

U.S. SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

INFORMATION REQUIRED IN PROXY STATEMENT

SCHEDULE 14A INFORMATION

**PROXY STATEMENT PURSUANT TO SECTION 14(a)
OF THE SECURITIES EXCHANGE ACT OF 1934**

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 Pursuant to Rule 14a-12



Applied Therapeutics, 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 computed on table below per Exchange Act Rules 14a-6(i)(4) and 0-11.

(1) Title of each class of securities to which transaction applies:

(2) Aggregate number of securities to which transaction applies:

(3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):

(4) Proposed maximum aggregate value of transaction:

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- Fee paid previously with preliminary materials
- Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

(1) Amount previously paid:

(2) Form, schedule or registration statement no.:

(3) Filing party:

(4) Date filed:



545 Fifth Avenue, Suite 1400
New York, NY 10017

April 23, 2020

Dear Stockholder:

You are cordially invited to attend Applied Therapeutics, Inc.'s Annual Meeting of Stockholders on Thursday, June 4, 2020, at 10:30 a.m., Eastern Time, online at <http://www.virtualshareholdermeeting.com/APLT2020>. Due to the emerging public health impact of the evolving coronavirus (COVID-19) outbreak and to support the health and wellbeing of our stockholders, this year's Annual Meeting will be held in a virtual-only meeting format.

The matters to be acted on at the Annual Meeting of Stockholders are described in the enclosed notice and proxy statement.

We realize that you may not be able to attend the Annual Meeting of Stockholders and vote your shares at the meeting. However, regardless of your meeting attendance, we need your vote. We urge you to ensure that your shares are represented by voting in advance of the meeting on the Internet or via a toll-free telephone number, as instructed in the Notice Regarding the Internet Availability of Proxy Materials, or if you have elected to receive a paper or e-mail copy of the proxy materials, by completing, signing and returning the proxy card that is provided. If you decide to attend the Annual Meeting of Stockholders, you may revoke your proxy at that time and vote your shares at such meeting.

Please remember that this is your opportunity to voice your opinion on matters affecting the Company. We look forward to receiving your proxy and perhaps seeing you at the Annual Meeting of Stockholders.

Sincerely,

A handwritten signature in black ink, appearing to read "Shoshana", written over a horizontal line.

Shoshana Shendelman, Ph.D.
Chair, President, Chief Executive Officer and
Secretary



545 Fifth Avenue, Suite 1400
New York, NY 10017

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD ON THURSDAY, JUNE 4, 2020

You are cordially invited to attend the 2020 Annual Meeting of Stockholders of Applied Therapeutics, Inc. (the "Company") to be held on Thursday, June 4, 2020, at 10:30 a.m., Eastern Time, online at <http://www.virtualshareholdermeeting.com/APLT2020>. Due to the emerging public health impact of the evolving coronavirus (COVID-19) outbreak and to support the health and wellbeing of our stockholders, this year's Annual Meeting will be held in a virtual-only meeting format.

At the 2020 Annual Meeting of Stockholders, stockholders will be invited to consider and vote upon the following matters:

1. Election of two Class I directors to serve for a three-year term of office expiring at the 2023 Annual Meeting of Stockholders;
2. Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020; and
3. Any other matter that properly comes before the 2020 Annual Meeting of Stockholders.

The foregoing items of business are more fully described in the proxy statement accompanying this Notice of Annual Meeting of Stockholders.

The board of directors has fixed the close of business on April 7, 2020 as the record date for the determination of stockholders entitled to notice of, and to vote at, this annual meeting of stockholders and any postponement or adjournment thereof. A list of stockholders entitled to vote at the Annual Meeting will be available for examination during ordinary business hours for 10 days prior to the Annual Meeting at our principal executive office at 545 Fifth Avenue, Suite 1400, New York, NY 10017. The stockholder list will also be available online during the Annual Meeting. Your vote is very important to the Company and all proxies are being solicited by the board of directors. So, whether or not you plan on attending the 2020 Annual Meeting of Stockholders, we encourage you to submit your proxy as soon as possible (i) by accessing the Internet site or by calling the toll-free number described in the proxy materials; or (ii) by signing, dating and returning a proxy card or instruction form provided to you. By submitting your proxy promptly, you will save the Company the expense of further proxy solicitation. Please note that all votes cast by telephone or on the Internet must be cast prior to 11:59 p.m., Eastern Time, on June 3, 2020.

By Order of the Board of Directors,

A handwritten signature in black ink, appearing to read "Shoshana", written over a horizontal line.

Shoshana Shendelman, Ph.D.
Chair, President, Chief Executive Officer and
Secretary

New York, New York
April 23, 2020

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545 Fifth Avenue, Suite 1400
New York, NY 10017

PROXY STATEMENT

INFORMATION ABOUT THE ANNUAL MEETING AND PROXY MATERIALS

General

This proxy statement is furnished to stockholders of Applied Therapeutics, Inc., a Delaware corporation (the "Company"), in connection with the solicitation of proxies for use at the 2020 Annual Meeting of Stockholders of the Company (the "Annual Meeting") to be held on Thursday, June 4, 2020, at 10:30 a.m., Eastern Time, online at <http://www.virtualshareholdermeeting.com/APLT2020>. Due to the emerging public health impact of the evolving coronavirus (COVID-19) outbreak and to support the health and wellbeing of our stockholders, this year's Annual Meeting will be held in a virtual-only meeting format. This solicitation of proxies is made on behalf of our board of directors. Capitalized terms used, but not defined, herein shall have the meanings ascribed to them in our Annual Report on Form 10-K for the fiscal year ended December 31, 2019 (the "Annual Report").

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting to be Held on Thursday, June 4, 2020

Pursuant to the rules adopted by the SEC, we have elected to provide access to our proxy materials over the Internet. Accordingly, we are sending a Notice Regarding the Internet Availability of Proxy Materials (the "Internet Notice") to certain of our stockholders of record. We are also sending a paper copy of the proxy materials and proxy card to other stockholders of record who have indicated they prefer receiving such materials in paper form. Brokers and other nominees who hold shares on behalf of beneficial owners will be sending their own similar Internet Notice. Such Internet Notice, or this proxy statement and proxy card or voting instruction form, as applicable, is being mailed to our stockholders on or about April 23, 2020.

