



AVROBIO, INC.
100 Technology Square, 6th Floor
Cambridge, Massachusetts 02139

NOTICE OF 2023 ANNUAL MEETING OF STOCKHOLDERS
To be held June 6, 2023

Notice is hereby given that the 2023 Annual Meeting of Stockholders, or Annual Meeting, of AVROBIO, Inc. will be held on Tuesday, June 6, 2023 at 9:00 a.m. Eastern Time. We will utilize a virtual format for our Annual Meeting, and stockholders may attend the virtual Annual Meeting by visiting www.proxydocs.com/AVRO. The purpose of the Annual Meeting is the following:

1. to elect two class II directors to our board of directors, to serve until the 2026 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, 2023; 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 II directors nominated by the board of directors.

Only AVROBIO, Inc. stockholders of record at the close of business on April 10, 2023 will be entitled to vote during the Annual Meeting and any adjournment or postponement thereof. In order to attend, you must register in advance at www.proxydocs.com/AVRO prior to the deadline of June 4, 2023 at 5:00 p.m. Eastern Time. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the meeting and will permit you to submit questions. You will not be able to attend the 2023 Annual Meeting in person.

Your vote is important. Whether or not you are able to attend the virtual Annual Meeting, 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 virtual Annual Meeting. You may vote by submitting your proxy via the Internet, by telephone, or by mail (if you received paper copies of the proxy materials) by following the instructions on the proxy card or voting instruction card. Voting over the Internet or by telephone, written proxy or voting instruction card will ensure your representation at the virtual Annual Meeting regardless of whether you attend.

By order of the Board of Directors,

A handwritten signature in black ink that reads "Bruce Booth".

Bruce Booth
Chairman of the Board of Directors

Cambridge, Massachusetts
May 1, 2023

Table of Contents

	<u>Page</u>
GENERAL INFORMATION	2
PROPOSAL NO. 1 – ELECTION OF CLASS II DIRECTORS	6
PROPOSAL NO. 2 – RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG LLP AS AVROBIO, INC.’S INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2023	12
CORPORATE GOVERNANCE	14
CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS	30
PRINCIPAL STOCKHOLDERS	32
REPORT OF THE AUDIT COMMITTEE	34
HOUSEHOLDING	35
STOCKHOLDER PROPOSALS.....	36
OTHER MATTERS.....	37



**AVROBIO, INC.
100 Technology Square, 6th Floor
Cambridge, Massachusetts 02139**

**PROXY STATEMENT
FOR THE 2023 ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD JUNE 6, 2023**

This proxy statement contains information about the 2023 Annual Meeting of Stockholders, or the Annual Meeting, of AVROBIO, Inc., which will be held on Tuesday, June 6, 2023 at 9:00 a.m. Eastern Time. The 2023 Annual Meeting will be a virtual stockholders meeting held at www.proxydocs.com/AVRO. 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,” “Company,” “we,” “us,” and “our” refer to AVROBIO, Inc. The mailing address of our principal executive offices is 100 Technology Square, 6th Floor, 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 proxy tabulator written notice to that effect. Such written notice should be delivered by mail to Proxy Tabulator for AVROBIO, Inc., c/o Mediant Communications, P.O. Box 8016, Cary, NC 27512-9903.

We made this proxy statement and our Annual Report to Stockholders for the fiscal year ended December 31, 2022 available to stockholders on or about May 5, 2023.

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, or 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, or 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 June 2018 initial public offering; (ii) the last day of the fiscal year in which our total annual gross revenue is equal to or more than \$1.235 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, or SEC. Even after we are no longer an “emerging growth company,” we may remain a “smaller reporting company.”

This proxy statement and our 2022 Annual Report to Stockholders are available for viewing, printing and downloading at www.proxydocs.com/AVRO.

A copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2022, as filed with the SEC, except for exhibits, will be furnished without charge to any stockholder upon written request to AVROBIO, Inc., 100 Technology Square, 6th Floor, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. This proxy statement and our Annual Report on Form 10-K for the fiscal year ended December 31, 2022 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 2023 ANNUAL MEETING OF STOCKHOLDERS**

GENERAL INFORMATION

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

On or about May 5, 2023, we will begin mailing our proxy materials, including the Notice of 2023 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 2022 Annual Report to Stockholders, or 2022 Annual Report.

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 10, 2023.

How many votes can be cast by all stockholders?

There were 44,102,953 shares of our common stock, par value \$0.0001 per share, outstanding on April 10, 2023, 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 10, 2023.

Where will the Annual Meeting be held this year?

The Annual Meeting will be a virtual stockholders meeting. We are committed to ensuring that stockholders will be afforded the same rights and opportunities to participate as they would at an in-person meeting. In order to attend the virtual Annual Meeting and vote your shares, you must register in advance at www.proxydocs.com/AVRO prior to the deadline of June 4, 2023 at 5:00 p.m. Eastern Time. There will not be an in-person meeting.

How do I vote?

If you are a stockholder of record, there are several ways for you to vote your shares.

- *By Internet or Telephone prior to the Annual Meeting.* You can vote by proxy over the Internet (www.proxypush.com/AVRO) or by telephone (1-866-430-8290) by following the instructions provided in the proxy materials. In order to be counted, proxies submitted by Internet or by telephone must be received by the cutoff time of 11:59 p.m. Eastern Time on June 5, 2023.
- *By Mail prior to the Annual Meeting.* If you requested printed copies of the proxy materials by mail, you can vote by mailing your proxy as described in the proxy materials. Proxies submitted by mail must be received before the start of the Annual Meeting.
- *Online during the Annual Meeting.* You may vote during the virtual Annual Meeting by following the instructions available at www.proxydocs.com/AVRO. If you hold your shares through a bank or broker and wish to vote at the virtual Annual Meeting, you must obtain a valid proxy from the firm that holds your shares. In order to attend the virtual Annual Meeting and vote your shares, you must register in advance at www.proxydocs.com/AVRO prior to the deadline of June 4, 2023 at 5:00 p.m. Eastern Time.

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 can I submit a question for the Annual Meeting?

Stockholders of record will have the opportunity to submit questions in advance of the meeting. To attend the Annual Meeting, you must register in advance at www.proxydocs.com/AVRO prior to the deadline of June 4, 2023 at 5:00 p.m. Eastern Time. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the meeting and will permit you to submit questions in advance of the meeting. All questions presented should relate directly to the agenda item under discussion. We reserve the right to exclude questions regarding topics that are not pertinent to meeting matters or company business in the chairperson's sole and absolute discretion. If we receive substantially similar questions, we may group such questions together and provide a single response to avoid repetition.

How do I revoke my proxy?

You may revoke your proxy by (1) following the instructions in the proxy materials and entering a new vote by mail that we receive before the start of the Annual Meeting or by telephone or over the Internet by the cutoff time of 11:59 p.m. Eastern Time on June 5, 2023, (2) attending and voting at the virtual Annual Meeting (although attendance at the virtual 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 proxy tabulator prior to the taking of the vote at the Annual Meeting. Such written notice of revocation or subsequent proxy card should be delivered by mail to Proxy Tabulator for AVROBIO, Inc., c/o Mediant Communications, P.O. Box 8016, Cary, NC 27512-9903.

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 By-laws, 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 such 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 our proxy materials and soliciting votes. If you choose to view any of our 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 Donnelley Financial Solutions to assist us in the distribution of proxy materials. 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. For stockholder proposals to be brought before the 2024 Annual Meeting of Stockholders, the required notice must be received by our Corporate Secretary at our principal executive offices no earlier than February 7, 2024 and no later than March 8, 2024. Stockholder proposals and the required notice should be addressed to AVROBIO, Inc., 100 Technology Square, 6th Floor, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. We encourage any such proposal to also be submitted via email to CorporateSecretary@AVROBIO.com.

