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

SCHEDULE 14A

**Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934
(Amendment No. _____)**

Filed by the Registrant Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))**
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Under Rule 14a-12

SYNOLOGIC, INC.
(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
 - Fee previously paid with preliminary materials.
 - Fee computed on table in exhibit required by Item 25(b) per Exchange Act Rules 14a-6(i)(1) and 0-11.
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April 27, 2022

To Our Stockholders:

You are cordially invited to attend the 2022 Annual Meeting of Stockholders (“**Annual Meeting**”) of Synlogic, Inc. (“**Synlogic**”). The meeting will be held on Thursday, June 9, 2022 at 9:00 a.m. EDT. The Annual Meeting will be held in a virtual meeting format only. You can attend the Annual Meeting online, vote your shares electronically, and submit your questions during the Annual Meeting by visiting www.virtualshareholdermeeting.com/SYBX2022 and entering your 16-digit control number found on the Notice of Internet Availability or the proxy card that you receive. For further information about the Annual Meeting, please see the Information About the Annual Meeting and Voting beginning on page 3. You will not be able to attend the Annual Meeting in person.

Over the last year we have continued to make progress advancing our Synthetic Biotics to patients. Most notably, in September of last year, we delivered our first proof of concept (“PoC”) with the positive interim analysis from our phenylketonuria (“PKU”) program’s Phase 2 study. Our PKU program demonstrated clinically meaningful reductions of phenylalanine (“Phe”) in patients with PKU, in an interim analysis of the Phase 2 SynPheny-1 study, supporting the ability of Synthetic Biotic medicines to make a meaningful difference to patients.

We closed 2021 having made additional progress in multiple programs, including clinical proof of mechanism in enteric hyperoxaluria, a research collaboration with Roche in inflammatory bowel disease (“IBD”) and a new clinical candidate for homocystinuria (“HCU”) developed in partnership with Ginkgo Bioworks. We are building on this progress in 2022 with multiple readouts expected across our programs.

The agenda for this Annual Meeting includes (i) the election of three (3) Class I directors, each to serve a three-year term, (ii) an advisory vote on the compensation paid to our named executive officers, and (iii) the ratification of the appointment of KPMG LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2022. Our Board of Directors recommends the election of the three nominees to our Board of Directors and a vote in favor of proposals (ii) and (iii). Such other business will be transacted as may properly come before the Annual Meeting.

Under Securities and Exchange Commission rules that allow companies to furnish proxy materials to stockholders over the Internet, we have elected to deliver our proxy materials to the majority of our stockholders digitally. On April 27, 2022, we intend to begin sending to our stockholders a Notice of Internet Availability of Proxy Materials (the “Notice”) containing instructions on how to access our proxy statement for our 2022 virtual-only Annual Meeting of stockholders and our 2021 annual report to stockholders. The Notice also provides instructions on how to vote online or by telephone, how to receive a paper copy of the proxy materials by mail and how to access the virtual Annual Meeting.

We hope you will be able to attend the Annual Meeting. Whether you plan to attend the Annual Meeting or not, it is important that you cast your vote. You may vote over the Internet as well as by telephone or by mail. When you have finished reading the proxy statement, you are urged to vote in accordance with the instructions set forth in this proxy statement. We encourage you to vote by proxy so that your shares will be represented and voted at the meeting.

Thank you for your continued support of Synlogic, Inc. We look forward to you joining us at this year’s Annual Meeting.

Sincerely,

A handwritten signature in black ink, appearing to read "Aoife Brennan".

Aoife Brennan
President and CEO



April 27, 2022

NOTICE OF 2022 ANNUAL MEETING OF STOCKHOLDERS

Time: 9:00 a.m. Eastern Time
Date: Thursday, June 9, 2022
Virtual Meeting: The Annual Meeting will be a virtual meeting through which you can listen to the meeting, submit questions and vote online. You may access the Annual Meeting by visiting www.virtualshareholdermeeting.com/SYBX2022 and entering the control number (included in the Notice of Internet Availability or proxy card that you receive). Stockholders attending the virtual meeting will be afforded the same rights and opportunities to participate as they would at an in-person meeting.

Purpose:

- (1) To elect three Class I directors to serve three-year terms expiring in 2025;
- (2) To approve by an advisory vote the compensation of the Company's named executive officers;
- (3) To ratify the appointment of KPMG LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2022; and
- (4) To transact such other business that is properly presented at the Annual Meeting and any adjournments or postponements thereof.

Who may vote: You may vote if you were the record owner of Synlogic, Inc. common stock at the close of business on April 12, 2022 (the "Record Date"). A list of registered stockholders as of the close of business on the Record Date will be available at our corporate headquarters for examination by any stockholder for any purpose germane to the Annual Meeting for a period of at least 10 days prior to the Annual Meeting. If you wish to view this list, please contact me, as our Head of Legal, at Synlogic, Inc., 301 Binney Street, Suite 402, Cambridge, MA 02142. Such list will also be available for examination by the stockholders during the Annual Meeting at www.virtualshareholdermeeting.com/SYBX2022.

All stockholders are cordially invited to attend the virtual annual meeting. **Whether you plan to attend the Annual Meeting or not, we urge you to vote by following the instructions in the Notice of Internet Availability of Proxy Materials that you previously received and submit your proxy by the Internet, telephone or mail in order to ensure the presence of a quorum.** You may change or revoke your proxy at any time before it is voted at the meeting.

By order of the Board of Directors,

A handwritten signature in black ink, appearing to read "B. St. Amant".

Brendan St. Amant
Head of Legal

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SYNOLOGIC, INC.
301 Binney Street, Suite 402
Cambridge, MA 02142

**PROXY STATEMENT FOR THE 2022 ANNUAL MEETING OF STOCKHOLDERS TO
BE HELD ON JUNE 9, 2022**

This proxy statement, along with the accompanying notice of 2022 Annual Meeting of stockholders, contains information about the 2022 Annual Meeting of stockholders of Synlogic, Inc., including any adjournments or postponements of the Annual Meeting. We are holding the annual meeting at 9:00 a.m., Eastern Time, on Thursday, June 9, 2022. You will be able to attend the annual meeting, vote and submit your questions during the meeting by visiting www.virtualshareholdermeeting.com/SYBX2022.

In this proxy statement, we refer to Synlogic, Inc. as “Synlogic,” “the Company,” “we”, and “us.”

This proxy statement relates to the solicitation of proxies by our Board of Directors, or Board, for use at the annual meeting.

On or about April 27, 2022, we intend to begin sending to our stockholders the Important Notice Regarding the Availability of Proxy Materials containing instructions on how to access our proxy statement for our 2022 virtual-only annual meeting of stockholders and our 2021 annual report to stockholders.

IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE STOCKHOLDER MEETING TO BE HELD ON JUNE 9, 2022

This proxy statement, the Notice of Annual Meeting of Stockholders, our form of proxy card and our 2021 Annual Report to stockholders are available for viewing, printing and downloading at www.proxyvote.com. To view these materials please have your 16-digit control number(s) available that appears on your Notice or proxy card. On this website, you can also elect to receive future distributions of our proxy statements and annual reports to stockholders by electronic delivery.

Additionally, you can find a copy of our Annual Report on Form 10-K, which includes our financial statements, for the fiscal year ended December 31, 2021 on the website of the Securities and Exchange Commission, or the SEC, at www.sec.gov, or in the “Financials” section of the “Investors & Media” section of our website at www.synlogictx.com. You may also obtain a printed copy of our Annual Report on Form 10-K, including our financial statements, free of charge, from us by sending a written request to: Attn: Investor Relations, Synlogic, Inc., 301 Binney Street, Suite 402, Cambridge, MA 02142. Exhibits will be provided upon written request and payment of an appropriate processing fee.

IMPORTANT INFORMATION ABOUT THE ANNUAL MEETING AND VOTING

Why is the Company Soliciting My Proxy?

The Board of Synlogic is soliciting your proxy to vote at the 2022 Annual Meeting of stockholders to be held virtually via live webcast, on Thursday, June 9, 2022, at 9:00 a.m. Eastern Time and any adjournments of the meeting, which we refer to as the Annual Meeting. The proxy statement along with the accompanying Notice of Annual Meeting of Stockholders summarizes the purposes of the meeting and the information you need to know to vote at the Annual Meeting. You will be able to participate in the annual meeting, vote your shares electronically and submit your questions during the live webcast of the meeting by visiting www.virtualshareholdermeeting.com/SYBX2022 and entering your 16-digit control number found on the enclosed voting form.

We have made available to you on the Internet or have sent you this proxy statement, the Notice of Annual Meeting of Stockholders, the proxy card and a copy of our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 because you owned shares of Synlogic, Inc. common stock on the Record Date. The Company intends to commence distribution of the Important Notice Regarding the Availability of Proxy Materials, which we refer to throughout this proxy statement as the Notice, and, if applicable, the proxy materials to stockholders on or about April 27, 2022.

Why Did I Receive a Notice in the Mail Regarding the Internet Availability of Proxy Materials Instead of a Full Set of Proxy Materials?

As permitted by the rules of the SEC, we may furnish our proxy materials to our stockholders by providing access to such documents on the Internet, rather than mailing printed copies of these materials to each stockholder. Most stockholders will not receive printed copies of the proxy materials unless they request them. We believe that this process should expedite stockholders' receipt of proxy materials, lower the costs of the Annual Meeting and help to conserve natural resources. If you received the Notice by mail or electronically, you will not receive a printed or email copy of the proxy materials, unless you request one by following the instructions included in the Notice. Instead, the Notice instructs you as to how you may access and review all of the proxy materials and submit your proxy on the Internet. If you requested a paper copy of the proxy materials, you may authorize the voting of your shares by following the instructions on the proxy card, in addition to the other methods of voting described in this proxy statement.

Why are you holding a Virtual Annual Meeting?

Due to the public health impact of COVID-19, we believe that utilizing the virtual meeting format will help protect the health and well-being of our directors, employees and stockholders who wish to attend the Annual Meeting. Stockholders attending the virtual meeting will be afforded the same rights and opportunities to participate as they would at an in-person meeting, including the ability to submit questions and comments and to vote. We believe that hosting a virtual meeting is in the best interest of our stockholders and enables increased stockholder attendance and participation considering the current circumstances.

What happens if there are technical difficulties during the Annual Meeting?

We will have technicians ready to assist you with any technical difficulties you may have accessing the virtual Annual Meeting, voting at the annual meeting or submitting questions at the annual meeting. If you encounter any difficulties accessing the virtual Annual Meeting during the check-in or meeting time, please call the technical support number that will be posted on the Virtual Stockholder Meeting log in page.

Who Can Vote?

Only stockholders of record at the close of business on April 12, 2022 are entitled to vote at the annual meeting. On this Record Date, there were 70,272,526 shares of our common stock outstanding and entitled to vote. Our common stock is our only class of voting stock.

If on April 12, 2022 your shares of our common stock were registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, LLC, then you are a stockholder of record.

If on April 12, 2022 your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in "street name" and the Notice is being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the Annual Meeting. As a beneficial owner, you have the right to direct your broker or other agent regarding how to vote the shares in your account. You are also invited to attend the annual meeting. However, since you are not the stockholder of record, you may not vote your shares at the annual meeting unless you request and obtain a valid proxy from your broker or other agent.

You do not need to attend the annual virtual meeting to vote your shares. Shares represented by valid proxies, received in time for the virtual annual meeting and not revoked prior to the annual meeting, will be voted at the annual meeting. For instructions on how to change or revoke your proxy, see "May I Change or Revoke My Proxy?" below.

How Many Votes Do I Have?

Each share of our common stock that you own entitles you to one vote.

How Do I Vote?

Whether you plan to attend the annual meeting or not, we urge you to vote by proxy. All shares represented by valid proxies that we receive through this solicitation, and that are not revoked, will be voted in accordance with your instructions on the proxy card or as instructed via Internet or telephone. You may specify whether your shares should be voted for or withheld for each nominee for director, and whether your shares should be voted for, against or abstain with respect to the other proposal. If you properly submit a proxy without giving specific voting instructions, your shares will be voted in accordance with the Board's recommendations as noted below. Voting by proxy will not affect your right to attend the annual meeting. If your shares are registered directly in your name through our stock transfer agent, American Stock Transfer & Trust Company, LLC, or you have stock certificates registered in your name, you may vote:

- **By Internet or by telephone.** Follow the instructions included in the Notice or, if you received printed materials, in the proxy card to vote over the Internet or by telephone.
- **By mail.** If you received a proxy card by mail, you can vote by mail by completing, signing, dating and returning the proxy card as instructed on the card. If you sign the proxy card but do not specify how you want your shares voted, they will be voted in accordance with the Board's recommendations as noted below.
- **At the time of the virtual Annual Meeting.** If you attend the virtual Annual Meeting, you may vote your shares online at the time of the meeting.

Telephone and Internet voting facilities for stockholders of record will be available 24 hours a day and will close at 11:59 p.m. Eastern Time on June 8, 2022.

If your shares are held in "street name" (held in the name of a bank, broker or other holder of record), you will receive instructions from the holder of record. You must follow the instructions of the holder of record in order for your shares to be voted. Telephone and Internet voting also will be offered to stockholders owning shares through certain banks and brokers. If your shares are not registered in your own name and you plan to vote your shares at the time of the virtual annual meeting, you should contact your broker or agent to obtain a legal proxy or broker's proxy card and vote your shares online at the time of the meeting.

How Does the Board Recommend That I Vote on the Proposals?

The Board recommends that you vote as follows:

- **"FOR"** the election of the nominees for director;
- **"FOR"** the advisory vote to approve the compensation of the Company's named executive officers, as disclosed in this proxy statement; and
- **"FOR"** the ratification of the selection of KPMG LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2022.

If any other matter is presented at the annual meeting, your proxy provides that your shares will be voted by the proxy holder listed in the proxy in accordance with his or her best judgment. At the time this proxy statement was first made available, we knew of no matters that needed to be acted on at the annual meeting, other than those discussed in this proxy statement.

May I Change or Revoke My Proxy?

If you give us your proxy, you may change or revoke it at any time before the annual meeting. You may change or revoke your proxy in any one of the following ways:

- if you received a proxy card, by signing a new proxy card with a date later than your previously delivered proxy and submitting it as instructed above;
- by re-voting by Internet or by telephone as instructed above;
- by notifying Synlogic's Corporate Secretary in writing before the annual meeting that you have revoked your proxy; or
- by attending the virtual annual meeting and voting online at the time. Attending the virtual annual meeting will not in and of itself revoke a previously submitted proxy. You must specifically request at the virtual annual meeting that it be revoked.