Stockholders will have the ability to access the proxy materials on the website referred to in the Internet Notice or may request to receive a paper copy of the proxy materials by mail or electronic copy by electronic mail on a one-time or ongoing basis. Instructions on how to request a printed copy by mail or electronically may be found on the Internet Notice.

The Internet Notice will also identify the date, the time and location of the Annual Meeting; the matters to be acted upon at the meeting and the board of directors' recommendation with regard to each matter; a toll-free telephone number, an e-mail address, and a website where stockholders can request to receive, free of charge, a paper or e-mail copy of this proxy statement, our Annual Report and a form of proxy relating to the Annual Meeting; information on how to access and vote the form of proxy; and information on how to obtain instructions to attend the virtual meeting and vote in person at the virtual meeting, should stockholders choose to do so.

What Are You Voting On?

You will be asked to vote on the following proposals at the Annual Meeting:

1. Election of two Class I directors to serve for a three-year term of office expiring at the 2023 Annual Meeting of Stockholders;
2. Ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020; and
3. Any other matter that properly comes before the Annual Meeting.

Who Can Vote

Only holders of record of shares of our common stock as of the close of business on the record date, April 7, 2020 (the "Record Date"), are entitled to receive notice of, and to vote at, the Annual Meeting. Each share of common stock entitles the holder thereof to one vote. Your shares of common stock may be voted at the Annual Meeting, or any adjournment or postponement thereof only if you are present in person at the virtual meeting or your shares are represented by a valid proxy.

Difference between a Stockholder of Record and a "Street Name" Holder

If your shares are registered directly in your name, you are considered the stockholder of record with respect to those shares.

If your shares are held in a stock brokerage account or by a bank, trust or other nominee, then the broker, bank, trust or other nominee is considered to be the stockholder of record with respect to those shares. However, you are still considered to be the beneficial owner of those shares, and your shares are said to be held in "street name." Street name holders generally cannot submit a proxy or vote their shares directly and must instead instruct the broker, bank, trust or other nominee how to vote their shares using the methods described below under the heading "Voting Your Shares."

Quorum

At the close of business on the Record Date, there were 21,969,277 shares of our common stock outstanding and entitled to vote at the Annual Meeting. The presence of a majority of the outstanding shares of our common stock entitled to vote constitutes a quorum, which is required in order to hold and conduct business at the Annual Meeting. Your shares are counted as present at the Annual Meeting if you:

- Are present in person at the virtual Annual Meeting; or
- Have properly submitted a proxy card by mail or submitted a proxy by telephone or over the Internet.

If you submit your proxy, regardless of whether you abstain from voting on one or more matters, your shares will be counted as present at the Annual Meeting for the purpose of determining a quorum. If your shares are held in "street name," your shares are counted as present for purposes of determining a quorum if your broker, bank, trust or other nominee submits a proxy covering your shares. Your broker, bank, trust or other nominee is entitled to submit a proxy covering your shares as to certain "routine" matters, even if you have not instructed your broker, bank, trust or other nominee on how to vote on those matters. Please see below under "— Broker Non-Votes."

Voting Your Shares

The Annual Meeting will be held entirely online this year. You may vote in person by attending the virtual Annual Meeting or by submitting a proxy. The method of voting by proxy differs (1) depending on whether you are viewing this proxy statement on the Internet or receiving a paper copy and (2) for shares held as a record holder and shares held in "street name."

If you are a record holder, you may vote by submitting a proxy over the Internet or by telephone by following the instructions on the website referred to in the proxy card or the Internet Notice mailed to you.

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Alternatively, if you received a paper copy of your proxy card, you may vote your shares by submitting a proxy over the Internet or by telephone by following the instructions on the proxy card, or by completing, dating and signing the proxy card that was included with this proxy statement and promptly returning it in the pre-addressed, postage-paid envelope provided to you.

If your shares are held in "street name," your broker, bank or other street name holder will provide you with instructions that you must follow to have your shares voted.

Deadline for Submitting Your Proxy on the Internet or by Telephone

Internet and telephone voting will close at 11:59 p.m., Eastern Time, on June 3, 2020. Stockholders who submit a proxy through the Internet should be aware that they may incur costs to access the Internet, such as usage charges from telephone companies or Internet service providers and that these costs must be borne by the stockholder. Stockholders who submit a proxy by Internet or telephone need not return a proxy card or the voting instruction form forwarded by your broker, bank, trust or other nominee by mail.

YOUR VOTE IS VERY IMPORTANT. Please submit your vote in advance even if you plan to attend the Annual Meeting.

Voting at the Annual Meeting

If you plan to attend the Annual Meeting, you may vote during the virtual meeting. Please note that if your shares are held in "street name" and you wish to vote during the meeting, you must obtain a proxy issued in your name from your broker, bank or other street name holder. Even if you intend to attend the Annual Meeting, we encourage you to submit your proxy or voting instructions to vote your shares in advance of the Annual Meeting. Please see the important instructions and requirements below under "— Attendance at the Annual Meeting."

Changing Your Vote

As a stockholder of record, if you vote by proxy, you may revoke that proxy at any time before it is voted at the Annual Meeting. Stockholders of record may revoke a proxy prior to the Annual Meeting by (i) delivering a written notice of revocation to the attention of the Secretary of the Company at our principal executive office at 545 Fifth Avenue, Suite 1400, New York, NY 10017, (ii) duly submitting a later-dated proxy over the Internet, by mail, or if applicable, by telephone, or (iii) attending the virtual Annual Meeting and voting during the meeting. Attendance at the Annual Meeting will not, by itself, revoke a proxy.

If your shares are held in the name of a broker, bank, trust or other nominee, you may change your voting instructions by following the instructions of your broker, bank, trust or other nominee.

If You Receive More Than One Proxy Card or Internet Notice

If you receive more than one proxy card or Internet Notice, it means you hold shares that are registered in more than one account. To ensure that all of your shares are voted, sign and return each proxy card or, if you submit a proxy by telephone or the Internet, submit one proxy for each proxy card or Internet Notice you receive.

How Your Shares Will Be Voted

Shares represented by proxies that are properly executed and returned, and not revoked, will be voted as specified. YOUR VOTE IS VERY IMPORTANT.

If You Do Not Specify How You Want Your Shares Voted

If you are the record holder of your shares and submit your proxy without specifying how your shares are to be voted, your shares will be voted as follows:

- FOR the election of the two nominees for Class I director; and
- FOR the ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020.