In addition, any stockholder proposal intended to be included in the proxy statement for the next annual meeting of our stockholders in 2024 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 January 6, 2024. If the date of the 2024 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.

To comply with the universal proxy rules, stockholders who intend to solicit proxies in support of director nominees other than the Company’s nominees must provide notice that sets forth the information required by Rule 14a-19 under the Exchange Act no later than April 7, 2024. Stockholder proposals and the required notice should be addressed to AVROBIO, Inc., 100 Technology Square, 6th Floor, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. We encourage any such proposal to also be submitted via email to CorporateSecretary@AVROBIO.com.

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 II 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 Gail Farfel, Ph.D., Christopher Paige, Ph.D. and Philip Vickers, Ph.D., and their terms will expire at the annual meeting of stockholders to be held in 2025;
- 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; and
- the class III directors are Bruce Booth, D.Phil. and Phillip Donenberg, and their terms will expire at the annual meeting of stockholders to be held in 2024.

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 Ian Clark and Annalisa Jenkins, M.B.B.S., F.R.C.P. for election as the class II 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.

Our board of directors believes that a diversity of experience and other characteristics, such as gender, race, ethnicity, culture, nationality and sexual orientation, are an important part of its makeup. Accordingly, in 2021, the board of directors amended our Corporate Governance Guidelines to provide that when identifying prospective director candidates, the Nominating and Corporate Governance Committee may: (i) consider candidates with diverse backgrounds in terms of knowledge, experience, skills and other characteristics in the context of the needs of the Company at that point in time with a view to creating a board with a diversity of experience and perspectives; and (ii) include in the pool from which director candidates are identified candidates with a diversity of gender, race, ethnicity, culture, nationality or sexual orientation (and any third party engaged to identify candidates for such pool may be asked to include such candidates). 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.

The Nasdaq Stock Market LLC, or Nasdaq, listing requirements require each listed company to have, or explain why it does not have, at least two Diverse (as defined in Nasdaq Rule 5605(f)) directors on the board, including at least one Diverse director who self-identifies as female and one Diverse director who self-identifies as part of an underrepresented minority or LGBTQ+. However, smaller reporting companies, such as AVROBIO, may satisfy this requirement by having two female directors. The current composition of our board of directors is in compliance with the Nasdaq diversity requirement. The table below provides certain highlights of the composition of our board members and nominees based on their voluntary self-identified demographic characteristics. The categories “Female,” “LGBTQ+,” and “Two or More Races or Ethnicities” as used in the below table have the definitions as provided in Nasdaq Rule 5605(f).

Board Diversity Matrix (As of May 1, 2023)				
Board Size:				
7 Directors				
Gender:	Male	Female	Non-Binary	Gender Undisclosed
Number of directors based on gender identity	5	2	-	-
Number of directors who identify in any of the categories below:				
African American or Black	-	-	-	-
Alaskan Native or American Indian	-	-	-	-
Asian	-	-	-	-
Hispanic or Latinx	-	-	-	-
Native Hawaiian or Pacific Islander	-	-	-	-
White	5	2	-	-
Two or More Races or Ethnicities	-	-	-	-
LGBTQ+	-	-	-	-
Undisclosed	-	-	-	-

Nominees for Election as Class II Directors

The following table and narrative information identifies our nominees for class II directors, and sets forth their principal occupation and business experience during the last five years and their ages as of May 1, 2023.

Name	Positions and Offices Held with AVROBIO	Director Since	Age
Ian Clark	Director	2018	62
Annalisa Jenkins, M.B.B.S., F.R.C.P.	Director	2018	57

Ian Clark has served as a member of our board of directors since January 2018. From 2010 to 2016, 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. 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 Corvus Pharmaceuticals, Inc. (Nasdaq: CRVS), Takeda Pharmaceutical Company Limited (NYSE: TAK), Olema Pharmaceuticals, Inc. (Nasdaq: OLMA), where he serves as chairman, and Guardant Health, Inc. (Nasdaq: GH), where he also serves as the lead independent director. Mr. Clark serves as an advisor to KKR. Mr. Clark previously served on the board of directors of Agios Pharmaceuticals, Forty Seven, Inc., Shire plc, Kite Pharma, and TerraVia (formerly Solazyme). He also previously served on the board of directors of the Biotechnology Industry Organization (BIO), as a member of the economic advisory council of the Federal Reserve Bank of San Francisco, 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., and as a member of the strategic priorities board of BioFulcrum, an initiative within the Gladstone Institutes. 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 of directors 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 president and 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 currently serves on the board of Genomics England, a UK government entity dedicated to advancing the 100,000 Genomes Project. Dr. Jenkins also serves on the board of directors of Oncimmune Holdings plc (LSE: ONC), Affimed N.V. (Nasdaq: AFMD), Compass Pathways (Nasdaq: CMPS), Mereo Biopharma Group plc (Nasdaq: MREO), and a number of privately held biotechnology and life science companies, and serves as a trustee to a number of non-profit organizations. Dr. Jenkins previously served on the board of numerous biotechnology and life science companies, including AgeX Therapeutics, Inc. (NYSE American: AGE), Silence Therapeutics, Ardelyx, Inc., OncoSec Medical Incorporated, and Sensyne Health plc., and she served as a committee member of the science board to the FDA, which advised leadership on complex scientific and technical issues. 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 of directors based on her industry experience in the field in which we operate and her executive experience with companies in our industry.

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 Ian Clark and Annalisa Jenkins as the class II directors, to serve for a three-year term ending at the annual meeting of stockholders to be held in 2026.

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 May 1, 2023.

Name	Positions and Offices Held with AVROBIO	Director Since	Class and Year in Which Term Will Expire	Age
Gail Farfel, Ph.D.	Director	2020	Class I—2025	59
Christopher Paige, Ph.D.	Director	2016	Class I—2025	70
Philip J. Vickers, Ph.D.	Director	2019	Class I—2025	63
Bruce Booth, Ph.D.	Director	2016	Class III—2024	49
Phillip B. Donenberg	Director	2018	Class III—2024	62

Class I Directors (Term Expires at 2025 Annual Meeting)

Gail M. Farfel, Ph.D. has served as a member of our board of directors since October 2020. Dr. Farfel is the chief executive officer of ProMIS Neurosciences, Inc., a biopharmaceutical company, and has served in this role since September 2022. From June 2015 to September 2022, Dr. Farfel was executive vice president and chief development officer of Zogenix Inc., a biopharmaceutical company. Previously, Dr. Farfel was chief clinical and regulatory officer of Marinus Pharmaceuticals (Nasdaq: MRNS), establishing and overseeing clinical, medical and regulatory strategies for adult and pediatric seizure disorders, including a pediatric epileptic orphan disease. She also previously served as vice president, therapeutic area head for neuroscience clinical development and medical affairs at Novartis Pharmaceuticals Corporation, where she oversaw a portfolio of products for multiple sclerosis, Alzheimer’s disease and Parkinson’s disease. Dr. Farfel serves on the board of directors of Durect Corporation (Nasdaq: DRRX). She previously served on the board of directors of Zogenix International Ltd., a wholly owned subsidiary of Zogenix, Inc. (Nasdaq: ZGNX). Dr Farfel holds a Ph.D. in neuropsychopharmacology from the University of Chicago, where she received the Ginsburg Prize for Dissertation Excellence and is a director on the Medical and Biological Sciences Alumni Board. She also holds a B.S in biochemistry from the University of Virginia. We

believe that Dr. Farfel is qualified to serve on our board of directors because of her scientific, executive, and industry experience in the field in which we operate.