Your most current vote, whether by telephone, Internet or proxy card is the one that will be counted.

What if I Receive More Than One Notice or Proxy Card?

You may receive more than one Notice or proxy card if you hold shares of our common stock in more than one account, which may be in registered form or held in street name. Please vote in the manner described above under “How Do I Vote?” for each account to ensure that all of your shares are voted.

Will My Shares be Voted if I Do Not Vote?

If your shares are registered in your name or if you have stock certificates, they will not be counted if you do not vote as described above under “How Do I Vote?” If your shares are held in street name and you do not provide voting instructions to the bank, broker or other nominee that holds your shares as described above, the bank, broker or other nominee that holds your shares has the authority to vote your unvoted shares only with respect to Proposal 3. Therefore, we encourage you to provide voting instructions to your bank, broker or other nominee. This ensures your shares will be voted at the annual meeting and in the manner you desire. A “broker non-vote” will occur if your broker cannot vote your shares on a particular matter because it has not received instructions from you and does not have discretionary voting authority on that matter or because your broker chooses not to vote on a matter for which it does have discretionary voting authority.

What Vote is Required to Approve Each Proposal and How are Votes Counted?

Proposal 1: Elect Directors

The nominees for director who receive the most votes (also known as a “plurality” of the votes cast) will be elected. You may vote either FOR all of the nominees, WITHHOLD your vote from all of the nominees or WITHHOLD your vote from any one or more of the nominees. Votes that are withheld will not be included in the vote tally for the election of the directors. Brokerage firms do not have authority to vote customers’ unvoted shares held by the firms in street name for the election of the directors. As a result, any shares not voted by a customer will be treated as a broker non-vote. Such broker non-votes will have no effect on the results of this vote.

Proposal 2: Advisory vote on Executive Compensation

For the advisory vote on executive compensation, the votes cast FOR must exceed the votes cast AGAINST to approve, on an advisory basis, the compensation of our named executive officers. Only FOR and AGAINST votes will affect the outcome. Abstentions will have no effect on the voting of Proposal 2. Therefore, if your shares are held by your bank, broker or other nominee in street name and you do not vote your shares, your bank, broker or other nominee cannot vote your shares on Proposal 2. Shares held in street name by banks, brokers or nominees who indicate on their proxies that they do not have authority to vote the shares on Proposal 2 will not be counted as votes FOR or AGAINST the proposal and will be treated as broker non-votes. As a result, broker non-votes will have no effect on the results of this vote. Although the advisory vote is non-binding, the compensation committee and the board of directors will review the voting results and take them into consideration when making future decisions regarding executive compensation.

Proposal 3: Ratify Selection of Independent Registered Public Accounting Firm

The affirmative vote of a majority of the shares cast affirmatively or negatively for this proposal is required to ratify the selection of our independent registered public accounting firm. Abstentions will have no effect on the results of this vote. Brokerage firms have authority to vote customers’ unvoted shares held by the firms in street name on this proposal. If a broker does not exercise this authority, such broker non-votes will have no effect on the results of this vote. We are not required to obtain the approval of our stockholders to select our independent registered public accounting firm. However, if our stockholders do not ratify the selection of KPMG LLP as our independent registered public accounting firm for 2022, our Audit Committee of our Board will reconsider its selection.

Is Voting Confidential?

We will keep all the proxies, ballots and voting tabulations private. We only let our Inspector of Elections examine these documents. Management will not know how you voted on a specific proposal unless it is necessary to meet legal requirements. We will, however, forward to management any written comments you make on the proxy card or otherwise provide.

Where Can I Find the Voting Results of the Annual Meeting?

The preliminary voting results will be announced at the annual meeting, and we will publish preliminary results, or final results if available, in a Current Report on Form 8-K within four business days of the annual meeting. If final results are unavailable at the time we file the Form 8-K, then we will file an amended report on Form 8-K to disclose the final voting results within four business days after the final voting results are known.

What Are the Costs of Soliciting these Proxies?

We will pay all of the costs of soliciting these proxies. Our directors and employees may solicit proxies in person or by telephone, fax or email. We will pay these employees and directors no additional compensation for these services. We will ask banks, brokers and other institutions, nominees and fiduciaries to forward these proxy materials to their principals and to obtain authority to execute proxies. We will then reimburse them for their expenses.

What Constitutes a Quorum for the Annual Meeting?

The presence, in person or by proxy, of the holders of a majority of the voting power of all outstanding shares of our common stock entitled to vote at the annual meeting is necessary to constitute a quorum at the annual meeting. Votes of stockholders of record who are present at the annual meeting in person or by proxy, abstentions, and broker non-votes are counted for purposes of determining whether a quorum exists.

Attending the Annual Meeting

This year, we will host our Annual Meeting at 9:00 a.m. Eastern time on Thursday, June 9, 2022. You will be able to participate in the Annual Meeting, vote your shares electronically and submit your questions during the live webcast of the meeting by visiting www.virtualshareholdermeeting.com/SYBX2022 and entering your 16-digit control number found on the enclosed voting form. You need not attend the Annual Meeting in order to vote.

Householding of Annual Disclosure Documents

SEC rules concerning the delivery of annual disclosure documents allow us or your broker to send a single Notice or, if applicable, a single set of our proxy materials to any household at which two or more of our stockholders reside, if we or your broker believe that the stockholders are members of the same family. This practice, referred to as “householding,” benefits both you and us. It reduces the volume of duplicate information received at your household and helps to reduce our expenses. The rule applies to our Notices, annual reports, proxy statements and information statements. Once you receive notice from your broker or from us that communications to your address will be “household,” the practice will continue until you are otherwise notified or until you revoke your consent to the practice. Stockholders who participate in householding will continue to have access to and utilize separate proxy voting instructions.

If your household received a single Notice or, if applicable, a single set of proxy materials this year, but you would prefer to receive your own copy, please contact our Corporate Secretary at Synlogic, Inc., 301 Binney Street, Suite 402, Cambridge MA 02142.

If you do not wish to participate in “householding” and would like to receive your own Notice or, if applicable, set of Synlogic’s proxy materials in future years, follow the instructions described below.

Conversely, if you share an address with another Synlogic stockholder and together both of you would like to receive only a single Notice or, if applicable, set of proxy materials, follow these instructions:

- If your Synlogic shares are registered in your own name, please contact our transfer agent, American Stock Transfer & Trust Company, LLC, and inform them of your request by calling them at 1-800-937-5449 or writing them at 6201 15th Avenue, Brooklyn, NY 11219.
- If a broker or other nominee holds your Synlogic shares, please contact the broker or other nominee directly and inform them of your request. Be sure to include your name, the name of your brokerage firm and your account number.

Electronic Delivery of Company Stockholder Communications

Most stockholders can elect to view or receive copies of future proxy materials over the Internet instead of receiving paper copies in the mail.

You can choose this option and save the Company the cost of producing and mailing these documents by:

- following the instructions provided on your Notice or proxy card; or
- following the instructions provided when you vote over the Internet.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of April 1, 2022 for (a) the executive officers named in the Summary Compensation Table on page 16 of this proxy statement, (b) each of our directors and director nominees, (c) all of our current directors and executive officers as a group and (d) each stockholder known by us to own beneficially more than 5% of our common stock. Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. We deem shares of common stock that may be acquired by an individual or group within 60 days of April 1, 2022 pursuant to the exercise of options to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table. Except as indicated in footnotes to this table, we believe that the stockholders named in this table have sole voting and investment power with respect to all shares of common stock shown to be beneficially owned by them based on information provided to us by these stockholders. Percentage of ownership is based on 70,267,586 shares of common stock outstanding on April 1, 2022.

Name and Address of Beneficial Owner**	Shares Beneficially Owned (1)	
	Number	Percent
Directors and Named Executive Officers:		
Peter Barrett, Ph.D. (2)	2,855,942	4.05%
Aoife Brennan, MB, BCh, BAO, MMSc (3)	949,770	1.34%
Nick Leschly (4)	97,117	*
Richard P. Shea (5)	62,500	*
Edward Mathers (6)	55,000	*
Patricia Hurter, Ph.D. (7)	45,000	*
Michael Burgess, MB, CHB, Ph.D. (8)	35,000	*
Michael Heffernan (9)	10,000	*
Lisa Kelly-Croswell (10)	10,000	*
Antoine Awad (11)	233,850	*
Gregg Beloff (12)	74,996	*
Richard Riese, M.D., Ph.D.		
All directors and current executive officers as a group (11 persons) (13)	4,384,179	6.12%
Five Percent Stockholders:		
FMR LLC (14) 245 Summer Street Boston, MA 02210	10,456,385	14.88%
Ginkgo Bioworks, Inc. (15) 27 Drydock Avenue, 8th Floor Boston, MA 02210	8,888,888	12.21%
RA Capital Management, L.P. (16) 200 Berkeley Street, 18th Floor Boston, MA 02116	6,666,666	9.49%
OrbiMed Advisors LLC (17) 601 Lexington Avenue, 54th Floor New York, NY 10022	6,029,995	8.58%
New Enterprise Associates 14, L.P. (18) 1954 Greenspring Drive, Suite 600 Timonium, MD 21093	4,229,410	6.02%

* Represents beneficial ownership of less than 1% of the outstanding shares of our common stock.

** Addresses are given for beneficial owners of more than 5% of the outstanding common stock only.

(1) Includes shares issuable upon the exercise of options to purchase shares of common stock within 60 days following April 1, 2022.

(2) Consists of 2,651,963 shares of our common stock owned by Atlas Venture Fund IX, L.P. ("Atlas IX") and 203,979 shares of our common stock issuable upon the exercise of options exercisable within 60 days following April 1, 2022. Atlas Venture Associates IX, L.P. ("AVA IX LP"), is the general partner of Atlas IX, and Atlas Venture Associates IX, LLC ("AVA IX LLC"), is the general partner of AVA IX LP. Dr. Barrett disclaims Section 16 beneficial ownership of the securities held by Atlas IX, except to the extent of his pecuniary interest therein, if any.

(3) Consists of 275,343 shares of our common stock held by Dr. Brennan and 674,427 shares of our common stock issuable upon the exercise of options exercisable within 60 days following April 1, 2022.

(4) Consists of 23,150 shares of our common stock held by Mr. Leschly and 73,967 shares of our common stock issuable upon the exercise of options exercisable within 60 days following April 1, 2022.

(5) Consists of 7,500 shares of our common stock held by Mr. Shea and 55,000 shares of our common stock issuable upon the exercise of options exercisable within 60 days following April 1, 2022.

(6) Consists of 55,000 shares of our common stock issuable upon the exercise of options held by Mr. Mathers exercisable within 60 days following April 1, 2022.

- (7) Consists of 45,000 shares of our common stock issuable upon the exercise of options held by Dr. Hurter exercisable within 60 days following April 1, 2022.
- (8) Consists of 35,000 shares of our common stock issuable upon the exercise of options held by Dr. Burgess exercisable within 60 days following April 1, 2022.
- (9) Consists of 10,000 shares of our common stock issuable upon the exercise of options held by Mr. Heffernan exercisable within 60 days following April 1, 2022.
- (10) Consists of 10,000 shares of our common stock issuable upon the exercise of options held by Ms. Kelly-Croswell exercisable within 60 days following April 1, 2022.
- (11) Consists of 81,170 shares of our common stock held by Mr. Awad and 152,680 shares of our common stock issuable upon the exercise of options exercisable within 60 days following April 1, 2022.
- (12) Consists of 74,996 shares of our common stock held by Mr. Beloff issuable upon the exercise of options exercisable within 60 days following April 1, 2022.
- (13) See footnotes 2 through 11. Includes 30,000 shares of common stock held by Mr. Michael Jensen, our Chief Financial Officer.
- (14) This information is based solely on a Schedule 13G filed with the Securities and Exchange Commission on or about February 9, 2022. Consists of 10,456,385 shares held by Fidelity Management & Research Company, LLC (“FMR LLC”). Members of the Johnson family including Abigail P. Johnson, are the predominant owners, directly or through trusts, of series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders’ voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. FMR Co., Inc. is wholly owned by Fidelity Management & Research Company. Fidelity Management & Research Company is wholly owned by FMR LLC. The address of FMR LLC is 245 Summer Street, Boston, Massachusetts 02210.
- (15) This information is based solely on a Schedule 13G filed with the Securities and Exchange Commission on or about June 21, 2019. Shares reported as beneficially owned by Ginkgo Bioworks, Inc. (“Ginkgo”) include (i) 6,340,771 shares of common stock held by Ginkgo and (ii) a warrant to purchase 2,548,117 shares of common stock held by Ginkgo.
- (16) This information is based solely on a Schedule 13D filed with the Securities and Exchange Commission on or about October 1, 2021. Consists of 6,666,666 shares held by RA Capital Management, L.P. (“RA Capital”). RA Capital Healthcare Fund GP, LLC is the general partner of RA Capital Healthcare Fund, L.P. (the “Fund”). The general partner of RA Capital is RA Capital Management GP, LLC, of which Dr. Peter Kolchinsky and Mr. Rajeev Shah are the controlling persons. RA Capital serves as investment adviser for the Fund and may be deemed a beneficial owner, for purposes of Section 13(d) of the Exchange Act, of any securities of the Company held by the Fund. The Fund has delegated to RA Capital the sole power to vote and the sole power to dispose of all securities held in the Fund’s portfolio, including the shares of the Company’s common stock reported herein. Because the Fund has divested itself of voting and investment power over the reported securities they hold and may not revoke that delegation on less than 61 days’ notice, the Fund disclaims beneficial ownership of the securities they hold for purposes of Section 13(d) of the Act and therefore disclaim any obligation to report ownership of the reported securities under Section 13(d) of the Act. As managers of RA Capital, Dr. Kolchinsky and Mr. Shah may be deemed beneficial owners of the shares of common stock of the Company beneficially owned by RA Capital. RA Capital, Dr. Kolchinsky, and Mr. Shah disclaim beneficial ownership of the shares other than the pecuniary interest therein.
- (17) Consists of 4,363,295 shares of our common stock held of record by OrbiMed Capital GP VI LLC (“GP VI”) and 1,666,700 shares of our common stock held of record by OrbiMed Genesis GP LLC (“OrbiMed Genesis”). GP VI is the general partner of OrbiMed Private Investments VI, LP (“OPI VI”), pursuant to the terms of the limited partnership agreement of OPI VI. OrbiMed Advisors LLC is the managing member of GP VI, pursuant to the terms of the limited liability company agreement of GP VI. Pursuant to these agreements and relationships, OrbiMed Advisors LLC and GP VI have discretionary investment management authority with respect to the assets of OPI VI. Such authority includes the power of GP VI to vote and otherwise dispose of securities purchased by OPI VI. The number of Shares attributable to OPI VI is 4,363,295. OrbiMed Advisors and GP VI may each be considered to hold indirectly 4,363,295 Shares. OrbiMed Genesis is the general partner of Genesis, pursuant to the terms of the limited partnership agreement of Genesis. OrbiMed Advisors LLC is the managing member of OrbiMed Genesis, pursuant to the terms of the limited liability company agreement of OrbiMed Genesis. Pursuant to these agreements and relationships, OrbiMed Advisors LLC and OrbiMed Genesis have discretionary investment management authority with respect to the assets of Genesis. Such authority includes the power to vote and otherwise dispose of securities held by Genesis. The number of outstanding Shares of the Issuer attributable to Genesis is 1,666,700. OrbiMed Advisors and OrbiMed Genesis may each be considered to hold indirectly 1,666,700 Shares.
- (18) This information is based solely on a Schedule 13D filed with the Securities and Exchange Commission on or about February 1, 2018. Consists of 4,229,410 shares held by New Enterprise Associates 14, L.P. (“NEA 14”). NEA Partners 14, L.P. (“NEA Partners 14”) is the sole general partner of NEA 14. NEA 14 GP, LTD (“NEA 14 LTD”) is the sole general partner of NEA Partners 14. The individual Directors (the “Directors”) of NEA 14 LTD are M. James Barrett, Peter J. Barris, Forest Baskett, Anthony A. Florence, Jr., Patrick J. Kerins, David M. Mott, Scott D. Sandell, Peter Sonsini and Ravi Viswanathan. The Directors share voting and dispositive power with regard to shares held directly by NEA 14. Edward Mathers is a partner at NEA.