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In addition, the proxy holders named in the proxy are authorized to vote in their discretion on any other matters that may properly come before the Annual Meeting and at any postponement or adjournment thereof. The board of directors knows of no other items of business that will be presented for consideration at the Annual Meeting other than those described in this proxy statement.

Broker Non-Votes

A “broker non-vote” occurs when a nominee holding shares for a beneficial owner has not received voting instructions from the beneficial owner and does not have discretionary authority to vote the shares. If you hold your shares in street name and do not provide voting instructions to your broker or other nominee, your shares will be considered to be broker non-votes and will not be voted on any proposal on which your broker or other nominee does not have discretionary authority to vote. Shares that constitute broker non-votes will be counted as present at the Annual Meeting for the purpose of determining a quorum, but will not be considered entitled to vote on the proposal in question. Brokers generally have discretionary authority to vote on the ratification of the selection of Ernst & Young LLP as our independent registered public accounting firm. Brokers do not have discretionary authority, however, to vote on the election of directors to serve on our board of directors.

Votes Required

The following table summarizes the voting requirements and the effects of broker non-votes and “withhold” votes or abstentions on each of the proposals to be voted on at the Annual Meeting:

	<u>Proposals</u>	<u>Required Vote</u>	<u>Effect of Broker Non-Votes</u>	<u>Effect of “Withhold” Votes or Abstentions</u>
1.	Election of Directors	Plurality of votes cast for each nominee	None	None
2.	Ratification of Independent Registered Public Accounting Firm	Majority of the shares present and entitled to vote	Not applicable	Against

Inspector of Election

All votes will be tabulated by the inspector of election appointed for the Annual Meeting, who will separately tabulate affirmative and negative votes, abstentions and broker non-votes.

Solicitation of Proxies

We will bear the cost of soliciting proxies. Copies of solicitation materials will be furnished to banks, brokerage houses, fiduciaries and custodians holding shares of our common stock in their names that are beneficially owned by others to forward to those beneficial owners. We may reimburse persons representing beneficial owners for their costs of forwarding the solicitation materials to the beneficial owners. Original solicitation of proxies may be supplemented by telephone, facsimile, electronic mail or personal solicitation by our directors, officers or other employees. No additional compensation will be paid to our directors, officers or other employees for such services.

Attendance at the Annual Meeting

You may attend the Annual Meeting, as well as vote and submit questions during the Annual Meeting, by visiting <http://www.virtualshareholdermeeting.com/APLT2020>. You will need your unique control number, which appears in the Internet Notice, the proxy card or voting instructions that accompanied the proxy materials. In the event that you do not have a control number, please contact your broker, bank or other nominee as soon as possible so that you can be provided with a control number and gain access to the meeting.

PROPOSAL 1 – ELECTION OF DIRECTORS

Our board of directors currently consists of six members. In accordance with our Amended and Restated Certificate of Incorporation (the “Certificate of Incorporation”) our board of directors is divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors are divided among the three classes as follows:

Class	Term Expiration	Director	Age
Class I	2020	Les Funtleyder	50
		Stacy J. Kanter	61
Class II	2021	Joel S. Marcus	72
		Jay S. Skyler, M.D. MACP	73
Class III	2022	Teena Lerner, Ph.D.	62
		Shoshana Shendelman, Ph.D.	41

Class I Director Nominees for Election – Term Expiring 2023

The current term of the Class I directors will expire at the Annual Meeting. Our board of directors nominated each of Les Funtleyder and Stacy J. Kanter for re-election at the Annual Meeting as a Class I director to hold office until the 2023 Annual Meeting of Stockholders and until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. The nominees have consented to serve a term as Class I directors. Should any of the nominees become unable to serve for any reason prior to the Annual Meeting, the board of directors may designate a substitute nominee, in which event the persons named in the enclosed proxy will vote for the election of such substitute nominee, or may reduce the number of directors on the board of directors.

Below is a biography of each of the Class I directors standing for re-election at the Annual Meeting:

Les Funtleyder

Les Funtleyder, 50, has served as a member of our board of directors since June 2016 and previously served as our interim Chief Financial Officer from December 2018 to April 2019. Mr. Funtleyder also serves as a healthcare portfolio manager at E Squared Capital Management, LLC since January 2014, a senior external advisor with McKinsey and Co. since June 2017, and a consulting partner at Bluecloud Health, a private equity healthcare fund, since December 2013. Mr. Funtleyder previously served as the director of strategic investments and communications of OPKO Health Inc., a publicly traded healthcare company. Mr. Funtleyder currently serves on the board of directors of several private healthcare companies and foundations. Mr. Funtleyder is also an adjunct professor at Columbia University Medical Center. Mr. Funtleyder received his B.A. from Tulane University and MPH from Columbia University Mailman School of Public Health. We believe that Mr. Funtleyder’s extensive experience managing and investing in the healthcare industry qualifies him to serve on our board of directors.

Stacy J. Kanter

Stacy J. Kanter, 61, has served as a member of our board of directors since May 2019 and currently serves as the chair of our audit committee and as a member of our nominating and corporate governance committee. Ms. Kanter practiced law for more than 30 years with Skadden, Arps, Slate, Meagher & Flom LLP, where she was a partner from 1993 until December 2018 and Head of the Global Capital Markets practice from 2009 until December 2018 and was Of Counsel from January 2019 until joining our board of directors. Ms. Kanter also chaired Skadden’s Global Diversity and Inclusion Committee. Ms. Kanter was an associate at Skadden from 1984 to 1986 and from 1988 to 1993. Ms. Kanter served as a law clerk to the Honorable Raymond J. Dearie, United States District Court Judge for the Eastern District of New York from 1986 to 1987. Ms. Kanter received her B.S. in Business Administration and Management from the University at Albany School of Business and her J.D. from Brooklyn Law School. We believe that Ms. Kanter’s extensive legal and business expertise in corporate finance and capital markets, corporate

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governance and mergers and acquisitions qualifies her to serve on our board of directors. Ms. Kanter was identified as a potential candidate by our Chief Executive Officer, and following an independent third party review process, recommended to the nominating and corporate governance committee and later approved by the board.