Christopher Paige, Ph.D. has served as a member of our board of directors since January 2016. Dr. Paige is a professor in the departments of medical biophysics and immunology at the University of Toronto and has served in that role since 1987. He also holds the position of Emeritus Senior Scientist at University Health Network (UHN) after having served as a senior scientist at UHN from 1987 to 2021. From 1997 to October 2016, he served as the vice president, research of UHN. 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 also has experience serving on the board of directors of privately held companies. 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 of directors 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 was the chief executive officer of Faze Medicines, a biotechnology company from January 2021 to November 2022. From November 2017 until December 2020, Dr. Vickers served as the president and chief executive officer and a member of the board of directors of Northern Biologics Inc., a biotechnology company. From June 2013 until June 2017, Dr. Vickers served as global head of research and development and a member of the executive committee of Shire plc, 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 senior vice president, 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 & Co., Inc., Pfizer Inc., Boehringer-Ingelheim International GmbH and Resolvix Pharmaceuticals, Inc. Dr. Vickers serves on the board of directors of Revance Therapeutics, Inc., or Revance (Nasdaq: RVNC), a biotechnology company, and will continue to serve on the Revance board until the Revance 2023 annual meeting. Dr. Vickers also serves 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 of directors because of his scientific, executive, and industry experience in the field in which we operate.

Class III Directors (Term Expires at 2024 Annual Meeting)

Bruce Booth, D.Phil. has served as the chairperson of our board of directors since February 2016. Dr. Booth joined Atlas Venture in 2005, and currently serves as general 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 is chairman and co-founder of Kymera Therapeutics, Inc. (Nasdaq: KYMR), chairman of Vigil Neuroscience (Nasdaq: VIGL), and serves on the board of Magenta Therapeutics, Inc. (Nasdaq: MGTA), all of which are biotechnology companies. He also serves on the board of several privately held companies. From February 2018 until July 2020, Dr. Booth served as chairperson of the board of directors of Unum Therapeutics Inc. (Nasdaq: UMRX), now called Cogent Biosciences (Nasdaq: COGT); from February 2017 until December 2018, Dr. Booth served as independent chairperson of the board of directors of miRagen Therapeutics, Inc. (Nasdaq: MGEN), now called Viridian Therapeutics, Inc (Nasdaq: VRDN); and from August 2006 until June 2018, Dr. Booth served on the board of directors of Zafgen, Inc. (Nasdaq: ZFGN), now called Larimar Therapeutics, Inc. (Nasdaq: LRMR). 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. Mr. Donenberg served as senior vice president and chief financial officer of Jaguar Gene Therapy, LLC, a privately held early-stage gene therapy company from February 2020 to March 2023. 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. (now a Novartis company), a gene therapy company, as senior vice president and chief financial officer from October 2017 to June 2018 and as vice president, corporate controller 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 chief financial officer 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 currently serves on the board of directors and as audit committee chair of Taysha Gene Therapies, Inc. (Nasdaq: TSHA), a gene therapy company, and 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 current executive officers who are not directors, and sets forth their current positions at AVROBIO and their ages as of May 1, 2023.

Name	Position Held with AVROBIO	Officer Since	Age
Erik Ostrowski	President, Interim Chief Executive Officer, Chief Financial Officer and Treasurer	2019	50
Steven Avruch	Chief Legal Officer and Secretary	2019	63
Azadeh Golipour	Chief Technology Officer	2022	44
Deanna Petersen	Chief Business Officer	2020	61
Essra Ridha, M.D., MRCP, FFPM	Chief Medical Officer	2021	40

Steven Avruch has been our Chief Legal Officer and Secretary since March 2020 and previously served as our Vice President, General Counsel and Secretary from January 2019 to March 2020. 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.

Azadeh Golipour, Ph.D. has been our Chief Technology Officer since January 2022. Prior to that she was SVP, Portfolio Planning and Program Management from October 2021 to January 2022. From July 2016 through October 2021 Dr. Golipour held positions of increasing responsibility at our Company, including: SVP, CMC Strategy & Manufacturing; VP, Manufacturing Operations; Senior Director, Manufacturing Operations; and Director, Manufacturing Operations. Dr. Golipour received a Ph.D. in molecular genetics from University of Toronto (Canada) and has published multiple articles, including two first-author articles in the journal Cell, Stem Cell and one article in the journal Nature. Dr. Golipour's articles on reprogramming stem cells have been cited more than 1,000 times.

Erik Ostrowski has been our Chief Financial Officer and Treasurer since January 2019 and has also served as our President and Interim Chief Executive Officer since May 1, 2023. From June 2014 to December 2018, Mr. Ostrowski served as the chief financial officer of Summit Therapeutics plc., a biotechnology company. Prior to that, he served as vice president of finance at Organogenesis Inc., a biotechnology company, from July 2010 to June 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). Mr. Ostrowski has served on the board of directors of Faron Pharmaceuticals Oy (AIM: FARN, First North: FARON) since April 2022. He received a B.S. in accounting and economics from Babson College and a M.B.A. from the University of Chicago Booth School of Business.

Deanna Petersen has been our Chief Business Officer since January 2016. Prior to joining our Company, from June 2009 to June 2015, Ms. Petersen was vice president business of development rare diseases at Shire plc. Prior to that, Ms. Petersen served as vice president of business development at Agenus Inc. from April 2002 to March 2009 and vice president of business development at Coley Pharmaceutical Group. Ms. Petersen received a B.S. degree in biology from Iowa State University and a M.B.A. from the University of Iowa.

Essra Ridha, M.D., M.R.C.P., F.F.P.M. has been our Chief Medical Officer since October 2021, and from April 2021 to July 2021, she was our Vice President, Clinical Development. Prior to joining our Company, from June 2019 to February 2021, Dr. Ridha was Senior Medical Director at Sangamo Therapeutics, a biotechnology company, and before that, from March 2016 to December 2018, she served as Clinical Development Director at GlaxoSmithKline, a pharmaceutical company. From June 2014 to March 2016, Dr. Ridha worked as a medical expert at Bristol Myers Squibb Pharmaceuticals advising on late-stage clinical development, medical affairs, real-world evidence and health economics and outcomes research in cardiovascular medicine. Dr. Ridha is a member of the Royal College of Physicians of London, as well as a Fellow of the Faculty of Pharmaceutical Medicine. She was an expert panel member at the World Health Organization Expert Advisory Committee to develop Global Standards for the Governance and Oversight of Human Genome Editing. She earned her medical degrees from the Royal Free & University College London Medical School and earned her Bachelor of Science Neuroscience with Basic Medical Sciences, with honors, from University College London.

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, 2023**

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, 2023. 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, 2023. 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 virtual 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 years ended December 31, 2022 and December 31, 2021.

	2022	2021
Audit fees ⁽¹⁾	\$ 598,408	\$ 553,000
Audit-related fees	—	—
Tax fees ⁽²⁾	\$ 64,166	69,341
All other fees ⁽³⁾	3,600	3,600
Total fees	\$ 666,174	\$ 625,941

- (1) Audit fees consist of fees for professional services provided by Ernst & Young LLP for the audit of our annual financial statements, the review of interim consolidated financial statements and consultations on accounting matters directly related to the audit, and comfort letters, consents and assistance with and review of documents filed with the SEC.
- (2) Tax fees consist of fees for professional services in connection with tax compliance, tax planning, and tax advice, including the review and preparation of our federal, state and foreign income tax returns and requests for rulings or technical advice from tax authorities.
- (3) Other fees consist of aggregate fees billed for products and services provided by Ernst & Young LLP other than those fees disclosed above. For the year ended December 31, 2021, the other fees relate to our Ernst & Young research website membership.

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. The Audit Committee has delegated authority to the Chair of the Audit Committee to pre-approve services up to a designated amount. A summary of any new services pre-approved by the Chair is reported to the full Audit Committee in connection with its next scheduled meeting.