The Board of Directors

Our bylaws provide that our business is to be managed by or under the direction of our Board. Our Board is divided into three classes for purposes of election. One class is elected at each annual meeting of stockholders to serve for a three-year term. Our Board currently consists of nine members, classified into three classes as follows: (1) Aoife Brennan, MB, BCh, BAO, MMSc., Patricia Hurter, Ph.D., and Richard Shea constitute a class with a term ending at the 2022 annual meeting, (2) Peter Barrett, Ph.D., Edward Mathers, Michael Heffernan and Lisa Kelly-Croswell constitute a class with a term ending at the 2023 annual meeting, and (3) Nick Leschly and Michael Burgess, MB, CHB, Ph.D., constitute a class with a term ending at the 2024 annual meeting.

On March 16, 2022, our Board accepted the recommendation of the Nominating and Governance Committee and voted to nominate Aoife Brennan, MB, BCh, BAO, MMSc., Patricia Hurter Ph.D., and Richard Shea, for election at the annual meeting for a term of three years to serve until the 2025 annual meeting of stockholders, and until their respective successors have been elected and qualified or until such director’s earlier death, resignation or removal.

Set forth below are the names of the persons nominated as directors and directors whose terms do not expire this year, their ages, their offices in the Company, if any, their principal occupations or employment for at least the past five years, the length of their tenure as directors and the names of other public companies in which such persons hold or have held directorships during the past five years. Additionally, information about the specific experience, qualifications, attributes or skills that led to our Board’s conclusion at the time of filing of this proxy statement that each person listed below should serve as a director is set forth below:

Name	Age	Position with the Company
Aoife Brennan, MB, BCh, BAO, MMSc	46	President and Chief Executive Officer; Class I Director
Peter Barrett, Ph.D.	69	Class II Director; Chairman of the Board
Michael Burgess, MB, CHB, Ph.D.	59	Class III Director
Michael Heffernan	57	Class II Director
Patricia Hurter, Ph.D.	58	Class I Director
Lisa Kelly-Croswell	55	Class II Director
Nick Leschly	49	Class III Director
Edward Mathers	62	Class II Director
Richard P. Shea	70	Class I Director

Our Board has reviewed the materiality of any relationship that each of our directors has with Synlogic, either directly or indirectly. Based upon this review, our Board has determined that the following members of the Board are “independent directors” as defined by the Nasdaq Stock Market: Patricia Hurter, Richard P. Shea, Peter Barrett, Edward Mathers, Nick Leschly, Michael Burgess, Michael Heffernan and Lisa Kelly-Croswell.

Aoife Brennan, MB, BCh, BAO, MMSc., age 46, has served as President and Chief Executive Officer and a member of our Board since October 2018. Prior to that, since September 2016, Dr. Brennan served as Chief Medical Officer of Private Synlogic (defined below) and was responsible for the oversight and direction of its clinical development strategy and operations. From May 2011 to August 2016, Dr. Brennan was Vice President and Head of the Rare Disease Innovation Unit at Biogen, a biotechnology company, where she was responsible for research and development of the Biogen rare disease portfolio, which involved programs ranging from pre-clinical to commercial, including the approval of ALPROLIX®, ELOCTATE® and SPINRAZA®. From 2008 to 2011, Dr. Brennan was director of clinical development at Tolerx, Inc., a start-up biotechnology company focusing on immunotherapy for Type 1 diabetes. Dr. Brennan serves on the board of directors of Cerevence, a clinical stage biopharmaceutical company advancing new medicines for brain diseases. Dr. Brennan also serves on the board of directors of Fibrogen, Inc. Dr. Brennan previously served on the board of directors of Ra Pharmaceuticals, Inc., until its acquisition by UCB. Dr. Brennan holds a medical degree from Trinity College in Dublin, Ireland and completed her post-graduate training in internal medicine, endocrinology and metabolism at the Royal College of Physicians in Ireland. Additionally, she completed her post-doctoral training in clinical research and metabolism at the Beth Israel Deaconess Medical Center in Boston and is a graduate of the Harvard Medical School Scholars in Clinical Science Program. The Board has concluded that Dr. Brennan possesses specific attributes that qualify her to serve as a member of our Board, including the perspective and experience she brings as our President and Chief Executive Officer, which brings operational expertise to our Board.

Peter Barrett, Ph.D., age 69, has served as Chairman of our Board since the Merger (defined below) closed on August 28, 2017, and prior to that time served as the Chairman of the Private Synlogic (defined below) board of directors since March 2014. Dr. Barrett is a partner at Atlas Venture and has been involved in the creation of several novel therapeutic and drug discovery platform companies. He is also a Senior Fellow at Harvard Business School, where he is the Faculty Chair of the Key Advisory Board of the Blavatnik Fellowship Program. Dr. Barrett currently serves on the board of Larimar Therapeutics and Obsidian Therapeutics. Prior to joining Atlas, Dr. Barrett was Co-founder, Executive Vice president, and Chief Business Officer of Celera Genomics, which announced the first successful sequencing of the human genome in 2001. While at Celera, Dr. Barrett led strategic alliances, acquisitions, and business strategy and helped launch it as a public company in 1999. Prior to founding Celera, Dr. Barrett held senior management positions at Applera, most recently serving as Vice President of corporate planning and business development. During his tenure, he ran several businesses and expanded the life science business through a series of licensing agreements, partnerships, and acquisitions. Dr. Barrett also serves on the board of the Perkin-Elmer Corporation. Dr. Barrett received a BS in chemistry from Lowell Technological Institute (now known as the University of Massachusetts, Lowell), and a Ph.D. in analytical chemistry from Northeastern University. He also

completed Harvard Business School's Management Development Program. The Board has concluded that Dr. Barrett possesses specific attributes that qualify him to serve as a member and chairman of the Board, including his 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.

Michael Burgess, M.B., Ch.B., Ph.D., age 59, has served as a member of our Board since January 2020. Dr. Burgess joined SpringWorks Therapeutics, a clinical-stage biopharmaceutical company that applies a precision medicine approach to acquiring, developing and commercializing life-changing medicines, in May 2021 as Head of Research and Development. Dr. Burgess currently serves on the board of directors at Turnstone Biologics, a clinical stage viral immunotherapy cancer company, and previously served as President of Research and Development at Turnstone Biologics, since October 2017, where he led the build out of the cancer immunotherapy R&D organization. Prior to Turnstone, Dr. Burgess led strategy and execution of translational medicine, early-stage clinical trials and clinical pharmacology across all therapeutic areas, including oncology at Bristol-Myers Squibb from January 2013 to September 2017. Prior to this, at Roche Pharmaceuticals, he held several senior leadership positions, including acting global head of Roche Pharma Research and Early Development (pRED) and Senior Vice President and Global Head of Oncology Research and Early Development. Before joining Roche, Dr. Burgess spent 7 years at Eli Lilly and Company working on early stage oncology trials. Dr. Burgess received his medical degree (M.B., Ch.B.) and a Ph.D. in molecular biology from the University of Bristol, UK and spent 10 years as a practicing physician in pediatrics and pediatric oncology. The Board has concluded that Dr. Burgess possesses specific attributes that qualify him to serve as a member of our Board, including his experience in the pharmaceutical industry and drug research and development.

Michael Heffernan, age 57, has served as a member of our Board since December 2020. Mr. Heffernan is a successful entrepreneur and biopharmaceutical leader with over 30 years of experience in building and leading development stage and commercial companies. He is the Founder and Chairman of Collegium Pharmaceutical, a publicly traded pharmaceutical company that he founded that is focused on developing and commercializing products for the treatment of chronic pain and related disorders. He served as its President and CEO from company inception until June 2018. Mr. Heffernan is currently an advisor, investor and board member in numerous public and private biotech companies. He recently co-founded Avenge Bio, Inc., an immuno-oncology company that he is actively managing and serves as the Chairman and CEO. Mr. Heffernan has held previous positions as CEO of Onset Dermatologics, a dermatology company that he founded and spun out of Collegium to create PreCision Dermatology which was sold to Valeant. He was co-founder and CEO of Clinical Studies Ltd., a pharmaceutical contract research organization that was sold to PhyMatrix Corp, a public healthcare services company, where he later served as CEO and Chairman. Mr. Heffernan began his career at Eli Lilly and Company and served in numerous sales and marketing roles. In addition to Collegium, Mr. Heffernan is currently on the board of directors of Akebia Therapeutics, Inc., Trevi Therapeutics, Inc., Biohaven Pharmaceuticals where he also serves as Chairman. He has served in a number of non-profit roles as both an advisor and board member. Mr. Heffernan was named E&Y Entrepreneur of the Year, Northeast Regional Winner in 2016. He is a registered pharmacist and earned his B.S. Degree in Pharmacy from the University of Connecticut. The Board has concluded that Mr. Heffernan possesses specific attributes that qualify him to serve as a member our Board, including his experience with the healthcare and pharmaceutical industries and his broad management experience.

Patricia Hurter, Ph.D., age 58, has served as a member of our Board since February 2019. Since September 2019, Dr. Hurter has served as CEO of Lyndra Therapeutics. Lyndra is a clinical-stage biopharmaceutical company pioneering long-acting oral therapies with a pipeline focused on therapies in central nervous system (CNS) disorders. Prior to Lyndra, Dr. Hurter was Senior Vice President of Pharmaceutical and Preclinical Sciences at Vertex Pharmaceuticals, Inc. from June 2014 to April 2019. She also served as Interim Head of Global Regulatory Affairs from 2013-2014 and oversaw several label expansions for Kalydeco® and the submission of the new drug application for Orkambi®. She played a leadership role in the development and commercialization of 5 transformative therapies for Vertex: Incivek®, Kalydeco®, Orkambi®, Symdeko® and Trikafta®. Prior to joining Vertex, Dr. Hurter was Director, Formulation Design and Characterization for Merck where she was a key member of the early development team for Januvia®, a treatment for Type II diabetes. A respected thought leader in the pharmaceutical industry, Dr. Hurter is a frequent contributor to many scientific publications. At Vertex, she founded and was the executive sponsor of "IWILL," a Vertex employee network devoted to the advancement of women leaders. She holds a Ph.D. in chemical engineering from the Massachusetts Institute of Technology, an M.S. in mechanical engineering from West Virginia University and earned a B.Sc. in chemical engineering, cum laude, from the University of KwaZulu-Natal in Durban, South Africa. She was elected to the National Academy of Engineering in 2021. The Board has concluded that Dr. Hurter possesses specific attributes that qualify her to serve as a member of our Board, including her experience in drug research and development, global regulatory affairs and GMP manufacturing.

Lisa Kelly-Croswell, age 55, has served as a member of our Board since February 2021. Ms. Kelly-Croswell serves as Senior Vice President and Chief Human Resources Officer for Boston Medical Center Health System (BMCHS), an academic medical center including a health plan as well as biomedical and clinical research portfolios. Prior to BMCHS, Ms. Kelly-Croswell was Senior Vice President, Human Resources at Vertex Pharmaceuticals, from July 2006 to June 2013, where she was part of the executive team evolving the company from an early stage biotech to a fully commercialized pharmaceutical company. Prior to Vertex, she served in senior leadership positions at Nitromed, CIGNA, and Monsanto Company. Ms. Kelly-Croswell began her career in a series of progressive HR positions at Frito-Lay, Inc. with a deeper focus in manufacturing. Ms. Kelly-Croswell received a B.S., Finance and M.A., Labor and Industrial Relations from the University of Illinois at Urbana-Champaign and is a current and past board member for multiple non-profit boards of directors. The Board has concluded that Ms. Kelly Croswell possesses specific attributes that qualify her to serve as a member of our Board, including her experience as a global human resources executive, and involvement in rapid business growth environments and innovative organizations.

Nick Leschly, age 49, has served as a member of our Board since the Merger (defined below) closed on August 28, 2017, and prior to that time served on the Private Synlogic (defined below) board of directors since March 2016. Mr. Leschly is the chief executive officer at 2Seventy Bio. Prior to that, he served as the chief bluebird of bluebird bio, Inc., a publicly-traded clinical-stage biotechnology company, since September 2010. Formerly a founding partner of Third Rock Ventures, L.P. since 2007, Mr. Leschly played an integral role in the overall formation, development and business strategy of several of Third Rock's portfolio companies, including Agios Pharmaceuticals. Prior to joining Third Rock, he worked at

Millennium Pharmaceuticals, Inc. (now a subsidiary of Takeda), leading several early-stage drug development programs and served as the product and alliance leader for VELCADE®. He received his B.S. in Molecular Biology from Princeton University and his M.B.A. from Wharton Business School. He also serves on the advisory boards for Princeton University Molecular Biology Department and the Special Olympics of Massachusetts. The Board has concluded that Mr. Leschly possesses specific attributes that qualify him to serve as a member of our Board, including his experience in the venture capital industry and drug research and development.