Required Vote

The directors will be elected by a plurality of the votes of the shares present in person, or represented by proxy, and entitled to vote.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS A VOTE IN FAVOR OF THE ABOVE NOMINEES FOR ELECTION AS CLASS I DIRECTORS TO THE BOARD.

Class II and III Directors Continuing in Office

Below are biographies of the directors continuing in office:

Shoshana Shendelman, Ph.D.

Shoshana Shendelman, Ph.D., 41, is our founder and has served as our President and Chief Executive Officer and as chair of our board of directors since January 2016 and currently serves as a member of our nominating and corporate governance committee. Prior to founding our company, she founded Clearpoint Strategy Group LLC, a boutique life sciences consulting firm, where she served as the Managing Director from July 2012 to December 2016, and served as a Senior Advisor from January 2017 to December 2018. Prior to that, she served as a scientific consultant and analyst at Bridge Scientific Consulting LLC. Dr. Shendelman received her B.S. in biochemistry from Brandeis University and a Ph.D. in Cellular, Molecular and Biophysical Studies (CMBS) from Columbia University Vagelos College of Physicians and Surgeons. We believe that Dr. Shendelman's extensive knowledge of our company as founder, President and Chief Executive Officer and her management background and experience in the healthcare industry qualifies her to serve on our board of directors.

Teena Lerner, Ph.D.

Teena Lerner, Ph.D., 62, has served as a member of our board of directors since March 2017 and currently serves as the chair of our compensation committee and as a member of our audit committee. Dr. Lerner has served on the Technology Transfer Advisory Committee of The Rockefeller University since 2000. In 2002, Dr. Lerner founded Rx Capital Management LP, a healthcare equity hedge fund, and served as the Chief Executive Officer until 2006. Prior to that, she was a portfolio manager at Pequot Capital Management, Inc., an investment advisory firm, and served as a Managing Director, Equity Research at Lehman Brothers Holdings Inc., a global financial services firm. Dr. Lerner received a B.S. from City University of New York-Brooklyn College, an MBA from New York University, Stern School of Business, a Ph.D. in Molecular Biology/Retrovirology from The Rockefeller University and a CFA charter from the Institute of Chartered Financial Analysts. We believe that Dr. Lerner's extensive expertise in various areas of the healthcare industry, including as investment banking and research, qualifies her to serve on our board of directors.

Joel S. Marcus

Joel S. Marcus, 72, has served as a member of our board of directors since January 2017 and currently serves as a member of our audit committee and compensation committee. Mr. Marcus co-founded Alexandria Real Estate Equities, Inc., or Alexandria Real Estate, a publicly traded real estate investment trust, and currently serves as Executive Chairman after previously serving as its Chairman since May 2007, Chief Executive Officer since March 1997 and a director since its founding in 1994. Mr. Marcus also founded and leads Alexandria Venture Investments, LLC, a strategic venture arm of Alexandria Real Estate. Prior to founding Alexandria Real Estate, Mr. Marcus had an extensive legal career specializing in corporate finance and capital markets, venture capital and mergers and acquisitions with special expertise in the biopharmaceutical industry. Mr. Marcus currently serves on the boards of directors of Intra-Cellular Therapies, Inc., MeiraGTx Holdings plc, and Frequency Therapeutics, Inc., publicly traded biopharmaceutical companies, and previously served on the board of directors of

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Atara Biotherapeutics, Inc., a publicly traded immunotherapy company. He also serves on the boards of directors of several private companies. Mr. Marcus received both his B.A. and J.D. from the University of California, Los Angeles. We believe that Mr. Marcus' extensive experience in the life sciences industry and as a chief executive officer and attorney qualifies him to serve on our board of directors.

Jay S. Skyler, M.D., MACP

Jay S. Skyler, M.D., MACP, 73, has served on our board of directors since April 2019 and currently serves as the chair of our nominating and corporate governance committee and as a member of our compensation committee. Dr. Skyler is a Professor of Medicine, Pediatrics and Psychology and Deputy Director of the Diabetes Research Institute at the University of Miami in Florida, where he has been employed since 1976. Dr. Skyler has also served as Study Chairman for the National Institute of Diabetes & Digestive & Kidney Diseases Type 1 Diabetes clinical trials network. He was previously the President of the American Diabetes Association and Vice-President of the International Diabetes Federation. Dr. Skyler served as a director of Amylin Pharmaceuticals, Inc., a pharmaceutical company, until its acquisition by Bristol-Myers Squibb Company in August 2012, and served as a director of MiniMed, Inc., a medical device company, until its acquisition by Medtronic plc. in 2001. Dr. Skyler currently serves on the board of directors of DexCom, Inc., a publicly traded medical device company. He also serves on the boards of directors of several private companies. Dr. Skyler received a B.S. from Pennsylvania State University and an M.D. from Jefferson Medical College. We believe that Dr. Skyler's extensive expertise in the life sciences industry and his experience serving on the board of directors of a public company qualifies him to serve on our board of directors.

General Information About the Board of Directors

Board and Committees

Our board of directors held 19 meetings during the fiscal year ended December 31, 2019. Each incumbent director serving during 2019 attended at least 75% of the aggregate of all meetings of the board of directors and all meetings of committees of which such director was a member. All directors are encouraged to attend our annual meeting of stockholders but we do not have a formal attendance policy.

Director Independence

Under the listing standards of The Nasdaq Stock Market LLC (the "Nasdaq Listing Rules"), at least a majority of our board of directors must be independent directors. Our board of directors has undertaken a review of its composition, the composition of its committees and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that none of our directors, except Shoshana Shendelman, representing one of our six directors, have any relationships that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the applicable rules of the SEC and the Nasdaq Listing Rules. In making this determination, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director, and in the case of Mr. Funtleyder, the fact that he was our former Interim Chief Financial Officer. Our board of directors has determined that Dr. Shendelman, by virtue of her position as our President and Chief Executive Officer, is not independent under applicable rules of the SEC and the Nasdaq Listing Rules.