During our 2022 and 2021 fiscal years, no services were provided to us by Ernst & Young LLP other than in accordance with the pre-approval policies and procedures described above.

The Audit Committee meets with representatives of Ernst & Young LLP periodically, but no less than quarterly throughout the year. The Audit Committee reviews audit, non-audit and tax services rendered by and the performance of Ernst & Young LLP, as well as fees charged by Ernst & Young LLP for such services. In engaging Ernst & Young LLP for the services described above, the Audit Committee considered whether the provision of such services is compatible with maintaining Ernst & Young LLP's independence.

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, 2023.

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 of directors, 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 minimum 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.

In addition to the foregoing, the Nominating and Corporate Governance Committee will consider other facts and circumstances that it deems appropriate or advisable, as outlined in the Company's Corporate Governance Guidelines.

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., 100 Technology Square, 6th Floor, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. We encourage any such proposal to also be submitted via email to CorporateSecretary@AVROBIO.com. 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 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 Dr. Farfel, 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. Dr. Farfel is not an independent director under these rules because an immediate family member is employed by Ernst & Young LLP, our independent registered public accounting firm.

Board Committees

Our board of directors has established an Audit Committee, a Compensation Committee, a Nominating and Corporate Governance Committee and a Science & Technology 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, and the Science & Technology Committee, while not subject to specific SEC or Nasdaq rules, also operates under a charter. Each such committee reviews its respective charter at least annually. A current copy of the charter for each of the Audit Committee, Compensation Committee, Nominating and Corporate Governance Committee, and Science & Technology Committee is posted on the Investors & Media – 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, 2022, the Audit Committee met eight 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 and discussing 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, 2022, the Compensation Committee met six times. The Compensation Committee’s responsibilities include:

- annually reviewing and approving 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, reviewing and approving the proposed compensation for our chief executive officer, including (i) the cash compensation of our chief executive officer, (ii) grants and awards to our chief executive officer under equity-based plans, (iii) amendments to or extensions of our chief executive officer’s employment agreement or other similar arrangements, (iv) any severance or change in control arrangement, (v) any supplemental or retirement benefits, and (vi) any other compensation matters as may be directed by the Compensation Committee or our board of directors;
- annually evaluating the performance of, or reviewing our chief executive officer’s assessment of, our other executive officers in light of the corporate goals and objectives relevant to their compensation;
- reviewing and approving the cash compensation of our other executive officers;
- establishing and periodically reviewing any policies and programs concerning perquisite benefits and non-cash or other benefits for our executive officers;
- reviewing and establishing our overall management compensation, philosophy, and policy;
- reviewing our overall compensation policies and practices, and assessing whether any risks arising from such policies and practices are reasonably likely to have a material adverse effect on the Company;
- 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 with the board of directors corporate succession plans for our chief executive officer and our other key officers;
- 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 discussing with our board of directors management proposals to our stockholders as well as proposals received from our stockholders that relate to executive compensation matters;
- 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, Phillip Donenberg 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, 2022, the Nominating and Corporate Governance Committee met three times. 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.

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.

Science & Technology Committee

Philip Vickers, Bruce Booth, Gail Farfel, Annalisa Jenkins and Christopher Paige serve on the Science & Technology Committee, which is chaired by Dr. Vickers. During the fiscal year ended December 31, 2022, the Science & Technology Committee met three times. The Science & Technology Committee's responsibilities include:

- reviewing and advising the board of directors on our research and development, or R&D, programs and progress in achieving R&D goals and objectives;
- advising the board of directors on the scientific and R&D aspects of licensing, collaboration and acquisition transactions that require approval by the board of directors;
- overseeing management's exercise of its responsibility to assess and manage risks associated with our R&D activities, clinical development and intellectual property; and
- making any recommendations to the board of directors that the Science & Technology Committee deems appropriate on any areas within its responsibility, including where action or improvement is needed.

Board and Committee Meetings Attendance

The full board of directors met five times during 2022. During 2022, each member of the board of directors 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).

Director Attendance at Annual Meeting of Stockholders

We do not have a policy with regard to our board members' attendance at our annual meetings of stockholders, but all our directors attended the 2022 Annual Meeting of Stockholders which was held on June 8, 2022.

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 our executive officers, directors and designated employees and consultants from engaging in certain prohibited transactions, including short sales, purchases or sales of derivative securities or hedging transactions, the use of our securities as collateral in a margin account, and pledging of our securities.

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 Investors & Media – 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 chairperson 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 chairperson 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 chairperson, particularly as the board of directors' oversight responsibilities continue to grow. While our bylaws and our corporate governance guidelines do not require that our chairperson 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.

Generally, 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. However, at least annually management provides to the full board of directors an overview of potential risks to the Company, which is then updated and presented to the Audit Committee on a periodic (currently quarterly) basis. 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 chairperson 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 chairperson of our board of directors or Nominating and Corporate Governance Committee, by submitting a written communication to the attention of such director at the following address:

c/o AVROBIO, Inc.
100 Technology Square, 6th Floor
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 and establishes 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 annually establishes the board and committee evaluation process and

may determine to use an independent third party evaluation process from time to time in the future. For example, in 2020 the Company engaged an independent third-party consultant to interview board members on board performance and then provided feedback to the Nominating and Corporate Governance Committee for review and consideration.

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, 2022. 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 2022. We reimburse non-employee members of our board of directors for reasonable travel expenses. Mr. MacKay, our former President and Chief Executive Officer, did not receive any compensation for his service as a member of our board of directors in 2022. Mr. MacKay's compensation for service as an employee for fiscal year 2022 is presented in "Executive Compensation—Summary Compensation Table."

NAME	FEES EARNED OR PAID IN CASH (\$)	OPTION AWARDS (\$) ⁽¹⁾	TOTAL (\$)
Bruce Booth, D.Phil. ⁽²⁾	85,000	25,333	110,333
Ian Clark ⁽³⁾	50,000	25,333	75,333
Phillip Donenberg ⁽⁴⁾	59,000	25,333	84,333
Gail Farfel ⁽⁵⁾	47,500	25,333	72,833
Annalisa Jenkins, M.B.B.S., F.R.C.P. ⁽⁶⁾	63,000	25,333	88,333
Christopher Paige, Ph.D. ⁽⁷⁾	59,000	25,333	84,333
Philip Vickers, Ph.D. ⁽⁸⁾	60,000	25,333	85,333

- (1) Amounts reflect the grant date fair value of option awards granted or modified in 2022 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 9 of "Notes to Consolidated Financial Statements" in our Annual Report on Form 10-K filed with the SEC on March 23, 2023 for a discussion of assumptions made by us 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 director upon vesting of applicable awards.
- (2) As of December 31, 2022, Dr. Booth held options to purchase a total of 76,069 shares of our common stock, of which 41,113 shares were vested as of such date.
- (3) As of December 31, 2022, Mr. Clark held options to purchase an aggregate of 155,091 shares of our common stock, of which 120,135 shares were vested as of such date.
- (4) As of December 31, 2022, Mr. Donenberg held options to purchase an aggregate of 94,812 shares of our common stock, of which 59,856 shares were vested as of such date.
- (5) As of December 31, 2022, Dr. Farfel held options to purchase an aggregate of 80,394 shares of our common stock, of which 37,660 shares were vested as of such date.
- (6) As of December 31, 2022, Dr. Jenkins held options to purchase an aggregate of 115,580 shares of our common stock, of which 80,624 shares were vested as of such date.
- (7) As of December 31, 2022, Dr. Paige held options to purchase an aggregate of 76,069 shares of our common stock, of which 41,113 shares were vested as of such date.
- (8) As of December 31, 2022, Dr. Vickers held options to purchase an aggregate of 94,812 shares of our common stock, of which 59,856 shares were vested as of such date.