Edward Mathers, age 62, has served as a member of our Board since October 2012. Mr. Mathers previously served on the Private Synlogic (defined below) board of directors since July 2014. Mr. Mathers is a General Partner at NEA, a private venture capital firm focusing on technology and healthcare investments. Mr. Mathers serves on the board of directors of the following publicly-traded pharmaceutical companies: ObsEva SA, Trevi Therapeutics, Akouos, Inc, Inozyme Pharma, Mirum Pharmaceuticals, Rhythm Pharmaceuticals, Inc., and Reneo Pharmaceuticals, Inc. Mr. Mathers also serves on the board of directors of several privately held companies. From 2002 to 2008, Mr. Mathers served as Executive Vice President, Corporate Development and Venture at MedImmune, Inc., a biopharmaceutical company, and led its venture capital subsidiary, MedImmune Ventures, Inc. Before joining MedImmune in 2002, Mr. Mathers was Vice President, Marketing and Corporate Licensing and Acquisitions at Inhale Therapeutic Systems, a biotechnology company. Previously, Mr. Mathers spent 15 years at Glaxo Wellcome, Inc. (GlaxoSmithKline), a pharmaceutical company, where he held various sales and marketing positions. Mr. Mathers received a B.S. in Chemistry from North Carolina State University. The Board has concluded that Mr. Mathers possesses specific attributes that qualify him to serve as a member our Board, including his experience with the healthcare and pharmaceutical industries and his broad management experience.

Richard P. Shea, age 70, has served as a member of our Board since the Merger (defined below) closed on August 28, 2017. Mr. Shea served as the Chief Financial Officer of Syndax Pharmaceuticals, Inc. from February 2017 through July 2020. Mr. Shea previously served as a member of the Syndax Pharmaceuticals board of directors from January 2014 to February 2017. From July 2007 through December 2016, Mr. Shea served as Senior Vice President and Chief Financial Officer of Momenta Pharmaceuticals Inc., a publicly traded biotechnology company, and was its Vice President and Chief Financial Officer since October 2003. Prior to joining Momenta, Mr. Shea served as Chief Operating Officer and Chief Financial Officer of Variagenics Inc., a publicly traded pharmacogenomics company, that was merged with Hyseq Pharmaceuticals Inc., and as Vice President, Finance of Genetics Institute, Inc., a publicly traded biotechnology company, which was acquired by Wyeth Pharmaceuticals, Inc., which was then acquired by Pfizer, Inc. Mr. Shea received an A.B. from Princeton University and an M.B.A. from the Public Management Program at Boston University. The Board has concluded Mr. Shea possesses specific attributes that qualify him to serve as a member of our Board, including his experience with the healthcare and pharmaceutical industries and his broad life sciences industry knowledge.

Committees of the Board of Directors and Meetings

Meeting Attendance. During the fiscal year ended December 31, 2021, Synlogic's Board held four meetings, and the various committees of the Board met a total of fifteen times. All directors attended at least 75% of the total number of meetings of the Board and of committees of the Board on which he or she served during fiscal 2021. Synlogic's annual meeting was held on June 9, 2021 and all of Synlogic's nine directors attended the meeting. We encourage our directors to attend the Annual Meeting.

Audit Committee. Synlogic's Audit Committee met eight times during fiscal 2021. This committee currently has four members, Richard P. Shea (Chairman), Peter Barrett, Michael Burgess and Michael Heffernan. Our Audit Committee's role and responsibilities are set forth in the Audit Committee's written charter and include the authority to retain and terminate the services of our independent registered public accounting firm. In addition, the Audit Committee reviews annual financial statements, considers matters relating to accounting policy and internal controls and reviews the scope of annual audits. All members of the Audit Committee satisfy the current independence standards promulgated by the Securities and Exchange Commission and by the Nasdaq Stock Market, as such standards apply specifically to members of audit committees. The Board has determined that Mr. Shea is an "audit committee financial expert," as the Securities and Exchange Commission has defined that term in Item 407 of Regulation S-K. Please also see the report of the Audit Committee set forth elsewhere in this proxy statement.

A copy of the Audit Committee's written charter is publicly available on our website at www.synlogictx.com.

Compensation Committee. Synlogic's Compensation Committee met three times during fiscal 2021. This committee currently has three members, Lisa Kelly-Crosswell (Chair), Nick Leschly and Ed Mathers. Our Compensation Committee's role and responsibilities are set forth in the Compensation Committee's written charter and includes reviewing, approving and making recommendations regarding our compensation policies, practices and procedures to ensure that legal and fiduciary responsibilities of the Board are carried out and that such policies, practices and procedures contribute to our success. Our Compensation Committee also administers our 2015 Equity Incentive Award Plan, 2017 Stock Incentive Plan, and 2015 Employee Stock Purchase Plan. The Compensation Committee reviews and recommends policies relating to compensation and benefits of our officers and employees. The Compensation Committee reviews and recommends corporate goals and objectives relevant to compensation of our Chief Executive Officer and other executive officers, evaluates the performance of these officers in light of those goals and objectives and may approve the compensation of the executive officers, other than the Chief Executive Officer, whose compensation the Compensation Committee recommends to the Board, based on such evaluations. The Compensation Committee also recommends to the Board the issuance of stock options and other awards under our stock plans. The Board has delegated authority to our Chief Executive Officer to grant options to new hire employees as well as certain other employees in connection with their promotion who (i) are not then subject or who are reasonably expected to become subject to Section 16 of the Exchange Act, or (ii) persons then or who are reasonably expected to be "covered employees" for purposes of Section 162(m) of the Internal Revenue Code of 1986, as amended. The purpose of this delegation of authority is to enhance the flexibility of option administration within the Company and to facilitate the timely grant of options within specified limits approved by the Board. All members of the Compensation Committee qualify as independent under the definition promulgated by the Nasdaq Stock Market.

The Compensation Committee has the authority to directly retain the services of independent consultants and other experts to assist in fulfilling its responsibilities. The Compensation Committee has engaged the services of Radford, a business unit of Aon plc (“Radford”), a national executive compensation consulting firm, to review and provide recommendations concerning all of the components of the Company’s executive compensation program. Radford performs services solely on behalf of the Compensation Committee and has no relationship with the Company or management except as it may relate to performing such services. Radford assists the Committee in defining the appropriate market of the Company’s peer companies for executive compensation and practices and in benchmarking our executive compensation program against the peer group each year. Radford also assists the Committee in benchmarking our director compensation program and practices against those of our peers. In compliance with the SEC and the corporate governance rules of the Nasdaq Stock Market, Radford provided the Compensation Committee with a letter addressing each of the six independence factors. Their responses affirm the independence of Radford and the partners, consultants, and employees who service the Compensation Committee on executive compensation matters and governance issues.

A copy of the Compensation Committee’s written charter is publicly available on our website at www.synlogictx.com.

Nominating and Governance Committee. Synlogic’s Nominating and Governance Committee met four times during fiscal 2021. This committee currently has three members, Michael Heffernan (Chairman), Lisa Kelly-Croswell and Patricia Hurter. Our Board has determined that all members of the Nominating and Governance Committee qualify as independent under the definition promulgated by the Nasdaq Stock Market. The Nominating and Governance Committee’s responsibilities are set forth in the Nominating and Governance Committee’s written charter and include: identification of qualified candidates to become Board members consistent with criteria approved by the Board; selection, or recommendation of selection to the Board, of nominees for election as directors at the next annual meeting of stockholders (or special meeting of stockholders at which directors are to be elected); selection, or recommendation of selection to the Board, of candidates to fill any vacancies on the Board; evaluation of and recommendation to the Board of any changes to the authorized size of the Board; assignment and rotation of Board members to various Board committees; review and recommendation to the Board of revisions to the Corporate Governance Guidelines; oversight of the evaluation of the Board and its various committees; and assistance with the selection of candidates for future executive officers as well the promotion and changes in position of incumbent executive officers.

Generally, our Nominating and Governance Committee considers candidates recommended by stockholders as well as from other sources such as other directors or officers, third party search firms or other appropriate sources. Once identified, the Nominating and Governance Committee will evaluate a candidate’s qualifications in accordance with our Corporate Governance Guidelines. Threshold criteria include: personal and professional integrity, ethics and values; absence of conflict of interest; fair and equal representation of all stockholders; commitment to promoting long term value of the company; experience in corporate management, such as serving as an officer or former officer of a publicly held company; strong finance experience; experience relevant to the Company’s industry; experience as a board member or executive officer of another publicly held company; diversity of expertise and experience in substantive matters pertaining to the Company’s business relative to other members of the Board; diversity of background and perspective, including with respect to age, gender, race, place of residence and specialized business or career experience relevant to the success of the Company; practical and mature business judgment, including the ability to make independent analytical inquiries; and any other relevant qualifications, attributes or skills. Our Nominating and Governance Committee has not adopted a formal diversity policy in connection with the consideration of director nominations or the selection of nominees. However, the Nominating and Governance Committee will consider issues of diversity among its members in identifying and considering nominees for director and strive where appropriate to achieve a diverse balance of backgrounds, perspectives, business and career experience on the Board and its committees.

If a stockholder wishes to propose a candidate for consideration as a nominee for election to the Board, it must follow the procedures described in our bylaws, the “Policy on Stockholder Recommendation of Candidates for Election as Directors” set forth as Appendix B of the Committee Charter, and in “Stockholder Proposals and Nominations for Director” at the end of this proxy statement. In general, persons recommended by stockholders will be considered in accordance with our Corporate Governance Guidelines. Any such recommendation should be made in writing to the Nominating and Governance Committee, care of our Secretary at our principal office and should be accompanied by the following information concerning each recommending stockholder and the beneficial owner, if any, on whose behalf the nomination is made:

- all information relating to such person that would be required to be disclosed in a proxy statement or other filings required to be made in connection with solicitations of proxies for election of directors in a contested election pursuant to Section 14(a) under the Exchange Act (including such proposed nominee’s written consent to being named in the proxy statement as a nominee and to serving as a director if elected);
- certain biographical and share ownership information about the stockholder and any other proponent, including a description of any derivative transactions in the Company’s securities;
- a description of certain arrangements and understandings between the proposing stockholder and any beneficial owner and any other person in connection with such stockholder nomination; and
- a statement whether or not either such stockholder or beneficial owner intends to deliver a proxy statement and form of proxy to holders of voting shares sufficient to carry the proposal.

The recommendation must also be accompanied by the following information concerning the proposed nominee:

- certain biographical information concerning the proposed nominee;
- all information concerning the proposed nominee required to be disclosed in solicitations of proxies for election of directors;
- certain information about any other security holder of the Company who supports the proposed nominee;

- a description of all relationships between the proposed nominee and the recommending stockholder or any beneficial owner, including any agreements or understandings regarding the nomination; and
- additional disclosures relating to stockholder nominees for directors, including completed questionnaires and disclosures required by our Bylaws.

A copy of the Nominating and Governance Committee's written charter is publicly available on the Company's website at www.synlogictx.com.

Science & Technology Committee. Synlogic's Science and Technology Committee was constituted by the Board in March 2022. This committee currently has three members, Michael Burgess (Chairman), Peter Barrett, and Patricia Hurter. Our Board has determined that all members of the Science and Technology Committee qualify as independent under the definition promulgated by the Nasdaq Stock Market. When the Committee formally meets, it is expected to advise the Board and management on the strategy, objectives and priorities, as well as robustness and quality, of the Company's current and planned research and development programs and technology initiatives as well as such other topics as deemed appropriate.

The Science & Technology Committee is currently preparing a written charter, given its recent formation, that will be publicly available on the Company's website at www.synlogictx.com in the near future.

Board Leadership Structure and Role in Risk Oversight

Leadership Structure of the Board

Our Board has separated the positions of Chairman of the Board and Chief Executive Officer. Separating these positions allows our Chief Executive Officer to focus on our day-to-day business, while allowing the Chairman of our Board to lead the Board in its fundamental role of providing advice to and independent oversight of management. Our Board recognizes the time, effort and energy that the Chief Executive Officer is required to devote to such position in the current business environment, as well as the commitment required to serve as Chairman of our Board, particularly as the Board's oversight responsibilities continue to grow. While our bylaws and corporate governance guidelines do not require that the Chairman and Chief Executive Officer positions be separate, our Board believes that having separate positions and having an independent outside director serve as Chairman is the appropriate leadership structure for us currently. Our Board will continue to periodically review our leadership structure and may make such changes in the future as it deems appropriate.

Role of Board in Risk Oversight Process

Risk assessment and oversight are an integral part of our governance and management processes. Our Board encourages management to promote a culture that incorporates risk management into our corporate strategy and day-to-day business operations. Management discusses strategic and operational risks at regular management meetings and conducts specific strategic planning and review sessions during the year that include a focused discussion and analysis of the risks facing us. Throughout the year, senior management reviews these risks with our Board at regular Board meetings as part of management presentations that focus on particular business functions, operations or strategies, and presents the steps taken by management to mitigate or eliminate such risks.

Our Board does not have a standing risk management committee, but rather administers this oversight function directly through the Board as a whole, as well as through various standing committees of the Board that address risks inherent in their respective areas of oversight. In particular, our Board is responsible for monitoring and assessing strategic risk exposure and the Audit Committee is responsible for overseeing our major financial risk exposures, information technology, cybersecurity and other risks, and the steps management has taken to monitor and control these exposures. The Audit Committee also monitors compliance with legal and regulatory requirements and considers and approves or disapproves any related-persons transactions. Our Nominating and Governance Committee monitors the effectiveness of our corporate governance. The Compensation Committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

Corporate Responsibility

We are committed to developing transformative medicines for patients in a socially responsible and sustainable manner.

Environmental Awareness: We lease our office and manufacturing facilities. Nevertheless, we recognize the importance of taking other measures to reduce our environmental footprint. Some of our efforts include our commitment to reduce, reuse or recycle where possible or appropriate.

Social and Human Capital: At Synlogic, we believe in fostering diversity, equity and inclusion (DEI) as it is critical to our success. Strengthening our diversity is an expression of our values and imperative for our business. We believe our science has the potential to deliver transformative benefit to patients, and we are committed to bringing innovation forward by embracing the diversity of our team and the patients we serve, and by ensuring all of our community has access to opportunities and innovative therapies.