Board Leadership Structure

Our Chief Executive Officer, Dr. Shoshana Shendelman, currently serves as the chair of our board. Our Corporate Governance Guidelines provide that the role of chair and Chief Executive Officer may be separate or, if the board of directors determines, combined. In the event that the chair is not an independent director, the board of directors will select one of the independent directors to act as a lead director to coordinate the other independent directors and to chair the executive sessions of independent

directors (the "Lead Independent Director"). Our current Lead Independent Director is Dr. Teena Lerner. As set forth in our Corporate Governance Guidelines, the Lead Independent Director's duties include: (i) presiding at all board meetings at which the chair is not present, including executive sessions of the independent directors; (ii) acting as liaison between the independent directors and the Chief Executive Officer and chair; (iii) presiding over meetings of the independent directors; (iv) consulting with the chair in planning and setting schedules and agendas for board meetings; and (v) performing such other functions as the board of directors may delegate. We do not believe there should be a fixed rule regarding the positions of Chief Executive Officer and chair being held by different individuals, or whether the chair should be an employee of the Company or should be elected from among the non-employee directors. The needs of the Company and the individuals available to assume these roles may require different outcomes at different times, and the board of directors believes that retaining flexibility in these decisions is in the best interests of the Company. The nominating and corporate governance committee will periodically review our leadership structure and make any recommendations to the board of directors.

Board's Role in Risk Oversight

Our management is responsible for identifying risks facing our Company, including strategic, financial, operational and regulatory risks, implementing risk management policies and procedures and managing our day to day risk exposure.

The audit committee reviews and discusses with management and the Company's auditors, as appropriate, (i) the Company's guidelines and policies with respect to financial risk management and financial risk assessment, including the Company's major financial risk exposures and the steps taken by management to monitor and control these exposures and (ii) management risks relating to data privacy, technology and information security, including cyber security and back-up of information systems, and the steps the Company has taken to monitor and control such exposures.

The compensation committee reviews the Company's practices and policies of employee compensation as they relate to risk management and risk-taking incentives, to determine whether such compensation policies and practices are reasonably likely to have a material adverse effect on the Company.

The nominating and corporate governance committee reviews, and recommends any changes to the Company's insider trading policies and also oversees and reviews the Company's major legal compliance risk exposures and the steps management has taken to monitor or mitigate such exposures, including the Company's procedures and any related policies with respect to risk assessment and risk management.

In addition, the board of directors is regularly presented with information at its regularly scheduled and special meetings regarding risks facing our Company, and management provides more frequent, informal communications to the board of directors between regularly scheduled meetings which are designed to give the board of directors regular updates about our business. The board of directors considers this information and provides feedback, makes recommendations, and, as appropriate, authorizes or directs management to address particular exposures to risk.

Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee. Our board of directors may establish other committees to facilitate the management of our business. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors. Each committee has adopted a written charter that satisfies the applicable rules of the SEC and Nasdaq Listing Rules, which we have posted on our website at www.appliedtherapeutics.com.

Committee Membership

Name	Audit Committee	Compensation Committee	Nominating & Corporate Governance Committee
Shoshana Shendelman, Ph.D. ⁽¹⁾			•
Les Funtleyder			
Stacy J. Kanter	Chair		•
Teena Lerner, Ph.D. ⁽²⁾	•	Chair	
Joel S. Marcus	•	•	
Jay S. Skyler, M.D., MACP		•	Chair

(1) Chair of the board of directors.

(2) Lead Independent Director

Audit Committee

The audit committee is responsible for assisting our board of directors in its oversight of the integrity of our financial statements, the qualifications and independence of our independent auditors and our internal financial and accounting controls. The audit committee has direct responsibility for the appointment, compensation, retention (including termination) and oversight of our independent auditors, and our independent auditors report directly to the audit committee. The audit committee also prepares the audit committee report that the SEC requires to be included in our annual proxy statement.

Our audit committee consists of Teena Lerner, Ph.D., Joel S. Marcus and Stacy J. Kanter. Our board of directors has determined that all three members are independent under the Nasdaq Listing Rules and Rule 10A-3(b)(1) under the Securities Exchange Act of 1934 (the "Exchange Act"). The chair of our audit committee is Ms. Kanter. Our board of directors has determined that each of Dr. Lerner and Mr. Marcus qualifies as an "audit committee financial expert" as such term is currently defined in Item 407(d)(5) of Regulation S-K. Our board of directors has also determined that each member of our audit committee can read and understand fundamental financial statements, in accordance with applicable requirements. In arriving at these determinations, the board of directors has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector.

Compensation Committee

The compensation committee approves the compensation objectives for the company, the compensation of the Chief Executive Officer and approves, or recommends to our board of directors for approval, the compensation for other executives. The compensation committee reviews all compensation components, including base salary, bonus and benefits.

Our compensation committee consists of Teena Lerner, Ph.D., Joel S. Marcus and Jay S. Skyler, M.D. Our board of directors has determined that all members are independent under the Nasdaq Listing Rules and are "non-employee directors" as defined in Rule 16b-3 under the Exchange Act. The chair of our compensation committee is Dr. Lerner.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee makes recommendations regarding corporate governance, the composition of our board of directors, identification, evaluation and nomination of director candidates and the structure and composition of committees of our board of directors. In addition, the nominating and corporate governance committee is responsible for developing and recommending corporate governance guidelines to our board of directors, as applicable to the Company.

Our nominating and corporate governance committee consists of Shoshana Shendelman, Ph.D., Jay S. Skyler, M.D. and Stacy J. Kanter. The chair of our nominating and corporate governance committee is Dr. Skyler. Each member of the nominating and corporate governance committee is an independent director as defined by the Nasdaq Listing Rules, except for Dr. Shendelman, who is not an independent director and, as required by the Nasdaq Listing Rules, will no longer serve on the committee effective as of the date immediately prior to the first anniversary of the Company's listing on The Nasdaq Stock Market LLC.

Code of Ethics

We have adopted a written code of business conduct and ethics that applies to all of our directors, officers and employees, including our principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions, and agents and representatives. A copy of our code of business conduct and ethics is posted on our website at www.appliedtherapeutics.com. The nominating and corporate governance committee of our board of directors is responsible for overseeing our code of business conduct and ethics and any waivers applicable to any director, executive officer or employee. We intend to disclose any amendments or waivers of our code of business conduct and ethics requiring disclosure under applicable SEC requirements or Nasdaq Listing Rules on our website identified above.

Stockholder Communications with the Board of Directors

Stockholders of the Company wishing to communicate with the board of directors or an individual director may send a written communication to the board of directors or such director at the following address:

c/o Applied Therapeutics, Inc.
545 Fifth Avenue, Suite 1400
New York, New York 10017
Attn: Secretary

The Secretary will review each communication, and will forward such communication to the board of directors or to any individual director to whom the communication is addressed unless the communication contains advertisements or solicitations or is unduly hostile, threatening or similarly inappropriate, in which case the Secretary shall discard the communication or inform the proper authorities, as may be appropriate.