Non-Employee Director Compensation Policy

Our board of directors has 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. Pursuant to our director compensation policy, each director who is not an employee will be paid cash compensation as set forth below:

	NON- CHAIRPERSON MEMBER ANNUAL FEE (\$)	CHAIRPERSON ANNUAL FEE (\$)
Board of Directors	40,000	72,500
Audit Committee	7,500	15,000
Compensation Committee	5,000	10,000
Nominating and Corporate Governance Committee	4,000	8,000
Science and Technology Committee	7,500	15,000

Pursuant to our director compensation policy, each non-employee director first elected or appointed to serve on our board of directors is granted an option award for a number of shares of our common stock equivalent to 0.08% of the total number of common stock shares outstanding on the date of grant, which vests in 36 equal monthly installments over a three-year period, subject to the director's continued service through such vesting dates. In addition, on the date of each annual meeting of stockholders of our Company, each continuing non-employee director is now granted an option award for a number of shares of our common stock equivalent to 0.04% of the total number of common stock shares outstanding on the date of grant, which vests 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.

The board of directors and Compensation Committee, in consultation with the Company's compensation consultant, will continue to review non-employee director compensation from time to time.

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, 2022 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, 2022. We refer to these individuals as our 2022 named executive officers. Our 2022 named executive officers are:

- Geoff MacKay, our former Chief Executive Officer and President;
- Azadeh Golipour, our Chief Technology Officer; and
- Erik Ostrowski, our President, Interim Chief Executive Officer, Chief Financial Officer and Treasurer.

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, 2022. 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, 2021, 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⁾</u>	<u>Option awards (\$)⁽²⁾</u>	<u>Non-Equity Incentive Plan Compensation (\$)⁽³⁾</u>	<u>All other compensation (\$)</u>	<u>Total (\$)</u>
Geoff MacKay <i>Former President and Chief Executive Officer</i>	2022	580,000	431,000	710,700	303,050	12,542 ⁽⁴⁾	2,037,292
	2021	559,702	—	4,608,631	184,702	9,987 ⁽⁴⁾	5,363,022
Azadeh Golipour <i>Chief Technology Officer</i>	2022	353,000	141,000 ⁽⁵⁾	302,231	124,688	109,519 ⁽⁶⁾	1,026,038
Erik Ostrowski <i>President, Interim Chief Executive Officer, Chief Financial Officer and Treasurer</i>	2022	460,000	299,000	404,806	174,800	13,487 ⁽⁷⁾	1,352,093
	2021	439,254	—	2,150,945	105,421	9,987 ⁽⁷⁾	2,705,607

- (1) Except as otherwise provided, the 2022 amounts reflect discretionary retention bonuses granted in January 2022 and paid in two equal installments in June 2022 and December 2022.
- (2) Amounts reflect the grant date fair value of equity awards granted or modified in 2022 and 2021 in accordance with ASC 718. Such grant date fair value does not take into account any estimated forfeitures related to service-vesting conditions. See Note 9 of “Notes to Consolidated Financial Statements” in our Annual Report on Form 10-K filed with the SEC on March 23, 2023 for a discussion of assumptions made by us in determining the aggregate grant date fair value of our equity awards. These amounts do not correspond to the actual value that may be recognized by the 2022 named executive officers upon vesting of applicable awards.
- (3) Amounts reflect bonuses paid with respect to performance during the 2021 and 2022 fiscal year, as discussed under “Narrative to Summary Compensation Table – Annual Bonus.”
- (4) Amount reflects the dollar value of 401(k) contributions and life insurance premiums paid by us on behalf of Mr. MacKay.
- (5) Amount includes a \$10,000 lump sum payment, paid in accordance with Dr. Golipour’s employment agreement.
- (6) Amount reflects the dollar value of life insurance premiums, \$90,571 in relocation benefits paid by us on behalf of Dr. Golipour pursuant to her employment agreement, and a tax gross-up on such relocation benefits.
- (7) Amount reflects the dollar value of 401(k) contributions and life insurance premiums paid by us on behalf of Mr. Ostrowski.

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 reviews and approves the compensation to be paid to our chief executive officer and 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 chief executive officer and other executive officers without the chief executive officer or other members of management present. Frederic W. Cook & Co., Inc., or FW Cook, advised the board of directors and the Compensation Committee on certain compensation matters and decisions during fiscal year 2022. FW Cook served at the discretion of the Compensation Committee and did not provide any other services to the Company during fiscal year 2022 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 FW Cook is independent and that its respective work has not raised any conflicts of interest.

Annual Base Salary

We use base salaries to recognize the experience, skills, knowledge and responsibilities required of all our employees, including our 2022 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 2022 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 2022 the annual base salaries for each of Mr. MacKay, Dr. Golipour and Mr. Ostrowski were \$580,000, \$348,600, and \$460,000, respectively.

Annual Bonus

We currently have a Senior Executive Cash Incentive Bonus Plan, which is intended to reward our executive officers, including our named executive officers, for meeting objective and/or subjective performance goals for a fiscal year. From time to time, our board of directors or Compensation Committee may approve annual bonuses for our executive officers, including our named executive officers, based on individual performance, company performance or as otherwise determined appropriate.

Performance goals for each new fiscal year are approved by our board of directors. The Compensation Committee then reviews and determines the Company's performance and level of attainment of such goals following the completion of the applicable fiscal year. For 2022, annual bonuses were based on achievement of Company goals related to achievement of clinical program objectives and milestones, regulatory objectives, and manufacturing development objectives.

With respect to performance in fiscal year 2022, the target bonus opportunity as a percentage of base salary for each of Mr. MacKay, Dr. Golipour and Mr. Ostrowski were 55%, 35% and 40%, respectively.

Retention Bonuses

On January 4, 2022, our Compensation Committee approved one-time cash retention payments to all employees remaining with the Company following our workforce reduction, including our executive officers. Each retention bonus was payable in two equal installments in June 2022 and December 2022, provided that the employee had not resigned or provided notice of intention to resign and the Company had not terminated such employee's employment for cause or provided notice of intent to terminate such employee's employment for cause.

The aggregate retention bonuses granted to each of Mr. MacKay, Dr. Golipour and Mr. Ostrowski were \$431,000, \$131,000, and \$299,000, respectively.

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 or restricted stock units (RSUs).

We typically grant stock option awards to each of our executives in connection with their start of employment. Such stock option awards are typically granted on the first trading day of the month after the employees' start date. We set the option exercise price and grant date fair value based on the value of our common stock on the date of grant. For grants in connection with initial employment, vesting begins on the initial date of employment. For our employees other than our executives, in 2021 we began granting restricted stock units in connection with their start of employment, which are typically granted on the first trading day of the month after the employees' start date and begin vesting on their initial date of employment.

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, Azadeh Golipour and Erik Ostrowski 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. The material terms of the employment agreements with our 2022 named executive officers are described below. The terms "change of control," "cause" and "good reason" referred to below are defined in the applicable agreement.

Employment Agreement with Geoff MacKay

Prior to his resignation effective on May 1, 2023, Geoff MacKay, our former President and Chief Executive Officer, was party to an employment agreement with the Company. Effective upon the closing of our initial public offering in June 2018, we entered into an amended employment agreement with Mr. MacKay. Under the terms of the employment agreement, Mr. MacKay was entitled to receive an annual base salary of \$500,000, subject to annual review by our board of directors or Compensation Committee. In addition, Mr. MacKay was eligible to receive cash incentive compensation as determined by our board of directors or Compensation Committee from time to time, with an initial target annual bonus of 50% of his annual base salary. Mr. MacKay also previously entered into a Confidentiality and IP Assignment Agreement with us, the terms of which were incorporated into his employment agreement.