We are committed to creating a diverse and inclusive environment, embracing individuality in all forms including ability, age, color, ethnicity, family or marital status, gender identity or expression, genetics, language, national origin, political affiliation, race, religion, sexual orientation, socio-economic status, veteran status, and any other individual differences or characteristics, education, skill sets and experience. We are focused on inclusive hiring practices, fair and equitable treatment, organizational flexibility and training and resources.

We recognize that our employees are essential to our success. To this end, we support business growth by seeking to attract and retain best-in-class talent. We use internal and external resources to recruit highly skilled candidates for open positions. We believe that we are able to attract and retain the talent that is required to meet our business goals. In addition to full-time hiring, we currently partner with three separate organizations focused on under-represented and underserved communities to provide internship opportunities.

While we strive to provide real-time recognition of employee performance, we have a formal annual review process not only to determine pay and equity adjustments tied to individual contributions, but to identify areas where employees may benefit from additional training and development opportunities.

We believe in encouraging employees to be lifelong learners by providing ongoing learning and leadership training opportunities which helps us to promote key talent from within. We have partnered with the Commonwealth Corporation and a leading external training provider to provide a broad training curriculum of professional skills to all employees.

Our total rewards philosophy has been to invest in our workforce by offering a competitive compensation and benefits package. We provide employees with compensation packages that include base salary, annual incentive bonuses and long-term equity incentive awards. Our equity incentive awards ensure alignment between our employees and shareholders and encourage an ownership mentality. We also recognize success through an ongoing peer-to-peer and manager-led recognition program, and annual awards aligned to our goals and values.

We also offer comprehensive employee benefits, such as life, disability and health insurance, health savings and flexible spending accounts, paid time off, a 401(k) plan with market-competitive company matching contributions, and an Employee Stock Purchase Plan (ESPP). It is our express intent to be an employer of choice in our industry by providing a market-competitive compensation and benefits package.

We also conduct employee engagement surveys on a regular basis to help us understand employee satisfaction and how best to improve as an organization. Our Social Committee, consisting of employees from various functions, is dedicated to organizing activities, such as themed social gatherings, volunteer opportunities, and other events that enrich our culture and bring employees together. We also encourage employees to take one paid day off a calendar year to volunteer for the organization of their choice.

We also have an Equity, Diversity, and Inclusion Committee, comprised of employees at various levels of our organization, focused on increasing the inclusive culture of the company, and diversity of our workforce. As of December 31, 2021, women comprise 48% of our workforce, and 50% of our Executive Team including our CEO. Our employees are 28% BIPOC (Black, Indigenous, and people of color), with a focus on ensuring our candidate pools, and thus hires, appropriately represents our communities and the patients we serve.

We have always invested, and will continue to invest, in the health, safety, and wellness of our employees. We provide our employees with access to a variety of innovative, flexible, and convenient health and wellness programs. Program benefits are intended to provide protection and security, so employees can have peace of mind concerning events that may require time away from work or that may impact their financial well-being. We provide an Employee Assistance Program (“EAP”) which provides consultation, referrals and resources to help employees and their household manage everyday life and work challenges. We also reimburse for fitness and other similar programs, as well as offer periodic health challenges to encourage health and well-being.

We have occupational health and safety measures that apply to all our employees, contractors and visitors. We have convened a cross-functional Safety Committee to identify and address concerns and look for areas to improve. We train individuals commensurate with their level of risk and employees are required to report incidents and are encouraged to voice any health or safety concerns to management or a Safety team member.

Our investments and the prioritization of employee health, safety, and wellness have taken on particular significance in light of the COVID-19 pandemic. To protect and support our team members, we have created a cross-functional COVID response team and implemented health and safety measures that include maximizing personal workspaces, altering work schedules, mandating vaccines, and providing asymptomatic COVID-19 testing regularly for employees who work on site. To aid in containing the spread of COVID-19, we have implemented remote-work options and have at times limited employee travel.

We are committed to the community and we and our employees participate in multiple charitable endeavors each year. We partner with external non-profits, such as Life Science Cares, to provide further opportunities to engage with our local community. We also regularly engage directly with patients to better understand the lives of people living with rare disease which we believe can help us discover and develop potential therapies, design and execute our clinical trials, and enrich our culture. We benefit from periodic company-wide patient speaking events to ensure all our employees understand the challenges faced by the patients we serve.

Governance, Ethics, and Compliance: Our Board is committed to corporate governance, risk oversight, and ethics and compliance. Our Board has adopted Corporate Governance Guidelines, which present a framework for good corporate governance practices. The Board has also adopted a Code of Conduct and Business Ethics for all directors, officers and employees as well as a Whistleblower Policy applicable to its employees that provides for protection from retaliation due to reporting issues relating to compliance with applicable laws and regulations. We also provide for continuing education for Directors, a separate CEO and Chair Role, full independence among standing members of audit, compensation and nominating and corporate governance committees, and regular Board and Committee self-evaluation.

We will continue to evolve and strengthen our corporate responsibility efforts and anticipate reporting on other measures over time.

Policy Prohibiting Hedging and Pledging

Pursuant to our Insider Trading Policy, our officers, directors, employees and consultants are prohibited from engaging in transactions in publicly traded options, such as puts and calls, and other derivative securities with respect to our common stock at any time. This prohibition extends to any hedging, pledging or similar transaction designed to decrease the risks associated with holding our securities.

Stockholder Communications to the Board

Generally, stockholders who have questions or concerns should contact our Investor Relations department at (617) 401-9975. However, any stockholders who wish to address questions regarding our business directly with the Board, or any individual director, should direct his or her questions in writing to the Chairman of the Board at Synlogic, Inc., 301 Binney Street, Suite 402, Cambridge MA 02142. Communications will be distributed to the Board, or to any individual director or directors as appropriate, depending on the facts and circumstances outlined in the communications. Items that are unrelated to the duties and responsibilities of the Board may be excluded, such as: junk mail and mass mailings, resumes and other forms of job inquiries, surveys, and solicitations or advertisements.

In addition, any material that is unduly hostile, threatening, or illegal in nature may be excluded, provided that any communication that is filtered out will be made available to any outside director upon request.

Executive Officers

The following table sets forth certain information regarding our executive officers who are not also directors as of April 1, 2022. We have employment or consulting agreements with each of our executive officers.

Name	Age	Position
Antoine Awad	42	Chief Operating Officer
Michael Jensen	46	Chief Financial Officer

Antoine (Tony) Awad, age 42, joined Synlogic as a consultant in October 2018 and became a full-time employee in December 2018 as Head of Technical Operations and has served as Synlogic's Chief Operating Officer since July 2020. He is responsible for process sciences and manufacturing functions for the Company, as well as operations, information technology and facilities. Mr. Awad has over 18 years of experience in the biotechnology and pharmaceutical industry with substantial and notable experience in the development and manufacturing of multiple modalities of novel therapeutics from pre-IND studies through global commercialization. Mr. Awad resides as an advisor to the board of directors and executive team of Verseau, the macrophage company. Prior to joining Synlogic, Mr. Awad was most recently at Abpro Therapeutics and served as Senior Vice President of CMC and Operations, from October 2017 to October 2018, where he was responsible for the development of bi-specific antibodies for oncology focused therapeutics while leading corporate operational functions, including HR, IT and facilities. Prior to that, from March 2017 to May 2017, he served as Senior Vice President of Technical Operations and Manufacturing at L.E.A.F. Pharmaceuticals focused on developing small molecules and nanotechnology based drugs for solid tumors. Previously, Mr. Awad held positions of increasing responsibilities over a ten-year period at Merrimack Pharmaceuticals, from August 2007 to March 2017. As Head of Process Sciences & Manufacturing, Mr. Awad led CMC development, manufacturing and approval of ONIVYDE® for treatment of advanced pancreatic cancer and transitioned to Ipsen Bioscience to integrate and lead commercial manufacturing of ONIVYDE®. Mr. Awad has broad experience in partnerships, collaboration and M&A, most notably with Sanofi, Baxalta/Shire plc, Actavis Pharma/Teva Pharmaceutical Industries and Ipsen Bioscience. Mr. Awad is a graduate of Boston University and holds degree in biochemistry and molecular biology and conducted graduate research at Boston University School of Dental Medicine.

Michael Jensen, age 46, joined Synlogic in March 2022 as our Chief Financial Officer, and is responsible for the oversight and direction of finance, tax, accounting, treasury, and investor relations. He brings with him two decades of experience in finance and accounting leadership roles within the life science industry, ranging from venture-backed start-ups to global publicly traded pharmaceutical and medical device companies. Prior to joining Synlogic, from March 2020 to March 2022, Mr. Jensen was the CFO at Intrinsic Therapeutics, a commercial-stage medical device company focused on delivering treatments to improve surgical efficacy. Prior to Intrinsic Therapeutics, from March 2019 to March 2020, Mr. Jensen was the CFO at Taconic Biosciences. Prior to Taconic Biosciences, Mr. Jensen was the CFO at IWP, from December 2016 to February 2019. Mr. Jensen has held financial leadership roles at several biotech and healthcare companies including Straumann North America, Siemens Healthcare Diagnostics, Novartis, and Novo Nordisk Inc. Mr. Jensen holds a Master of Economics and Business Administration degree from Copenhagen Business School in Copenhagen, Denmark, and a Bachelor of Business Administration degree from Towson University in Baltimore, MD. Mr. Jensen also served as an Officer in the Royal Danish Army.

Summary Compensation Table

The following table presents information regarding the total compensation paid or accrued during the last two fiscal years for (1) our Chief Executive Officer, (2) our two next most highly compensated executive officers who earned more than \$100,000 during the fiscal year ended December 31, 2021 and who were serving as executive officers as of such date, and (3) our former Chief Medical Officer (collectively the “Named Executive Officers”).

	Year	Salary (\$)	Stock Awards (1) (\$)	Option Awards (2) (\$)	Non-Equity Incentive Plan Compensation (3) (\$)	All Other Compensation (4) (\$)	Total (\$)
Aoife M. Brennan, MB, BCh, BAO, MMSc <i>President and Chief Executive Officer</i>	2021	569,500	249,375	721,444	313,225	8,700	1,862,244
	2020	550,000	78,710	204,773	261,300	5,700	1,100,483
Antoine Awad (5) <i>Chief Operating Officer</i>	2021	391,040	61,250	177,197	173,622	8,257	811,366
	2020	359,000	29,750	168,931	159,424	5,700	722,805
Richard Riese, M.D., Ph.D. (6) <i>Former Chief Medical Officer</i>	2021	323,369	61,250	177,197	—	8,700	570,516
	2020	414,000	22,950	59,675	157,320	5,700	659,645
Gregg Beloff <i>Interim Chief Financial Officer</i>	2021	225,472	—	79,690	—	—	305,452
	2020	267,400	—	—	—	—	267,400

- (1) The amounts reported represent the aggregate grant date fair value of restricted stock awards granted as estimated pursuant to FASB ASC 718, Compensation—Share based compensation (ASC 718). See Note 9 of the Company’s Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2021 for the assumptions used in calculating this amount.
- (2) The amounts reported represent the aggregate grant date fair value of option awards granted as estimated pursuant to FASB ASC 718, Compensation—Share based compensation (ASC 718). See Note 9 of the Company’s Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2021 for the assumptions used in calculating this amount.
- (3) The amounts reported represent bonuses paid based on the Board’s determination of achievement of pre-established performance criteria as outlined in each individual employment agreement for the years ended December 31, 2021 and 2020, as indicated.
- (4) Amount represents employer matching contribution to the named executive officer’s account under the 401(k) plan.
- (5) Mr. Awad’s 2020 option awards include an equity grant in connection with his promotion to Chief Operating Officer in July 2020.
- (6) Dr. Riese resigned as our Chief Medical Officer, effective July 29, 2021, in order to pursue another opportunity.

Narrative Disclosure to Summary Compensation Table

Historically, the Company’s executive compensation program has reflected our innovative and growth-oriented corporate culture and is designed to attract, retain and incentivize and align executives with both short- and long-term company objectives. To date, the compensation of the Company’s Chief Executive Officer and our other executive officers has consisted of a combination of base salary, cash bonuses and long-term incentive compensation paid in the form of equity. The named executive officers, like all full-time employees, are eligible to participate in the Company’s health and welfare benefit plans. The Company will continue to evaluate its compensation values and philosophy and compensation plans and arrangements as circumstances require. The Company will review executive compensation from time to time at the discretion of the Compensation Committee. As part of this review process, the Board and Compensation Committee will apply the values and philosophy, while considering the compensation levels needed to ensure the organization’s executive compensation program remains competitive and aligns incentives with the goals of the organization.

Base Salary

In March 2022, the Compensation Committee and the Board approved an annual increase in base salaries for certain employees effective as of January 1, 2022, resulting in an annual base salary of \$595,128 for Dr. Brennan and an annual base salary of \$410,592 for Mr. Awad. In October 2019, the Company appointed Gregg Beloff as Interim Chief Financial Officer. Mr. Beloff is the founder and Managing Director of Danforth Advisors, LLC (“Danforth”). The Company entered into a Consulting Agreement with Danforth and will pay Danforth at an hourly rate for Mr. Beloff’s services, subject to an annual increase each year and will reimburse Danforth for expenses. Pursuant to the Consulting Agreement, the Company paid Danforth \$225,472 in 2021 and \$267,400 in 2020 for Mr. Beloff’s services.

Annual Bonuses

The Company’s employment agreements with its executive officers provide for the opportunity to earn a cash bonus based upon achievement of both corporate and individual goals determined by the Board based on a target percentage of annual base salary. In March 2022, the Board awarded Dr. Brennan a cash bonus of \$313,225, which represented 55.0% of her annual base salary, in recognition of her services provided in the year ended December 31, 2021 and in accordance with the terms of her employment agreement and bonus assessment. In March 2022, the Compensation Committee awarded Mr. Awad a cash bonus of \$173,622, which represented 44.0% of his annual base salary in recognition of his services provided in the year ended December 31, 2021 and in accordance with the terms of his employment agreement and bonus assessment.

