposal considered for inclusion in our 2020 proxy statement must submit the proposal in accordance with the procedures outlined in Rule 14a-8 of the Exchange Act so that it is received by us no later than December 28, 2019. However, if the date of the 2020 Annual Meeting of Stockholders is changed by more than 30 days from the date of the previous year’s meeting, then the deadline is a reasonable time before we begin to print and send our proxy statement for the 2020 Annual Meeting of Stockholders. SEC rules set standards for eligibility and specify the types of stockholder proposals that may be excluded from a proxy statement. Stockholder proposals should be addressed to AVROBIO, Inc., One Kendall Square, Building 300, Suite 201, Cambridge, Massachusetts 02139, Attention: Corporate Secretary.

If a stockholder wishes to propose a nomination of persons for election to our board of directors or present a proposal at an annual meeting but does not wish to have the proposal considered for inclusion in our proxy statement and proxy card, our bylaws establish an advance notice procedure for such nominations and proposals. Stockholders at an annual meeting may only consider proposals or nominations specified in the notice of meeting or brought before the meeting by or at the direction of the board of directors or by a stockholder of record on the record date for the meeting, who is entitled to vote at the meeting and who has delivered timely notice in proper form to our Corporate Secretary of the stockholder’s intention to bring such business before the meeting.

The required notice must be in writing and received by our Corporate Secretary at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary of the preceding year’s annual meeting. However, in the event that the date of the annual meeting is advanced by more than 30 days, or delayed by more than 60 days, from the first anniversary of the preceding year’s annual meeting, a stockholder’s notice must be so received no earlier than the 120th day prior to such annual meeting and not later than the close of business on the later of (A) the 90th day prior to such annual meeting and (B) the tenth day following the day on which public announcement of the date of such meeting is first made. For stockholder proposals to be brought before the 2020 Annual Meeting of Stockholders, the required notice must be received by our Corporate Secretary at our principal executive offices no earlier than February 12, 2020 and no later than March 13, 2020. Stockholder proposals and the required notice should be addressed to AVROBIO, Inc., One Kendall Square, Building 300, Suite 201, Cambridge, Massachusetts 02139, Attention: Corporate Secretary.

OTHER MATTERS

Our board of directors does not know of any other matters to be brought before the Annual Meeting. If any other matters not mentioned in this proxy statement are properly brought before the meeting, the individuals named in the enclosed proxy intend to use their discretionary voting authority under the proxy to vote the proxy in accordance with their best judgment on those matters.