PROPOSAL 2 – RATIFICATION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The audit committee is responsible for the appointment, compensation, retention and oversight of the Company's independent auditors. In connection with this responsibility, the audit committee evaluates and monitors the auditors' qualifications, performance and independence. This responsibility includes a review and evaluation of the independent auditors. The audit committee approves all audit engagement fees and terms associated with the retention of the independent auditors.

As a matter of good corporate governance, the board of directors is requesting our stockholders to ratify the audit committee's selection of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020. Ernst & Young LLP has served as our independent registered public accounting firm since 2017. The audit committee and the board of directors believe that the continued retention of Ernst & Young LLP as our independent auditors is in the best interests of the Company. The audit committee carefully considered the selection of Ernst & Young LLP as our independent auditors. In connection with this selection, the audit committee considered whether there should be a rotation of the independent audit firm. The audit committee charter requires the audit committee to periodically consider whether the independent audit firm should be rotated. In addition to evaluating rotation of the independent auditors, the audit committee oversees the selection of the new lead audit partner and the audit committee chair participates directly in the selection of the new lead audit partner.

If the stockholders do not ratify the selection, the audit committee will reconsider its selection. Even if the selection is ratified, the audit committee, in its discretion, may direct the appointment of a different independent registered public accounting firm at any time during the year if the audit committee determines that such a change would be in the best interests of the Company and our stockholders.

Representatives from Ernst & Young LLP are expected to be present at the Annual Meeting and will have an opportunity to make a statement at the Annual Meeting if they desire to do so and are expected to be available to respond to appropriate questions at the Annual Meeting.

Required Vote

Approval by the affirmative vote of the holders of a majority of the shares of common stock present in person, or represented by proxy, and entitled to vote at the Annual Meeting is required to ratify the selection of Ernst & Young LLP.

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS VOTE IN FAVOR OF THE RATIFICATION OF THE APPOINTMENT OF ERNST & YOUNG LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2020.

AUDIT COMMITTEE REPORT

The audit committee reviewed and discussed the audited consolidated financial statements for the fiscal year ended December 31, 2019, with our management and with our independent registered public accounting firm, Ernst & Young LLP. In addition, the audit committee discussed with Ernst & Young LLP the matters required to be discussed by the applicable requirements of the Public Company Accounting Oversight Board (the "PCAOB") and the SEC. The audit committee also discussed with Ernst & Young LLP the written disclosures and the independence letter from Ernst & Young LLP required by the applicable requirements of the PCAOB.

Based on the audit committee's review of the audited consolidated financial statements and the review and discussions described in the preceding paragraph, the audit committee recommended to the board of directors that the audited consolidated financial statements for the fiscal year ended December 31, 2019, be included in the Annual Report.

Audit Committee

Stacy J. Kanter (Chair)
Teena Lerner, Ph.D.
Joel S. Marcus

The above Audit Committee Report is not soliciting material, is not deemed filed with the SEC and is not incorporated by reference in any of our filings under the Securities Act of 1933 (the "Securities Act") or the Exchange Act whether made before or after the date of this proxy statement and irrespective of any general incorporation language in any such filings.

Independent Registered Public Accounting Firm

Fees Billed by the Principal Accountant

We were billed the following fees by our independent registered public accounting firm for the fiscal years ended December 31, 2019 and 2018:

	Year Ended December 31,	
	2019	2018
Audit Fees ⁽¹⁾	\$340,000	\$55,000
Audit-Related Fees ⁽²⁾	\$521,315	—
Tax Fees	—	—
All Other Fees	—	—
Total	\$861,315	\$55,000

(1) Audit fees consist of fees for services necessary to perform the audit of our consolidated financial statements for fiscal 2019 and 2018.

(2) Audit-related fees consist of fees for assurance and related services reasonably related to the performance of the audit or review and fees related to the preparation and review of documents filed with the SEC, including those related to the IPO (as defined below) and subsequent equity offerings.

Pre-approval of Services

The audit committee pre-approves all audit and non-audit services rendered by our independent auditor. The audit committee has not adopted a formal written policy or procedures for the pre-approval of audit and non-audit services rendered by our independent auditor. The audit committee generally pre-approves specified services in the defined categories of audit services, audit-related services, and tax services up to specified amounts. Pre-approval may also be given as part of the audit committee's approval of the scope of the engagement of the independent auditor or on an individual explicit case-by-case basis before the independent auditor is engaged to provide each service. The audit committee approved all of the fees in the table above.

PRINCIPAL STOCKHOLDERS

The following table sets forth information regarding beneficial ownership of our common stock as of April 7, 2020 by:

- Each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- Each of our directors;
- Each of our named executive officers; and
- All of our current executive officers and directors as a group.

The percentage ownership information is based on 21,969,277 shares of common stock outstanding as of April 7, 2020.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than 5% of our common stock. We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of our common stock issuable pursuant to the exercise of stock options or warrants that are either immediately exercisable or exercisable within 60 days of April 7, 2020. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them. Except as otherwise noted below, the address for each person or entity listed in the table is c/o Applied Therapeutics, Inc., 545 Fifth Avenue, Suite 1400, New York, New York 10017.

	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned
Greater than 5% Stockholders:		
Shoshana Shendelman, Ph.D. ⁽¹⁾	6,487,111	27.5%
Entities affiliated with Alexandria Venture ⁽²⁾	3,390,576	15.4%
Directors and Named Executive Officers:		
Les Funtleyder ⁽³⁾	201,922	*
Stacy J. Kanter ⁽⁴⁾	13,320	*
Teena Lerner, Ph.D. ⁽⁵⁾	68,383	*
Joel S. Marcus ⁽²⁾⁽⁶⁾	454,573	2.1%
Riccardo Perfetti, M.D., Ph.D. ⁽⁷⁾	334,911	1.5%
Jay S. Skyler, M.D., MACP ⁽⁸⁾	6,820	*
Mark J. Vignola, Ph.D. ⁽⁹⁾	<u>70,668</u>	<u>*</u>
All current executive officers and directors as a group (ten persons) ⁽¹⁰⁾	7,637,733	31.5%

* Represents beneficial ownership of less than 1%.