Equity Awards

In 2022, in connection with the Compensation Committee and the Board's assessment of 2021 performance, the Company granted the following options to its current named executive officers: Dr. Brennan was granted an option to purchase 434,160 shares of common stock, and Mr. Awad was granted an option to purchase 165,490 shares of common stock, with each option having an exercise price of \$1.95 per share and subject to vesting at a rate of 1/48th of the total number of shares subject thereto per month over four years. Additionally, Dr. Brennan was granted 106,920 shares of restricted common stock, and Mr. Awad was granted 40,820 shares of restricted common stock, each subject to vesting in equal annual installments over four years. In December 2021, the Company made a one-time grant of an option to Mr. Beloff to purchase an aggregate of 50,000 shares of the Company's common stock at an exercise price of \$2.34 per share (the fair market value on the date of the grant) which option will vest on a monthly basis in 1/12 increments starting November 1, 2021, with 100% of the shares to be vested on November 1, 2022, so long as Mr. Beloff continues providing his services to the Company, and otherwise to be in accordance with the Company's form of stock option agreement, provided however, that an aggregate of 50% of the shares covered by the option shall be vested immediately if the Company terminates Mr. Beloff's services before May 1, 2022.

Outstanding Equity Awards at Fiscal Year End

The following table presents the outstanding equity awards held by each of the named executive officers as of December 31, 2021. All equity awards set forth in the table below were granted under the 2015 Stock Incentive Plan except for the awards with a grant date of May 15, 2017 which were granted under the 2017 Equity Incentive Award Plan.

	Grant Date	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 of Stock That Have Not Vested ⁽¹⁾ (\$)
Aoife M. Brennan, MB, BCh, BAO, MMSc	5/15/2017	41,490	—	\$13.53	5/15/2027		
<i>President and Chief Executive Officer</i>	5/15/2017	42,413	—	\$13.53	5/15/2027		
(2)	3/14/2018	52,470	3,530	\$9.95	3/14/2028		
(3)	6/5/2018	47,250	6,750	\$9.55	6/5/2028		
(4)	10/31/2018	118,750	31,250	\$7.91	10/31/2028		
(5)	3/5/2019	127,188	57,812	\$8.59	3/5/2029		
(6)	3/10/2020	77,200	108,100	\$1.70	3/10/2030		
(7)	3/10/2020					34,725	84,035
(8)	3/10/2021	47,496	237,504	\$3.50	3/10/2031		
(9)	3/10/2021					71,250	172,425
Antoine Awad	(10) 2/28/2019	41,230	13,770	\$8.69	2/28/2029		
<i>Chief Operating Officer</i>	(5) 3/5/2019	6,864	3,136	\$8.59	3/5/2029		
(6) 3/10/2020	29,160	40,840	\$1.70	3/10/2030			
(7) 3/10/2020					13,125	31,763	
(11) 7/14/2020	24,786	45,214	\$1.85	7/14/2030			
(8) 3/10/2021	11,664	58,336	\$3.50	3/10/2031			
(9) 3/10/2021					17,500	42,350	
Gregg Beloff	10/23/2019	50,000	—	\$2.30	10/23/2029		
<i>Interim Chief Financial Officer</i>	(12) 12/6/2021	4,166	45,834	\$2.34	12/6/2031		
Richard Riese, M.D., Ph.D.	(13)						
<i>Former Chief Medical Officer</i>							

- (1) The market value of the stock awards is determined by multiplying the number of shares by \$2.42, the closing price of our common stock on the Nasdaq Global Market on December 31, 2021, the last trading day of our fiscal year.
- (2) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through March 14, 2022.
- (3) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through June 5, 2022.
- (4) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through October 2, 2022.
- (5) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through March 5, 2023.
- (6) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through April 1, 2024.
- (7) The restricted shares under this award are scheduled to vest in equal annual installments starting April 1, 2020 through April 1, 2024.
- (8) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through April 1, 2025.
- (9) The restricted shares under this award are scheduled to vest in equal annual installments starting April 1, 2021 through April 1, 2025.
- (10) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through December 17, 2022.
- (11) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through July 1, 2024.
- (12) The unvested shares under this option are scheduled to vest in approximately equal monthly installments through November 1, 2022.
- (13) Dr. Riese resigned as Chief Medical Officer, effective July 1, 2021, and did not hold any outstanding options or shares of restricted stock as of December 31, 2021.

Employment and Consulting Agreements and Potential Payments Upon Termination of Employment or Change in Control

The Company has entered into employment agreements with each of our named executive officers as described below, as well as standard confidential information and/or inventions assignment agreements under which each of the named executive officers has agreed not to disclose confidential information. These employment agreements provide for “at will” employment.

Aoife M. Brennan, MB, BCh, BAO, MMSc

In connection with her appointment as President and Chief Executive Officer in October 2018, we entered into an amended and restated employment arrangement with Dr. Brennan (the “Amended and Restated Employment Agreement”), pursuant to which Dr. Brennan was entitled to receive (i) an annual base salary of \$490,000 commencing as of October 2, 2018 (the “CEO Salary”), (ii) a target bonus of 40% of the CEO Salary and (iii) a one-time grant of an option to purchase an aggregate of 150,000 shares of common stock at an exercise price of \$7.91 (the fair market value on the date of the grant), which option will vest as to one-fourth of the shares on the first anniversary of Dr. Brennan’s start date as President and Chief Executive Officer and as to the remainder in equal monthly installments for the following 36 months, continuing for so long as Dr. Brennan continues to serve as the Company’s President and Chief Executive Officer. In March 2019, the Board, upon recommendation of the Compensation Committee, approved an increase in Dr. Brennan’s base salary to \$505,000, effective as of January 1, 2019, and an increase in the target annual cash bonus amount for 2019 for Dr. Brennan from 40% of base salary to 50% of base salary. In March 2022, the Board, upon recommendation of the Compensation Committee, approved an increase in Dr. Brennan’s base salary to \$595,128, effective as of January 1, 2022.

The Amended and Restated Employment Agreement provides that, in the event that Dr. Brennan’s employment is terminated for any reason other than for “cause,” death or “disability,” or by Dr. Brennan for “good reason” (each as defined in the Amended and Restated Employment Agreement), she will be entitled to receive (i) continuing severance pay at a rate equal to 100% of her base salary, as then in effect, for a period of 12 months from the date of such termination, to be paid periodically in accordance with normal Company payroll practices; (ii) the right to continue health care benefits under COBRA, paid by the Company until the earlier of (a) 12 months from termination, or (b) the date on which Dr. Brennan becomes eligible for healthcare insurance with a subsequent employer, and (iii) a lump-sum payment equal to the prorated portion of the target bonus for the fiscal year in which Dr. Brennan is terminated.

The Amended and Restated Employment Agreement provides that, in the event Dr. Brennan’s employment is terminated on account of death, “disability,” resignation for “good reason” or without “cause,” in any case, within the 12-month period immediately following or the 30-day period immediately prior to a “change in control,” then Dr. Brennan’s outstanding unvested restricted stock and/or options shall become fully vested.

In addition, Dr. Brennan has entered into a non-solicitation and non-competition agreement that applies for 12 months following her employment.

Antoine (Tony) Awad

We entered into an employment agreement with Mr. Awad in December 2018 as Head of Technical Operations, which initially provided for (i) an annual base salary of \$325,000 commencing as of December 17, 2018 (the “Start Date”), (ii) a target bonus of 30% of his base salary based on the achievement of corporate and/or individual performance goals, as determined by the Board, (iii) a one-time grant of an option to purchase an aggregate of 55,000 shares of common stock at an exercise price of \$8.69 (the fair market value on the date of the grant), which option will vest as to one-fourth of the shares on the first anniversary of Mr. Awad’s start date as Head of Technical Operations and as to the remainder in equal monthly installments for the following 36 months, continuing for so long as Mr. Awad continues to serve as the Company’s Head of Technical Operations, and (iv) a sign-on bonus in the amount of \$25,000, less any applicable withholding or other taxes, paid out by December 31, 2018.

In connection with his appointment as Chief Operating Officer in July 2020, the Board, upon recommendation of the Compensation Committee, approved: (1) an increase in Mr. Awad’s base salary to \$376,000, effective as of July 1, 2020, (ii) a target bonus of 40% and (iii) a grant of an option to purchase an aggregate of 70,000 shares of the Company’s common stock at an exercise price of \$1.85 (the fair market value on the date of the grant) which option vests in equal monthly installments for 48 months. In March 2022, the Board, upon recommendation of the Compensation Committee, approved an increase in Mr. Awad’s base salary to \$410,592, effective as of January 1, 2022.

Mr. Awad’s employment agreement provides that, in the event that Mr. Awad’s employment is terminated for any reason other than for “cause,” death or “disability,” or by Mr. Awad for “good reason” (each as defined in his employment agreement), he will be entitled to receive (i) continuing severance pay at a rate equal to 100% of his base salary, as then in effect, for a period of six months from the date of such termination, to be paid periodically in accordance with normal Company payroll practices; (ii) the right to continue health care benefits under COBRA, paid by the Company until the earlier of (a) six months from termination, or (b) the date on which Mr. Awad becomes eligible for healthcare insurance with a subsequent employer, and (iii) a lump-sum payment equal to the prorated portion of the target bonus for the fiscal year in which Mr. Awad is terminated.

Mr. Awad’s employment agreement provides that, in the event Mr. Awad’s employment is terminated on account of death, “disability,” resignation for “good reason” or without “cause,” in any case, within the 12-month period immediately following or the 30-day period immediately prior to a “change in control,” then Mr. Awad’s outstanding unvested restricted stock and/or options shall become fully vested.

In addition, Mr. Awad has entered into a non-solicitation and non-competition agreement that applies for 12 months following his employment.

We entered into an employment agreement with Dr. Riese in July 2019 as Chief Medical Officer, that initially provided for (i) an annual base salary of \$400,000 commencing as of September 16, 2019 (the “Start Date”), (ii) a target bonus of 40% of his base salary based on the achievement of corporate and/or individual performance goals, as determined by the Board, (iii) a one-time grant of an option to purchase an aggregate of 150,000 shares of common stock at an exercise price of \$2.58 (the fair market value on the date of the grant), which option will vest as to one-fourth of the shares on the first anniversary of Dr. Riese’s start date as Chief Medical Officer and as to the remainder in equal monthly installments for the following 36 months, continuing for so long as Dr. Riese continues to serve as the Company’s Chief Medical Officer, and (iv) a sign-on bonus in the amount of \$50,000, less any applicable withholding or other taxes, payable in the first quarter of 2020.

In March 2021, the Board, upon recommendation of the Compensation Committee, approved an increase in Dr. Riese’s base salary to \$426,420, effective as of January 1, 2021.

Dr. Riese’s employment agreement provided that, in the event that Dr. Riese’s employment was terminated for any reason other than for “cause,” death or “disability,” or by Dr. Riese for “good reason” (each as defined in his employment agreement), he would be entitled to receive (i) continuing severance pay at a rate equal to 100% of his base salary, as then in effect, for a period of six months from the date of such termination, to be paid periodically in accordance with normal Company payroll practices; (ii) the right to continue health care benefits under COBRA, paid by the Company until the earlier of (a) six months from termination, or (b) the date on which Dr. Riese becomes eligible for healthcare insurance with a subsequent employer, and (iii) a lump-sum payment equal to the prorated portion of the target bonus for the fiscal year in which Dr. Riese is terminated.

Dr. Riese’s employment agreement provided that, in the event Dr. Riese’s employment was terminated on account of death, “disability,” resignation for “good reason” or without “cause,” in any case, within the 12-month period immediately following or the 30-day period immediately prior to a “change in control,” then Dr. Riese’s outstanding unvested restricted stock and/or options would become fully vested.

In addition, Dr. Riese has entered into a non-solicitation and non-competition agreement that applies for 12 months following his employment.

Dr. Riese resigned as our Chief Medical Officer, effective July 29, 2021, in order to pursue another opportunity.

The following definitions apply to Dr. Brennan’s and Mr. Awad’s employment agreements, and prior to his resignation, Dr. Riese’s employment agreement:

“Cause” is defined as the executive’s (i) conviction of a felony, plea of guilty or “no contest” to a felony, or confession of guilt to a felony, in each case whether or not in connection with the performance of the executive’s duties to the Company; (ii) act or omission which constitutes willful misconduct or negligence that results in loss, damage or injury to the Company or its prospects, including, but not limited to (A) disloyalty, dishonesty or a breach of fiduciary duty to the Company or Stockholders, (B) theft, fraud, embezzlement or other illegal conduct, or (C) deliberate disregard of a rule or policy of the Company; (iii) failure, refusal or unwillingness to perform, to the reasonable satisfaction of the Board determined in good faith, any duty or responsibility assigned to the executive, which failure of performance continues for a period of more than two weeks after written notice thereof has been provided by the Board, setting forth in reasonable detail the nature of such failure of performance; or (iv) the material breach by the executive of any of the provisions of the employment agreement or its related agreements.

“Good reason” is defined as a resignation that occurs within 30 days following: (i) a change in the principal location at which the executive provides services to the Company beyond 50 miles from Cambridge, Massachusetts; (ii) a reduction in the executive’s compensation or a material reduction in the executive’s benefits, except such a reduction in connection with a general reduction in compensation or other benefits of all senior executives of the Company; (iii) a material breach of the executive’s employment agreement by the Company that has not been cured within 10 days after written notice thereof by the executive; or (iv) a failure by the Company to obtain the assumption of the employment agreement by any successor of the Company.

“Disability” is defined as the executive’s inability, due to physical or mental illness or disease, to perform the functions then performed by the executive for 180 consecutive days, accompanied by the likelihood, in the opinion of a physician chosen by the Company and reasonably acceptable to the executive, that the executive will be unable to perform such functions within the reasonably foreseeable future, provided that the foregoing definition shall not include a disability for which the Company is required to provide reasonable accommodation pursuant to the Americans with Disabilities Act or other similar statute or regulation.

“Change in control” is defined as (i) the sale of the Company by merger in which the stockholders in their capacity as such no longer own a majority of the outstanding equity securities of the Company (or its successor); (ii) any sale of all or substantially all of the assets or capital stock of the Company (other than in a spin-off or similar transaction) or (iii) any other acquisition of the business of the Company, as determined by the board of directors in its sole discretion. For the avoidance of doubt, in no event shall a bona fide equity or debt financing, including a financing in which greater than 50% of the Company’s outstanding equity securities are acquired by a third-party, be deemed a “change in control.”