Mr. MacKay's employment agreement provided that, in the event that his employment is terminated by us without "cause" or by Mr. MacKay with "good reason" (as each term is defined in his employment agreement), subject to the execution and effectiveness of a separation agreement and release, he would have been entitled to receive (i) an amount equal to 100% of his base salary, provided that Mr. MacKay hadn't breached any of the confidentiality, noncompetition or cooperation provisions set forth in, or incorporated into, the new employment agreement, payable in equal installments over 12 months in accordance with our normal payroll cycle, and (ii) if Mr. MacKay was participating in our group health plan and elects COBRA health continuation, a monthly cash payment 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, and (iii) acceleration of vesting of 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.

Under the employment agreement, in the event of a "change in control" (as defined in his employment agreement) all time-based stock options and other stock-based awards granted to Mr. MacKay at least 12 months prior to the effective date of the employment agreement would have accelerated and become fully exercisable or non-forfeitable immediately prior to the change in control. In addition, in the event that Mr. MacKay's employment was terminated by us without "cause" or by Mr. MacKay for "good reason", in each case, 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 would have been entitled to receive (i) a lump sum amount equal to 150% of the sum of his current base salary (or his base salary in effect immediately prior to the change in

control if higher) plus his target bonus for that year, (ii) if Mr. MacKay was participating in our group health plan and elects COBRA health continuation, a monthly cash payment 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, and (iii) full acceleration of vesting of all time-based stock options and other time-based stock-based awards held by Mr. MacKay.

Employment Agreement with Azadeh Golipour

Azadeh Golipour was previously employed by the Company pursuant to an offer letter dated December 22, 2021. On January 26, 2022, we entered into an employment agreement with Azadeh Golipour which sets forth the terms of her employment as our Chief Technology Officer and supersedes her previous offer letter in the entirety. Under the terms of the employment agreement, Dr. Golipour is entitled to receive an annual base salary of \$342,000, subject to annual review by our board of directors or Compensation Committee. In addition, Dr. Golipour is eligible to receive cash incentive compensation as determined by our board of directors or Compensation Committee from time to time, with an initial target annual bonus of 35% of her annual base salary. In addition, Dr. Golipour is eligible to receive a reimbursement of relocation costs associated with relocating from Toronto, Ontario to Cambridge, Massachusetts (and tax gross-up on such reimbursements) and additional \$10,000 lump sum payment. Until Dr. Golipour is no longer treated as a Canadian tax resident, Dr. Golipour is also eligible to receive a \$25,000 annual travel allowance, a \$5,000 per month housing allowance for 2022, up to \$2,500 per year for tax advice and preparation, and tax gross-up on such payments and benefits. Dr. Golipour also entered into an Employee Confidentiality, Assignment and Noncompetition Agreement with us, dated January 24, 2022.

Dr. Golipour's employment agreement provides that, in the event that her employment is terminated by us without "cause" or by Dr. Golipour with "good reason" (as each term is defined in her employment agreement), 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 garden leave pay paid to Dr. Golipour in the same calendar year under the Employee Confidentiality, Assignment and Noncompetition Agreement, provided that Dr. Golipour has not breached any of the confidentiality, noncompetition or cooperation provisions set forth in, or incorporated into, the employment agreement, payable in equal installments over nine months in accordance with our normal payroll cycle, (ii) if Dr. Golipour was participating in our group health plan and elects COBRA health continuation, a monthly cash payment equal to the monthly employer contribution that we would have made to provide health insurance to Dr. Golipour had she remained employed with us for up to nine months, and (iii) acceleration of vesting of all stock options and other stock based awards held by Dr. Golipour that would have vested if she had remained employed by us for an additional nine months following the date of termination.

In addition, in the event that Dr. Golipour's employment is terminated by us without "cause" or by Dr. Golipour for "good reason," in each case, within three months prior to or 18 months after a "change in control" (as defined in her employment agreement), subject to the execution and effectiveness of a separation agreement and release, she will be entitled to receive (i) a lump sum amount equal to 100% of the sum of her current base salary (or her base salary in effect immediately prior to the change in control if higher) plus her target bonus for that year, less any amount paid to Dr. Golipour in the same calendar year under the Employee Confidentiality, Assignment and Noncompetition Agreement, (ii) if Dr. Golipour was participating in our group health plan and elects COBRA health continuation, a monthly cash payment equal to the monthly employer contribution that we would have made to provide health insurance to Dr. Golipour had she remained employed with us for up to 12 months, and (iii) full acceleration of vesting of all time-based stock options and other time-based stock-based awards held by Dr. Golipour

Employment Agreement with Erik Ostrowski

On December 17, 2018, we entered into an employment agreement with Erik Ostrowski for the position of Chief Financial Officer. Under the terms of the employment agreement, Mr. Ostrowski is entitled to receive an annual base salary of \$412,000, subject to annual review by our board of directors or Compensation Committee. In addition, Mr. Ostrowski is eligible to receive cash incentive compensation as determined by our board of directors or Compensation Committee from time to time, with an initial target annual bonus of 40% of his annual base salary. Mr. Ostrowski also received a signing bonus in the form of (i) a one-time cash bonus of \$170,000 and (ii) a restricted stock unit for 2,300 shares of our common stock, or the Signing Bonus Award. In addition, pursuant to the terms of the employment agreement, Mr. Ostrowski was granted an option to purchase 186,000 shares of our common stock, or the New Hire Award. Each of the Signing Bonus Award and the New Hire Award will vest over four years, with 25% of the shares vesting on the one-year anniversary of Mr. Ostrowski's start date and the remaining shares vesting in thirty-six equal monthly installments thereafter, subject to Mr. Ostrowski's continued service to our Company through the applicable vesting date. Mr. Ostrowski also entered into an Employee Confidentiality, Assignment and Noncompetition Agreement with us, the terms of which are incorporated into his employment agreement.

Mr. Ostrowski's employment agreement provides that, in the event that his employment is terminated by us without "cause" or by Mr. Ostrowski with "good reason" (as each term is defined in his employment agreement), subject to the execution and effectiveness of a separation agreement and release, he will be entitled to receive (i) an amount equal to 75% of his base salary less any amount paid to Mr. Ostrowski in the same calendar year under the Employee Confidentiality, Assignment and Noncompetition Agreement, provided that Mr. Ostrowski has not breached any of the confidentiality, noncompetition or cooperation provisions set forth in, or incorporated into, the employment agreement, payable in equal installments over nine months in accordance with our normal payroll cycle, (ii) if Mr. Ostrowski was participating in our group health plan and elects COBRA health continuation, a monthly cash payment equal to the monthly employer contribution that we would have made to provide health insurance to Mr. Ostrowski had he remained employed with us for up to nine months, and (iii) acceleration of vesting of all stock options and other stock based awards held by Mr. Ostrowski that would have vested if he had remained employed by us for an additional nine months following the date of termination.

Under the employment agreement, in the event of a "change in control" (as defined in his employment agreement) all time-based stock options and other stock-based awards granted to Mr. Ostrowski 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. Ostrowski's employment is terminated by us without "cause" or by Mr. Ostrowski for "good reason", in each case, 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) a lump sum amount equal to 100% of the sum of his current base salary (or his base salary in effect immediately prior to the change in control if higher) plus his target bonus for that year, less any amount paid to Mr. Ostrowski in the same calendar year under the Employee Confidentiality, Assignment and Noncompetition Agreement, (ii) if Mr. Ostrowski was participating in our group health plan and elects COBRA health continuation, a monthly cash payment equal to the monthly employer contribution that we would have made to provide health insurance to Mr. Ostrowski had he remained employed with us for up to 12 months, and (iii) full acceleration of vesting of all time-based stock options and other time-based stock-based awards held by Mr. Ostrowski.