(1) Dr. Shendelman is also a director and named executive officer. Includes (a) 554,285 shares of common stock held by Dr. Shendelman, (b) 88,397 shares held by Clearpoint Strategy Group LLC, of which Dr. Shendelman is the sole owner, (c) 1,492,094 shares of common stock held by Sycamore Family I LLC, of which Dr. Shendelman's spouse, Vladimir Shendelman, is the sole manager, (d) 1,750,000 shares held by Sycamore 2020 GRAT, over which Dr. Shendelman holds sole voting and dispositive power over such shares as the Investment Advisor, (e) 290,280 shares held by Ginko Family LLC, of which Dr. Shendelman is the sole manager, (f) 709,720 shares held by Vladimir Shendelman, Dr. Shendelman's spouse, and (g) 1,602,335 shares of common stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days.

(2) Includes (a) 2,146,599 shares held by Alexandria Venture Investments, LLC ("Alexandria Venture"), and (b) 1,243,977 shares held by Alexandria Equities No. 7, LLC ("Alexandria Equities," and together with Alexandria Venture, the "Alexandria Entities"). One of our directors, Joel S. Marcus, is the Executive Chairman and founder of Alexandria Real Estate Equities, Inc.,

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the managing member of Alexandria Venture and the parent company of ARE-QRS Corp., which is the general partner of Alexandria Real Estate Equities L.P., which is the managing member of ARE-Special Services, LLC, which is the managing member of Alexandria Equities. ARE-QRS Corp. has full voting and investment power with respect to the shares owned by the Alexandria Equities and Alexandria Real Estate Equities, Inc. has full voting and investment power with respect to the shares owned by the Alexandria Venture. As Executive Chairman and founder of Alexandria Real Estate Equities, Inc., Mr. Marcus may be deemed to have voting and investment power with respect to the shares owned by the Alexandria Entities. Mr. Marcus disclaims beneficial ownership of the shares held by Alexandria Entities. The address for the Alexandria Entities is 385 E. Colorado Blvd., Suite 299, Pasadena, California 91101.

- (3) Includes 184,774 shares of common stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days.
- (4) Includes 6,820 shares of common stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days.
- (5) Includes 18,790 shares of common stock underlying outstanding options that are immediately exercisable or will become exercisable within 60 days.
- (6) Includes 49,213 shares of common stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days.
- (7) Includes 334,911 shares of common stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days.
- (8) Includes 6,820 shares of common stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days.
- (9) Includes 70,668 shares of common stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days.
- (10) Includes an aggregate of 2,274,331 shares of common stock underlying outstanding options that are immediately exercisable or will be immediately exercisable within 60 days, held by eight of the ten executive officers and directors.

EXECUTIVE AND DIRECTOR COMPENSATION

Our named executive officers for the year ended December 31, 2019, consisting of our principal executive officer and our two other executive officers who were serving as of December 31, 2019, are as follows:

- Shoshana Shendelman, Ph.D., our President and Chief Executive Officer;
- Mark Vignola, Ph.D., our Chief Financial Officer; and
- Riccardo Perfetti, M.D., Ph.D., our Chief Medical Officer.

Summary Compensation Table

The following table provides information regarding the compensation earned by our named executive officers for the year ended December 31, 2019.

Name and Principal Position	Year	Salary (\$) ⁽¹⁾	Bonus (\$)	Option Awards (\$) ⁽²⁾	All Other Compensation (\$) ⁽³⁾	Total (\$)
Shoshana Shendelman, Ph.D. <i>President and Chief Executive Officer</i>	2019	550,000	—	11,039,972 ⁽⁴⁾	—	11,589,972
	2018	500,000	—	685,554	—	1,185,554
Mark Vignola, Ph.D. <i>Chief Financial Officer</i>	2019	400,000	160,000	1,508,882	8,151	2,077,033
Riccardo Perfetti, M.D., Ph.D. <i>Chief Medical Officer</i>	2019	450,000	297,500 ⁽⁵⁾	2,600,221 ⁽⁷⁾	9,594	3,357,315
	2018	167,307	275,000 ⁽⁶⁾	725,241	10,221	1,177,769

- (1) Salary amounts represent actual amounts paid during the applicable year. See “— Narrative to the Summary Compensation Table — Annual Base Salary” below for more information.
- (2) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during the applicable year computed in accordance with ASC 718 for stock-based compensation transactions. Assumptions used in the calculation of these amounts are included in the notes to our financial statements included in our Annual Report. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.
- (3) The amounts represent matching contributions made by us to the named executive officer’s 401(k) plan account.
- (4) Consists of (i) an annual grant of options made on March 18, 2019 in respect of 2018 performance, (ii) an IPO grant of options granted on May 13, 2019, (iii) a grant of options made on December 16, 2019 in respect of 2019 performance in lieu of a grant of options that would have otherwise been made in early 2020 in respect of 2019 performance and (iv) a fully vested grant of options made on December 16, 2019 in lieu of an annual cash bonus in respect of 2019. While certain of these options relate to 2018 performance and certain others relate to 2019 performance, the applicable compensation disclosure rules require that the value of all of the option grants be included in this table.
- (5) Consists of Dr. Perfetti’s retention bonus (\$50,000) and an annual discretionary bonus for the 2019 calendar year (\$247,500).
- (6) Consists of Dr. Perfetti’s sign-on bonus (\$50,000) and an annual discretionary bonus for the 2018 calendar year (\$225,000).
- (7) Consists of the following option awards to Dr. Perfetti: (i) an annual grant of options made on March 18, 2019 in respect of 2018 performance, (ii) an IPO grant of options made on May 13, 2019 and (iii) a grant of options made on December 16, 2019 in respect of 2019 performance in lieu of a grant of options that would have otherwise been made in early 2020 in respect of 2019 performance. While certain of these options relate to 2018 performance and certain others relate to 2019 performance, the applicable compensation disclosure rules require that the value of all of the option grants be included in this table.

Narrative to the Summary Compensation Table

We review compensation annually for all employees, including our named executive officers. In setting executive base salaries and bonuses and granting equity incentive awards, we consider compensation for comparable positions in the market, the historical compensation levels of our executives, individual performance as compared to our expectations and objectives, our desire to motivate our employees to achieve short- and long-term results that are in the best interests of our stockholders and a long-term commitment to our company.