In October 2019, we entered into a Consulting Agreement with Danforth, as amended, pursuant to which Danforth will provide finance, accounting and administrative functions to the Company, including the services to be provided by Mr. Beloff as the Company's Interim Chief Financial Officer, principal accounting officer and principal financial officer. The Company entered into a Consulting Agreement with Danforth and will pay Danforth at an hourly rate for Mr. Beloff's services, subject to an annual increase each year and will reimburse Danforth for expenses. The Consulting Agreement's term continues until either party gives notice of termination. The Consulting Agreement may be terminated by the Company or Danforth with cause, upon 10 days written notice and without cause, upon 30 days written notice. The Company also made a one-time grant of an option to Mr. Beloff to purchase an aggregate of 50,000 shares of the Company's common stock at an exercise price of \$2.30 per share (the fair market value on the date of the grant) which vested with respect to 25% of the shares six months from the date of the grant date and with respect to the remaining 75% in equal monthly instalments over the subsequent 18 months. In December 2021, the Company made a one-time grant of an option to Mr. Beloff to purchase an aggregate of 50,000 shares of the Company's common stock at an exercise price of \$2.34 per share (the fair market value on the date of the grant) which option will vest on a monthly basis in 1/12 increments starting November 1, 2021, with 100% of the shares to be vested on November 1, 2022, so long as Mr. Beloff continues providing his services to the Company, and otherwise to be in accordance with the Company's form of stock option agreement, provided however, that an aggregate of 50% of the shares covered by the option shall be vested immediately if the Company terminates Mr. Beloff's services before May 1, 2022.

Other Benefits

Executive officers are eligible to participate in all of the Company's employee benefit plans, including medical, dental, vision, group life, short and long-term disability, a 401(k) retirement plan, an Employee Stock Purchase Plan (ESPP), and a flex spending account plan, in each case on the same basis as other employees, subject to applicable laws. We also provide paid-time-off benefits to all employees, including our executive officers.

401(k) Retirement Plan

We maintain a defined contribution retirement plan for our eligible employees. Employees are eligible to participate in the plan beginning on their date of hire. Under the terms of the plan, employees may make voluntary contributions as a percentage of compensation, up to statutory limits. Under our 401(k) plan, each employee is fully vested in his or her deferred salary contributions. Employee contributions are held and invested by the plan's trustee. Our 401(k) plan also permits us to make discretionary and matching contributions, subject to established limits. We started to match employee contributions effective January 1, 2019. We matched 50% of the employee contributions to the 401(k) plan up to a maximum of 4% of the participating employee's eligible earnings, resulting in a maximum company match of 2% of the participating employee's eligible earnings, and subject to certain additional statutory dollar limitations. In 2021, our Compensation Committee approved the increase in the Company's matching contribution to 50% of the employee contributions up to a maximum of 6% of the participating employee's eligible earnings, resulting in a maximum company match of 3% of the participating employee's eligible earnings, and subject to certain additional statutory dollar limitations. This increase in the Company's matching contributions was retroactive for all 2021 contributions.

SYNOLOGIC DIRECTOR COMPENSATION

The following table shows the total compensation paid or accrued during the fiscal year ended December 31, 2021 to each of our non-employee directors. Directors who are employed by us are not compensated for their service on our Board.

	<u>Fees Earned or Paid in Cash (1)</u>	<u>Option Awards (2)</u>
	(\$)	(\$)
Peter Barrett, Ph.D. (3)	82,256	32,287
Michael Burgess, MB, CHB, Ph.D. (4)	47,500	37,783
Michael Heffernan (5)	52,572	37,783
Patricia Hurter, Ph.D. (4)	44,327	37,783
Lisa Kelly-Croswell (5)	45,400	143,203
Chau Khuong	18,747	—
Nick Leschly (6)	45,000	37,783
Edward Mathers (7)	47,078	37,783
Richard P. Shea (7)	55,000	37,783

- (1) Amounts represent fees earned during 2021 under our Non-Employee Director Compensation Policy. Mr. Khuong resigned as a director on June 10, 2021. Ms. Kelly-Croswell was appointed as a director of the Company on February 9, 2021.
- (2) The amount reported represents the aggregate grant date fair value of option awards granted as estimated pursuant to FASB ASC 718, Compensation—Share based compensation (ASC 718). See Note 9 of the Company's Financial Statement included in our Annual Report on Form 10-K for the year ended December 31, 2021 for the assumptions used in calculating this amount. Pursuant to the Amended and Restated Non-Employee Director Compensation Program each non-employee director was granted an option to purchase 15,000 shares of our common stock in June 2021.
- (3) Dr. Barrett elected to receive his 2021 compensation in the form of a stock grant pursuant to the Company's Amended and Restated Non-Employee Director Compensation Program. Dr. Barrett had 204,463 option awards outstanding at December 31, 2021.
- (4) Dr. Burgess and Dr. Hurter each had 60,000 option awards outstanding at December 31, 2021.
- (5) Mr. Heffernan and Ms. Lisa Kelly-Croswell had 45,000 options outstanding at December 31, 2021.
- (6) Mr. Leschly had 88,967 option awards and 23,150 restricted shares outstanding at December 31, 2021.
- (7) Mr. Mathers and Mr. Shea each had 70,000 option awards outstanding at December 31, 2021.

Pursuant to our Amended and Restated Non-Employee Director Compensation Program, which was effective as of January 1, 2020, and updated as to amounts by the Board effective January 1, 2022, our non-employee directors are entitled to receive cash compensation, paid quarterly in arrears, as follows:

- Each non-employee director receives an annual cash retainer in the amount of \$40,000 per year.
- Any non-employee Chairman receives an additional annual cash retainer in the amount of \$30,000 per year.
- The chairperson of the Audit Committee receives additional annual cash compensation in the amount of \$15,000 per year for such chairperson's service on the Audit Committee. Each non-chairperson member of the Audit Committee receives additional annual cash compensation in the amount of \$7,500 per year for such member's service on the Audit Committee.
- The chairperson of the Compensation Committee receives additional annual cash compensation in the amount of \$12,000 per year for such chairperson's service on the Compensation Committee. Each non-chairperson member of the Compensation Committee receives additional annual cash compensation in the amount of \$5,000 per year for such member's service on the Compensation Committee.
- The chairperson of the Nominating and Corporate Governance Committee receives additional annual cash compensation in the amount of \$8,000 per year for such chairperson's service on the Nominating and Corporate Governance Committee. Each non-chairperson member of the Nominating and Corporate Governance Committee receives additional annual cash compensation in the amount of \$4,000 per year for such member's service on the Nominating and Corporate Governance Committee.
- The chairperson of the Science and Technology Committee receives additional annual cash compensation in the amount of \$8,000 per year for such chairperson's service on the Science and Technology Committee. Each non-chairperson member of the Science and Technology Committee receives additional annual cash compensation in the amount of \$4,000 per year for such member's service on the Science and Technology Committee.

Under the Amended and Restated Director Compensation Program, upon a director's initial appointment or election to our Board, such non-employee director will receive an option (the Initial Grant) to purchase 54,000 shares of our common stock (subject to adjustment as provided in the applicable equity plan). In addition, each non-employee director who has been serving as a director for at least three months prior to any annual stockholder meeting and will continue to serve as a director immediately following such annual stockholder meeting will be automatically granted, on the date of such annual stockholder meeting, an option (the Annual Grant) to purchase 27,000 shares of our common stock (subject to adjustment as provided in the applicable equity plan). The Initial Grant will vest in substantially equal installments on each of the first three anniversaries of the applicable grant date, subject to continued service through each applicable vesting date, and the Annual Grant will vest in full on the earlier of the first anniversary of the applicable grant date or immediately prior to the next annual stockholder meeting after the applicable grant date, subject to continued service through such vesting date. In addition, pursuant to the terms of the Amended and Restated Director Compensation Program, all equity awards outstanding and held by a non-employee director will vest in full immediately prior to the occurrence of a change in control.

We reimburse our non-employee directors for all reasonable and customary business expenses incurred providing services to us in accordance with Company policy.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides certain aggregate information with respect to all of the Company's equity compensation plans in effect as of December 31, 2021.

	(a)	(b)	(c)
Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders ⁽¹⁾	4,339,232	\$ 4.81	1,732,821
Equity compensation plans not approved by security holders ⁽²⁾	183,250	\$ 13.53	618,797
Total	4,522,482	\$ 5.16	2,351,618

(1) Consists of the 2015 Equity Incentive Award Plan and the Synlogic, Inc. 2015 Employee Stock Purchase Plan, as amended.

(2) Consists of the Synlogic 2017 Stock Incentive Plan.

Explanatory Note

On August 28, 2017, Synlogic, Inc., formerly known as Mirna Therapeutics, Inc. (NASDAQ: MIRN) ("Mirna"), completed its business combination with Synlogic, Inc. ("Private Synlogic") in accordance with the terms of the Agreement and Plan of Merger and Reorganization, dated as of May 15, 2017, by and among Mirna, Meerkat Merger Sub, Inc. ("Merger Sub"), and Private Synlogic (the "Merger Agreement"), pursuant to which Merger Sub merged with and into Private Synlogic, with Private Synlogic surviving as a wholly owned subsidiary of Mirna (the "Merger"). On August 28, 2017, immediately after completion of the Merger, Mirna changed its name to "Synlogic, Inc." ("Public Synlogic") (NASDAQ: SYBX).

Summary Description of the Company's 2015 Equity Incentive Award Plan

In August 2015, the Company adopted the Mirna 2015 Equity Incentive Award Plan (the "2015 Plan"). The terms of the 2015 Plan provide for the grant of stock options, stock appreciation rights, restricted stock awards, restricted stock unit awards, deferred stock awards, dividend equivalent awards, stock payment awards, performance awards and other stock-based awards. Stock options may be granted under the 2015 Plan with an exercise price not less than 100% of the fair market value of the common stock on the date of grant. Stock options under the 2015 Plan may be granted with terms of up to ten years. The total number of shares of the Company's common stock initially reserved for issuance under the 2015 Plan was equal to the sum of (i) 238,828 shares, plus (ii) any shares subject to awards under the Mirna Therapeutics, Inc. 2008 Long Term Incentive Plan that, on or after September 30, 2015, terminate, expire or lapse for any reason, up to a maximum of 116,951 shares. Additionally, the number of shares of common stock that may be issued under the 2015 Plan automatically increase on each January 1, beginning with January 1, 2016, and continuing until January 1, 2025 by an amount equal to the lesser of (i) 5% of the number of outstanding shares of common stock on that date and (ii) an amount determined by the Board; provided, however, that no more than 2,000,000 shares will be issued under the 2015 Plan as incentive stock options. As of December 31, 2021, 1,069,549 shares of common stock were available for future grants under the 2015 Plan.

Summary Description of the Company's Non-Stockholder Approved Equity Compensation Plan

Private Synlogic adopted the Synlogic, Inc. 2017 Stock Incentive Plan (the "2017 Plan") on May 11, 2017. The 2017 Plan will expire in 2027. Pursuant to the 2017 Reorganization, Private Synlogic issued restricted common stock awards under the 2017 Plan to replace the canceled incentive units pursuant to the termination of the 2015 LLC Plan. In addition, Private Synlogic also issued stock options to certain employees prior to the Merger. Pursuant to the Merger Agreement, each restricted common stock award of Private Synlogic under the 2017 Plan that was outstanding immediately prior to the Merger and each option to purchase common stock of Private Synlogic under the 2017 Plan that was outstanding and unexercised immediately prior to the Merger was converted into and became restricted common stock and options to purchase shares of the Company's common stock, respectively, based on the merger exchange ratio of 0.5532. In connection with the Merger, the Company assumed the 2017 Plan. The Board is authorized to administer the 2017 Plan. In addition, the Board or any committee to which the Board delegates authority may, with the consent of the affected plan participants, re-price or otherwise amend outstanding awards consistent with the terms of the 2017 Plan.

Upon a merger, consolidation or sale of all or substantially all of our assets, the Board or any committee to which the Board delegates authority, or the Board of any corporation assuming our obligations, may, in its sole discretion, take any one or more of the following actions pursuant to the 2017 Plan, as to some or all outstanding awards, to the extent not otherwise agreed under any individual agreement provide that outstanding options will be assumed or substituted for options of the successor corporation; provide that the outstanding options must be exercised within a certain number of days, either to the extent the options are then exercisable, or at the Board's discretion, any such options being made partially or fully exercisable; terminate outstanding options in exchange for a cash payment of an amount equal to the difference between (a) the consideration payable upon consummation of the corporate transaction to a holder of the number of shares into which such option would have been exercisable to the extent then exercisable, or in the Board's discretion, any such options being made partially or fully exercisable, and (b) the aggregate exercise price of those options; provide that outstanding stock grants will be substituted for shares of the successor corporation or consideration payable with respect to our outstanding stock in connection with the corporate transaction; and terminate outstanding stock grants in exchange for payment of an amount equal to the consideration payable upon consummation of the corporate transaction to a holder of the same number of shares comprising the stock grant, to the extent the stock grant is no longer subject to any forfeiture or repurchase rights, or at the Board's discretion, all forfeiture and repurchase rights being waived upon the corporate transaction. For purposes of determining such payments, in the case of a corporate transaction the consideration for which, in whole or in part, is other than cash, the consideration other than cash shall be valued at the fair market value thereof as determined in good faith by the Board.

Summary Description of the Company's 2015 Employee Stock Purchase Plan

The 2015 Employee Stock Purchase Plan ("ESPP") was adopted by Mirna in 2015 and allows eligible employees to purchase shares of the Company's common stock at a discount through payroll deductions of up to 15% of their eligible compensation, subject to any plan limitations. The ESPP generally provides for set offering periods, and at the end of each offering period, employees are able to purchase shares at 85% of the lower of the fair market value of the Company's common stock on the first trading day of the offering period or on the last trading day of the offering period. The Company suspended the ESPP in 2017. In December 2019, the Board reactivated the ESPP and approved an amendment to the ESPP to (i) reduce the permitted aggregate yearly payroll deduction and maximum number of shares of the Company's common stock that a participant may purchase per offering period under the ESPP and (ii) establish a period for enrollment for eligible participants. The reactivation of the ESPP was effective immediately. The Company's executive officers are eligible to participate in the ESPP.