Outstanding Equity Awards at 2022 Fiscal Year-End

The following table sets forth information concerning outstanding equity awards held by our 2022 named executive officers as of December 31, 2022. All equity awards set forth in the table below were granted under either our Amended and Restated 2015 Stock Option and Grant Plan, or the 2015 Plan, or our 2018 Stock Option and Incentive Plan, as amended or the 2018 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 (\$) ⁽¹⁾
Geoff MacKay	45,999	—	0.91	6/12/2027	—	—
	308,189	—	5.00	3/15/2028	—	—
	93,750	6,250 ⁽²⁾	15.00	3/4/2029	—	—
	200,956	91,344 ⁽³⁾	21.44	3/3/2030	—	—
	157,598	186,252 ⁽⁴⁾	16.02	2/3/2031	—	—
	—	125,000 ⁽⁵⁾	9.63	6/9/2031	—	—
	—	405,000 ⁽⁶⁾	1.84	2/1/2032	—	—
	—	328,500 ⁽⁶⁾	1.84	2/1/2032	—	—
	—	388,000 ⁽⁷⁾	0.79	12/7/2032	—	—
Azadeh Golipour	353	—	1.20	10/24/2026	36,344 ⁽⁸⁾	—
	736	—	0.91	6/12/2027	—	—
	5,908	—	5.00	3/15/2028	—	—
	19,167	833 ⁽⁹⁾	16.98	2/24/2029	—	—
	21,656	9,844 ⁽¹⁰⁾	20.98	3/1/2030	—	—
	11,979	13,021 ⁽¹¹⁾	14.57	1/3/2031	—	—
	21,083	24,917 ⁽⁴⁾	16.02	2/3/2031	—	—
	—	130,000 ⁽⁶⁾	1.84	2/1/2032	—	—
	—	100,000 ⁽⁶⁾	1.84	2/1/2032	—	—
	—	165,000 ⁽⁷⁾	0.79	12/7/2032	—	—
Erik Ostrowski	182,125	3,875 ⁽¹²⁾	15.65	1/1/2029	48 ⁽¹³⁾	34.08
	69,369	31,531 ⁽³⁾	21.44	3/3/2030	—	—
	54,588	64,512 ⁽⁴⁾	16.02	2/3/2031	—	—
	—	125,000 ⁽⁵⁾	9.63	6/9/2031	—	—
	—	170,000 ⁽⁶⁾	1.84	2/1/2032	—	—
	—	145,000 ⁽⁶⁾	1.84	2/1/2032	—	—
	—	221,000 ⁽⁷⁾	0.79	12/7/2032	—	—

- (1) This column is based on the fair market value of our common stock as of December 30, 2022, the last trading day of 2022, which was \$0.71 per share.
- (2) The shares underlying this stock option were scheduled to vest as follows: 25% of the shares vested on March 5, 2020 and the remainder vest in equal monthly installments until the option is fully vested on March 5, 2023, subject to the continued employment of the executive officer through each such vesting date.
- (3) The shares underlying this stock option were scheduled to vest as follows: 25% of the shares vested on March 4, 2021 and the remainder vest in equal monthly installments until the option is fully vested on March 4, 2024, subject to the continued employment of the executive officer through each such vesting date.
- (4) The shares underlying this stock option were scheduled to vest as follows: 25% of the shares vested on February 4, 2022 and the remainder vest in equal monthly installments until the option is fully vested on February 4, 2025, subject to the continued employment of the executive officer through each such vesting date.
- (5) The shares underlying this stock option were scheduled to vest as follows: 50% of the shares will vest on June 10, 2023 and the remainder will vest on June 10, 2024, subject to the continued employment of the executive officer through each such vesting date.
- (6) The shares underlying this stock option were scheduled to vest as follows: 25% of the shares vested on February 2, 2023 and the remainder vest in equal monthly installments until the option is fully vested on February 2, 2026, subject to the continued employment of the executive officer through each such vesting date.
- (7) The shares underlying this stock option were scheduled to vest as follows: 50% of the shares vest on December 8, 2023 and the remainder vest in equal monthly installments until the option is fully vested on December 8, 2024, subject to the continued employment of the executive officer through each such vesting date.

- (8) Represents a restricted stock unit award for 36,344 shares, which vests as follows: 50% of the shares vest on June 10, 2023 and the remaining 50% vest on June 10, 2024, subject to the continued employment of the executive officer through each such vesting date.
- (9) The shares underlying this stock option vest as follows: 25% of the shares vested on February 25, 2020 and the remainder vest in equal monthly installments until the option is fully vested on February 25, 2023, subject to the continued employment of the executive officer through each such vesting date.
- (10) The shares underlying this stock option vest as follows: 25% of the shares vested on March 2, 2021 and the remainder vest in equal monthly installments until the option is fully vested on March 2, 2024, subject to the continued employment of the executive officer through each such vesting date.
- (11) The shares underlying this stock option vest as follows: 25% of the shares vested on January 4, 2022 and the remainder vest in equal monthly installments until the option is fully vested on January 4, 2025, subject to the continued employment of the executive officer through each such vesting date.
- (12) The shares underlying this stock option vest as follows: 25% of the shares vested on January 2, 2020 and the remainder vested in equal monthly installments until the option was fully vested on January 2, 2023.
- (13) Represents a restricted stock unit award for 2,300 shares, which vests as follows: 25% of the shares vested on January 2, 2020 and the remainder vested in equal monthly installments until the restricted stock unit was fully vested on January 2, 2023.

Equity Compensation Plan Information

The following table sets forth information as of December 31, 2022 regarding shares of common stock that may be issued under our equity compensation plans, consisting of our 2018 Plan, our 2015 Plan, our 2019 Inducement Plan, our 2020 Inducement Plan, and our 2018 Employee Stock Purchase Plan, or ESPP.

Plan Category	Number of Shares of Common Stock to be Issued Upon Exercise of Outstanding Options and RSUs (#)	Weighted-Average Exercise Price of Outstanding Options (\$) ⁽¹⁾	Number of Shares of Common Stock Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in the First Column) (#)
Equity compensation plans approved by security holders (2)	9,044,463 ⁽²⁾	6.33	6,472,321 ⁽³⁾
Equity compensation plans not approved by security holders	1,319,200 ⁽⁴⁾	12.94	2,423,656 ⁽⁵⁾
Total	10,363,663	7.26	8,895,977

- (1) Since restricted stock units do not have any exercise price, such units are not included in the weighted average exercise price calculations above.
- (2) Includes (i) 8,104,071 shares of common stock issuable upon the exercise of outstanding options and (ii) 940,392 shares of common stock issuable upon vesting of restricted stock units.
- (3) As of December 31, 2022, there were 5,005,295 shares of common stock available for grant under our 2018 Plan, no shares available for grant under our 2015 Plan, and 1,467,026 shares of common stock available for grant under our ESPP (which number excludes the 1,115,700 shares that were added to the plan as a result of the automatic annual increase on January 1, 2023). Our ESPP provides that the number of shares reserved and available for issuance under the plan automatically increases each January 1 by the least of 1,115,700 shares of our common stock, 1% of the outstanding number of shares of our common stock on the immediately preceding December 31 or such lesser number of shares as determined by our Compensation Committee.
- (4) Consists of (i) 484,700 shares of common stock underlying non-qualified stock options that were granted prior to the adoption of our Inducement Plans as one-time awards to various new employees in accordance with Nasdaq Listing Rule 5635(c)(4), (ii) 771,500 shares of common stock issuable upon exercise of outstanding options granted under our 2019 Inducement Plan and (iii) 63,000 shares of common stock issuable upon exercise of outstanding options granted under our 2020 Inducement Plan.
- (5) Consists of (i) 786,656 shares of common stock issuable under our 2019 Inducement Plan and (ii) 1,637,000 issuable under our 2020 Inducement Plan.