REPORT OF AUDIT COMMITTEE

The Audit Committee of the Board, which consists entirely of directors who meet the independence and experience requirements of Nasdaq, has furnished the following report:

The Audit Committee assists the Board in overseeing and monitoring the integrity of our financial reporting process, compliance with legal and regulatory requirements and the quality of internal and external audit processes. This committee's role and responsibilities are set forth in our charter adopted by the Board, which is available on our website at www.synlogictx.com. This committee reviews and reassesses our charter annually and recommends any changes to the Board for approval. The Audit Committee is responsible for overseeing our overall financial reporting process, and for the appointment, compensation, retention, and oversight of the work of KPMG LLP. In fulfilling its responsibilities for the financial statements for fiscal year 2021, the Audit Committee took the following actions:

- Reviewed and discussed the audited financial statements for the fiscal year ended December 31, 2021 with management and KPMG LLP, our independent registered public accounting firm;
- Discussed with KPMG LLP the matters required to be discussed in accordance with PCAOB Auditing Standard No. 1301- *Communications with Audit Committees*; and
- Received written disclosures and the letter from KPMG LLP regarding its independence as required by applicable requirements of the Public Company Accounting Oversight Board regarding KPMG LLP communications with the Audit Committee and the Audit Committee further discussed with KPMG LLP their independence. The Audit Committee also considered the status of pending litigation, taxation matters and other areas of oversight relating to the financial reporting and audit process that the committee determined appropriate.

Based on the Audit Committee's review of the audited financial statements and discussions with management and KPMG LLP, the Audit Committee recommended to the Board that the audited financial statements be included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 for filing with the SEC.

Members of the Synlogic Audit Committee: Richard P. Shea, Peter Barrett, Michael Burgess and Michael Heffernan

DELINQUENT SECTION 16(a) REPORTS

Our records reflect that all reports which were required to be filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, as amended, were filed on a timely basis, except that one report, covering one transaction, was filed late by Gregg Beloff.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

Indemnification Agreements

We have entered into indemnification agreements with each of our directors and executive officers. These agreements, among other things, require us to indemnify each director and executive officer to the fullest extent permitted by Delaware law, including indemnification of expenses such as attorneys' fees, judgments, penalties, fines and settlement amounts incurred by the director or executive officer in any action or proceeding, including any action or proceeding by or in right of the Company, arising out of the person's services as a director or executive officer.

Change of Control and Severance Benefits Agreements

See the section entitled "*Employment Agreements and Potential Payments Upon Termination of Employment or Change in Control*" in this proxy statement.

Policies and Procedures for Related Party Transactions

Our Board has adopted a written related person transaction policy setting forth the policies and procedures for the review and approval or ratification of related person transactions. This policy covers, with certain exceptions set forth in Item 404 of Regulation S-K under the Securities Act, any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships in which we were or are to be a participant, where the amount involved exceeds \$120,000 and a related person had or will have a direct or indirect material interest, including, without limitation, purchases of goods or services by or from the related person or entities in which the related person has a material interest, indebtedness, guarantees of indebtedness and employment by us of a related person. In reviewing and approving any such transactions, our Audit Committee is tasked to consider all relevant facts and circumstances, including, but not limited to, whether the transaction is on terms comparable to those that could be obtained in an arm's length transaction with an unrelated third party and the extent of the related person's interest in the transaction.

ELECTION OF DIRECTORS

(Notice Item 1)

On March 16, 2022, the Board nominated Aoife Brennan, MB, BCh, BAO, MMSc., Patricia Hurter, Ph.D., and Richard P. Shea for election at the annual meeting. Our Board currently consists of nine members, classified into three classes as follows: (1) Aoife Brennan, MB, BCh, BAO, MMSc., Patricia Hurter, Ph.D., and Richard P. Shea constitute a class with a term ending at the 2022 annual meeting, and (2) Peter Barrett, Ph.D., Edward Mathers, Michael Heffernan and Lisa Kelly-Croswell constitute a class with a term ending at the 2023 annual meeting, and (3) Nick Leshly and Michael Burgess, MB, CHB, Ph.D., constitute a class with a term ending at the 2024 annual meeting. At each annual meeting of stockholders, directors are elected for a full term of three years to succeed those directors whose terms are expiring.

The Board has voted to nominate Aoife Brennan, MB, BCh, BAO, MMSc., Patricia Hurter, Ph.D., and Richard P. Shea for election at the annual meeting for a term of three years to serve until the 2025 Annual Meeting of Stockholders, and until their respective successors are elected and qualified.

Unless authority to vote for any of these nominees is withheld, the shares represented by the enclosed proxy will be voted **FOR** the election as directors of Aoife Brennan, MB, BCh, BAO, MMSc., Patricia Hurter, Ph.D., and Richard P. Shea. In the event that a nominee becomes unable or unwilling to serve, the shares represented by the enclosed proxy will be voted for the election of such other person as the Board may recommend in that nominee's place. We have no reason to believe that any nominee will be unable or unwilling to serve as a director.

A plurality of the shares voted for each nominee at the Meeting is required to elect each nominee as a director.

THE BOARD RECOMMENDS THE ELECTION OF AOIFE BRENNAN, MB, BCh, BAO, MMSc., PATRICIA HURTER, PH.D., AND RICHARD P. SHEA AS DIRECTORS, AND PROXIES SOLICITED BY THE BOARD WILL BE VOTED IN FAVOR THEREOF UNLESS A STOCKHOLDER HAS INDICATED OTHERWISE ON THE PROXY.

ADVISORY VOTE ON APPROVAL OF EXECUTIVE COMPENSATION AS DISCLOSED IN THIS PROXY STATEMENT

(Notice Item 2)

We are seeking your advisory vote as required by Section 14A of the Exchange Act on the approval of the compensation of our named executive officers as described in the compensation tables and related material contained in this proxy statement. Because your vote is advisory, it will not be binding on our compensation committee or our board of directors. However, the compensation committee and the board of directors will review the voting results and take them into consideration when making future decisions regarding executive compensation. At our annual meeting, we will also be holding an advisory vote to determine the frequency upon which to approve the compensation of our named executive officers, and the next such advisory vote will occur depending on the results of the voting on such proposal.

Our compensation philosophy is designed to align each executive's compensation with our short-term and long-term performance and to provide the compensation and incentives needed to attract, motivate and retain key executives who are crucial to our long-term success. Consistent with this philosophy, a significant portion of the total compensation opportunity for each of our executives is directly related to performance factors that measure our progress against the goals of our strategic and operating plans, as well as our performance against that of our peer companies.

In accordance with the rules of the SEC, the following resolution, commonly known as a "say-on-pay" vote, is being submitted for a stockholder vote at the 2022 annual meeting:

"RESOLVED, that the compensation paid to the named executive officers of Synlogic, Inc., as disclosed pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the compensation tables and the related material disclosed in this proxy statement, is hereby APPROVED."

The affirmative vote of a majority of the votes present or represented by proxy and entitled to vote at the annual meeting is required to approve, on an advisory basis, this resolution.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE TO APPROVE THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS, AND PROXIES SOLICITED BY OUR BOARD OF DIRECTORS WILL BE VOTED IN FAVOR OF SUCH APPROVAL UNLESS A STOCKHOLDER INDICATES OTHERWISE ON THE PROXY.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

(Notice Item 3)

The Audit Committee has appointed KPMG LLP, as our independent registered public accounting firm, to audit our financial statements for the fiscal year ending December 31, 2022. The Board proposes that the stockholders ratify this appointment. KPMG LLP audited our financial statements for the fiscal year ended December 31, 2021. We expect that representatives of KPMG LLP will be present at the annual meeting, will be able to make a statement if they so desire, and will be available to respond to appropriate questions.

In deciding to appoint KPMG LLP, the Audit Committee reviewed auditor independence issues and existing commercial relationships with KPMG LLP and concluded that KPMG LLP has no commercial relationship with the Company that would impair its independence for the fiscal year ending December 31, 2022.

The following table presents fees for professional audit services rendered by KPMG LLP for the audit of the Company's annual financial statements for the years ended December 31, 2021, and December 31, 2020, and fees billed for other services rendered by KPMG LLP during those periods.

	2021	2020
Audit fees: (1)	\$ 716,000	\$ 631,000
Audit related fees: (2)	—	—
Tax fees: (3)	22,750	21,535
Other fees: (2)	—	—
Total	\$ 738,750	\$ 652,535

- (1) Audit fees in 2021 and 2020 were for professional fees rendered for the audits of our financial statements, including accounting consultation, and reviews of quarterly financial statements, as well as for services that are normally provided in connection with regulatory filings or engagements, including comfort letters.
- (2) There were no audit-related or other fees in 2021 or 2020.
- (3) Tax fees in 2021 and 2020 were for professional fees rendered for matters related to filing our federal and state tax returns and permissible tax consultation services.

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-audit Services of Independent Public Accountant

Consistent with SEC policies regarding auditor independence, the Audit Committee has responsibility for appointing, setting compensation and overseeing the work of our independent registered public accounting firm. In recognition of this responsibility, the Audit Committee has established a policy to pre-approve all audit and permissible non-audit services provided by our independent registered public accounting firm.

Prior to engagement of an independent registered public accounting firm for the next year's audit, management will submit an aggregate of services expected to be rendered during that year for each of four categories of services to the Audit Committee for approval.

1. **Audit** services include audit work performed in the preparation of financial statements, as well as work that generally only an independent registered public accounting firm can reasonably be expected to provide, including comfort letters, statutory audits, and attestation services and consultation regarding financial accounting and/or reporting standards.
2. **Audit-Related** services are for assurance and related services that are traditionally performed by an independent registered public accounting firm, including due diligence related to mergers and acquisitions, employee benefit plan audits, and special procedures required to meet certain regulatory requirements.
3. **Tax** services include all services performed by an independent registered public accounting firm's tax personnel except those services specifically related to the audit of the financial statements, and includes fees in the areas of tax compliance, tax planning, and tax advice.
4. **Other Fees** are those associated with services not captured in the other categories.

Prior to engagement, the Audit Committee pre-approves these services by category of service. The fees are budgeted and the Audit Committee requires our independent registered public accounting firm and management to report actual fees versus the budget periodically throughout the year by category of service. During the year, circumstances may arise when it may become necessary to engage our independent registered public accounting firm for additional services not contemplated in the original pre-approval. In those instances, the Audit Committee requires specific pre-approval before engaging our independent registered public accounting firm.

The Audit Committee may delegate pre-approval authority to one or more of its members. The member to whom such authority is delegated must report, for informational purposes only, any pre-approval decisions to the Audit Committee at its next scheduled meeting.

In the event the stockholders do not ratify the appointment of KPMG LLP as our independent registered public accounting firm, the Audit Committee will reconsider its appointment.

THE BOARD RECOMMENDS A VOTE TO RATIFY THE APPOINTMENT OF KPMG LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM, AND PROXIES SOLICITED BY THE BOARD WILL BE VOTED IN FAVOR OF SUCH RATIFICATION UNLESS A STOCKHOLDER INDICATES OTHERWISE ON THE PROXY.

CODE OF BUSINESS CONDUCT AND ETHICS

We have adopted a Code of Business Conduct and Ethics that applies to all of our employees, including our Chief Executive Officer and Chief Financial Officer. The text of the Code of Business Conduct and Ethics is posted on our website at www.synlogictx.com. Disclosure regarding any amendments to, or waivers from, provisions of the Code of Conduct and Ethics that apply to our directors, principal executive and financial officers will be included in a Current Report on Form 8-K within four (4) business days following the date of the amendment or waiver, unless website posting or the issuance of a press release of such amendments or waivers is then permitted by the rules of the Nasdaq Stock Market.

OTHER MATTERS

The Board knows of no other business which will be presented to the annual meeting. If any other business is properly brought before the annual meeting, proxies will be voted in accordance with the judgment of the persons named therein.

STOCKHOLDER PROPOSALS AND NOMINATIONS FOR DIRECTOR

To be considered for inclusion in the proxy statement relating to our 2023 Annual Meeting of Stockholders, we must receive stockholder proposals (other than for director nominations) no later than December 27, 2022. To be considered for presentation at the 2023 Annual Meeting, although not included in the proxy statement, proposals (including director nominations that are not requested to be included in our proxy statement) must be received no earlier than one hundred twenty (120) days prior to the date that is one (1) year from this year's meeting date and no later than ninety (90) days prior to the date that is one (1) year from this year's meeting date. Therefore, to be presented at our 2023 Annual Meeting of Stockholders, such a proposal must be received on or after February 8, 2023 but no later than March 10, 2023. Proposals that are not received in a timely manner will not be voted on at the 2022 Annual Meeting. If a proposal is received on time, the proxies that management solicits for the meeting may still exercise discretionary voting authority on the proposal under circumstances consistent with the proxy rules of the SEC. All stockholder proposals should be marked for the attention of Company Secretary, Synlogic, Inc., 301 Binney Street, Suite 402, Cambridge MA 02142.

Cambridge, MA April 27, 2022

SYNOLOGIC, INC.
 301 SUMMIT ST, SUITE 402
 CHAMBERLAIN, MA 02142



VOTE BY INTERNET
 Before The Meeting - Go to www.proxyvote.com or scan the QR Barcode above

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time on June 8, 2022. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to www.virtualshareholdermeeting.com/SYNO2022

You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903
 Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time on June 8, 2022. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL
 Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

D79505-P71489

KEEP THIS PORTION FOR YOUR RECORDS
 DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

<p>SYNOLOGIC, INC.</p> <p>The Board of Directors recommends you vote FOR the following:</p> <p>1. Election of Class I Directors</p> <p>Nominees:</p> <p>01) Aoife Brennan, MB, BCh, BAO, MMSc 02) Patricia Hurter, Ph.D. 03) Richard P. Shea</p> <p>The Board of Directors recommends you vote FOR the following proposals:</p> <p>2. To approve by an advisory vote the compensation of the Company's named executive officers, as disclosed in the proxy statement.</p> <p>3. Ratification of appointment of KPMG LLP as Independent registered public accounting firm for fiscal year ending December 31, 2022.</p> <p>NOTE: Such other business as may properly come before the meeting or any adjournment thereof.</p> <p>Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.</p>	<p>For All</p> <p>Withhold All</p> <p>For All Except</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>	<p>To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.</p> <p>_____</p>		
	<p>For</p> <p>Against</p> <p>Abstain</p>	<p><input type="checkbox"/></p> <p><input type="checkbox"/></p> <p><input type="checkbox"/></p>			
<p>Signature [PLEASE SIGN WITHIN BOX]</p>		<p>Date</p>	<p>Signature (Joint Owners)</p>		<p>Date</p>

SYNLOGIC, INC.
Annual Meeting of Stockholders
June 9, 2022 9:00 AM, EDT
This proxy is solicited by the Board of Directors

The stockholder(s) hereby appoint(s) Aoife Brennan and Michael Jensen, or either of them, as proxies, each with the power to appoint (his/her) substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common Stock of SYNLOGIC, INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 9:00 AM, EDT on June 9, 2022, via live audio webcast at www.virtualshareholdermeeting.com/SYBX2022, and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Continued and to be signed on reverse side