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, 2021, 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, one percent of the average of our total assets amounts at December 31, 2021 and 2022) 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.

License Agreements and Related Agreements with University Health Network

Fabry License Agreement

On January 27, 2016, we entered into an option agreement with University Health Network, or 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 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. In connection with this agreement, we have also entered into three separate letter agreements with UHN, dated November 4, 2016, June 2, 2017 and December 11, 2019, 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. For the years ended December 31, 2021 and 2022, we paid \$209 and \$161, respectively, to UHN in connection with these agreements, which consists of reimbursable funded study trial costs and license maintenance fees.

Interleukin-12 Agreement

On January 27, 2016, we entered into an exclusive license agreement with 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 an upfront license fee and reimbursement of certain patent expenses, and 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, 2021 and 2022, we paid \$39 and \$39 to UHN under this agreement, respectively, which consists of license maintenance fees.

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, other than the letter agreement dated December 11, 2019, 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.

Agreements with Stockholders

In connection with our prior 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 or as an officer of the Company 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 person transaction policy that requires related party transactions to 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 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 10, 2023 by:

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

The column entitled “Shares Beneficially Owned” is based on a total of 44,102,953 shares of our common stock outstanding as of April 10, 2023.

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 10, 2023 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., 100 Technology Square, 6th Floor, Cambridge, Massachusetts 02139.

Name and address of beneficial owner	Shares beneficially owned	
	Number	Percentage
5% Stockholders:		
Affiliates of Atlas Venture Fund ⁽¹⁾	4,541,381	10.3 %
Farallon Capital Partners ⁽²⁾	3,116,000	7.1 %
GMT Capital Corp ⁽³⁾	3,309,859	7.5 %
Named Executive Officers and Directors:		
Geoff MacKay ⁽⁴⁾	1,869,105	4.1 %
Azadeh Golipour ⁽⁵⁾	171,194	*
Erik Ostrowski ⁽⁶⁾	444,756	*
Bruce Booth, DPhil ⁽⁷⁾	76,069	*
Ian T. Clark ⁽⁸⁾	155,091	*
Phillip Donenberg ⁽⁹⁾	96,812	*
Gail M. Farfel, PhD ⁽¹⁰⁾	76,505	*
Annalisa Jenkins, MBBS, FRCP ⁽¹¹⁾	115,580	*
Christopher Paige, PhD ⁽¹²⁾	328,581	*
Philip J. Vickers, PhD ⁽¹³⁾	99,612	*
All current executive officers and directors as a group (13 persons)⁽¹⁴⁾	4,368,200	9.2 %

* Represents beneficial ownership of less than one percent.

(1) Based in part on a Schedule 13D filed with the SEC on July 30, 2019 and a Form 4 filed with the SEC on February 18, 2020. 3,710,052 shares are held directly by Atlas Venture Fund X, L.P. (“Atlas Venture X”), 810,811 shares are held directly by Atlas Venture Opportunity Fund I, L.P. (“Atlas Venture Opportunity”) and 20,518 shares are held directly by Atlas Venture Associates X, L.P. (“AVA X LP”). 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. Atlas Venture Associates Opportunity I, L.P. (“AVA Opportunity LP”) is the general partner of Atlas Venture Opportunity and Atlas Venture Associates Opportunity I, LLC (“AVA Opportunity LLC”) is the general partner of AVA Opportunity LP. Bruce Booth is a member of AVA X LLC and AVA Opportunity 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 300 Technology Square, 8th Floor, Cambridge, MA 02139.

- (2) Based solely on a Schedule 13G filed with the SEC on February 17, 2023. The report was filed by Farallon Capital Partners, L.P.; Farallon Capital Institutional Partners, L.P.; Farallon Capital Institutional Partners II, L.P.; Farallon Capital Institutional Partners III, L.P.; Four Crossings Institutional Partners V, L.P.; Farallon Capital Offshore Investors II, L.P.; Farallon Capital (AM) Investors, L.P.; Farallon Capital F5 Master I, L.P.; Farallon Partners, L.L.C.; Farallon Institutional (GP) V, L.L.C.; Farallon F5 (GP), L.L.C.; Joshua J. Dapice; Philip D. Dreyfuss; Hannah E. Dunn; Michael B. Fisch; Richard B. Fried; Varun N. Gehani; Nicolas Giauque; David T. Kim; Michael G. Linn; Rajiv A. Patel; Thomas G. Roberts, Jr.; Edric C. Saito; William Seybold; Daniel S. Short; Andrew J. M. Spokes; John R. Warren; and Mark C. Wehrly. The address for these persons is c/o Farrallon Capital Management, L.L.C., One Maritime Plaza, Suite 2100, San Francisco, CA 94111.
- (3) Based solely on a Schedule 13G/A filed with the SEC on January 19, 2023. The report was filed by GMT Capital Corp. (“GMT”); Bay Resource Partners, L.P.; Bay II Resource Partners, L.P.; Bay Resource Partners Offshore Master Fund, L.P.; Thomas E. Claugus; and certain sub-advisory and separate account clients advised by GMT. The address for these persons is 2300 Windy Ridge Parkway, Ste. 550 South, Atlanta, GA 30339.
- (4) Consists of (i) 188,012 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, (iv) 445,123 shares held by the Geoff R. MacKay Irrevocable Trust, and (v) 1,090,762 shares of common stock that would have been issuable upon exercise of options within 60 days of April 10, 2023, had Mr. MacKay not resigned from the Company as of May 1, 2023. 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.
- (5) Consists of 171,194 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (6) Consists of (i) 2,300 shares of common stock and (ii) 442,456 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (7) Consists of 76,069 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (8) Consists of 155,091 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (9) Consists of (i) 2,000 shares of common stock and (ii) 94,812 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (10) Consists of 76,505 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (11) Consists of 115,580 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (12) Consists of (i) 252,512 shares of common stock and (ii) 76,069 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (13) Consists of (i) 4,800 shares of common stock and (ii) 94,812 shares of common stock issuable upon exercise of options within 60 days of April 10, 2023.
- (14) Includes an aggregate of 3,176,903 shares issuable upon exercise of stock options within 60 days of April 10, 2023 held by our current executive officers and directors as a group.

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, 2022. The Audit Committee also discussed with the independent registered public accounting firm the matters required to be discussed by the applicable requirements of the PCAOB and the Securities and Exchange Commission, or SEC. 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, 2022, that was filed with the 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.

May 1, 2023

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., 100 Technology Square, 6th Floor, 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 2024 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 January 6, 2024. However, if the date of the 2024 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 2024 Annual Meeting of Stockholders. 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. 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., 100 Technology Square, 6th Floor, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. We encourage any such proposal to also be submitted via email to CorporateSecretary@AVROBIO.com.

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, 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. For stockholder proposals to be brought before the 2024 Annual Meeting of Stockholders, the required notice must be received by our Corporate Secretary at our principal executive offices no earlier than February 7, 2024 and no later than March 8, 2024. Stockholder proposals and the required notice should be addressed to AVROBIO, Inc., 100 Technology Square, 6th Floor, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. We encourage any such proposal to also be submitted via email to CorporateSecretary@AVROBIO.com.

To comply with the universal proxy rules, stockholders who intend to solicit proxies in support of director nominees other than the Company's nominees must provide notice that sets forth the information required by Rule 14a-19 under the Exchange Act no later than April 7, 2024. Stockholder proposals and the required notice should be addressed to AVROBIO, Inc., 100 Technology Square, 6th Floor, Cambridge, Massachusetts 02139, Attention: Corporate Secretary. We encourage any such proposal to also be submitted via email to CorporateSecretary@AVROBIO.com.

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.