Prior to the completion of our Initial Public Offering on May 16, 2019 (the “IPO”), our board of directors determined our executive officers’ compensation and reviewed and discussed management’s proposed compensation with our Chief Executive Officer for all executives other than our Chief Executive Officer. Based on those discussions and its discretion, our board of directors then approved the

compensation of each executive officer. Since the completion of the IPO, the compensation committee has determined our executive officers' compensation and followed this process, but the compensation committee itself, rather than our board of directors, approves the compensation of each executive officer.

Annual Base Salary

Base salaries for our executive officers are initially established through arm's-length negotiations at the time of the executive officer's hiring, taking into account such executive officer's qualifications, experience, the scope of his or her responsibilities and competitive market compensation paid by other companies for similar positions within the industry and geography. Base salaries are reviewed annually, typically in connection with our annual performance review process, and adjusted from time to time to realign salaries with market levels after taking into account individual responsibilities, performance and experience. In making decisions regarding salary increases, we may also draw upon the experience of members of our board of directors with executives at other companies. The 2019 base salaries for our named executive officers were as follows: (a) \$550,000 for Dr. Shendelman, (b) \$450,000 for Dr. Perfetti and (c) \$400,000 for Dr. Vignola.

Bonus

Our named executive officers are eligible to receive discretionary annual bonuses based on individual performance, company performance or as otherwise determined appropriate by our compensation committee. In late 2019, the compensation committee met and, after considering input from management and considering relevant company and individual performance, determined to award the following annual bonuses to our named executive officers in respect of 2019: (a) a bonus in the form of a grant of fully vested options to purchase 23,317 shares of our common stock, which was granted to Dr. Shendelman in lieu of a cash bonus, (b) a cash bonus of \$160,000 to Dr. Vignola and (c) a cash bonus of \$247,500 to Dr. Perfetti.

Stock Option Grants

Our equity-based incentive awards are designed to align our interests and those of our stockholders with those of our employees and consultants, including our named executive officers. As of December 31, 2019, stock option awards were the only form of equity awards we granted to our named executive officers.

We have historically used stock options as an incentive for long-term compensation to our named executive officers because they are able to profit from stock options only if our stock price increases relative to the stock option's exercise price, which exercise price is set at the fair market value of our common stock on the date of grant. We may grant equity awards at such times as our board of directors determines appropriate. Additional grants may occur periodically in order to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

Prior to the IPO, all of the stock options we granted were made pursuant to the 2016 Equity Incentive Plan (the "2016 Plan"). Following the IPO, our equity incentive awards were granted under the terms of the 2019 Equity Incentive Plan (the "2019 Plan"). The terms of our equity plans are described below under "— Equity Incentive Plans."

All options are granted with an exercise price per share that is no less than the fair market value of our common stock on the date of grant of such award. Our stock option awards generally vest over a three-year period, and may be subject to acceleration of vesting and exercisability under certain termination and change in control events. See "— Outstanding Equity Awards at Fiscal Year-End" below for additional information.

Outstanding Equity Awards at Fiscal Year-End

The following table provides information regarding the outstanding equity awards held by our named executive officers as of December 31, 2019.

Name and Principal Position	Grant Date	Option Awards			
		Number of Securities Underlying Unexercised Options (#) (Exercisable)	Number of Securities Underlying Unexercised Options (#) (Unexercisable)	Option Exercise Price (\$)	Option Expiration Date
Shoshana Shendelman, Ph.D.					
<i>President and Chief Executive Officer</i>	March 21, 2017 ⁽¹⁾	27,624	—	1.00	March 21, 2027
	March 8, 2018 ⁽²⁾	484,641	242,320	1.44	March 7, 2028
	March 18, 2019 ⁽³⁾	316,298	632,596	4.70	March 17, 2029
	May 13, 2019 ⁽⁴⁾	—	767,349	10.00	May 13, 2029
	December 16, 2019 ⁽⁵⁾	—	209,000	22.20	December 16, 2029
	December 16, 2019 ⁽¹⁾	23,317	—	22.20	December 16, 2029
Mark Vignola					
<i>Chief Financial Officer</i>	May 3, 2019 ⁽⁶⁾	—	161,594	12.93	May 3, 2029
	May 13, 2019 ⁽⁴⁾	—	34,104	10.00	May 13, 2029
Riccardo Perfetti, M.D., Ph.D.					
<i>Chief Medical Officer</i>	December 17, 2018 ⁽⁷⁾	165,996	47,428	1.44	December 16, 2028
	March 18, 2019 ⁽⁸⁾	78,057	55,755	4.70	March 17, 2029
	May 13, 2019 ⁽⁴⁾	—	170,522	10.00	May 13, 2029
	December 16, 2019 ⁽⁵⁾	—	80,000	22.20	December 16, 2029

- (1) This option was fully vested as of December 31, 2019.
- (2) Two-thirds of this option was vested as of December 31, 2019, and the remainder vested on March 8, 2020.
- (3) One-third of this option vested on each of December 31, 2019 March 18, 2020, and the remainder vests on March 8, 2021.
- (4) One-fourth of this option vests on May 13, 2020, and the remainder vests monthly thereafter in one thirty-sixth increments.
- (5) One-fourth of this option vests on December 16, 2020, and the remainder vests monthly thereafter in one thirty-sixth increments.
- (6) One-third of this option vests on April 27, 2020, and the remainder vests monthly in one twenty-fourth increments.
- (7) One-third of this option vested on August 27, 2018, an additional sixteen twenty-fourths was vested as of December 31, 2019 and the remainder vests monthly in one twenty-fourth increments.
- (8) One-third of this option vested on March 18, 2019, an additional nine twenty-fourths was vested as of December 31, 2019 and the remainder vests monthly in one twenty-fourth increments.

IPO Option Grants

In connection with the IPO, our board of directors granted options to purchase 5% of our outstanding shares of common stock immediately following the IPO to Drs. Shendelman, Perfetti and Vignola under our 2019 Plan with an exercise price per share equal to the initial public offering price per share. One quarter of the shares underlying each of these options vest on the first anniversary of the date of grant and the remaining shares vest in 36 equal installments thereafter, subject to the executive officer's continued employment with us at each vesting date.

Option Grants Awarded in December 2019

Our compensation committee granted options in December 2019 to Drs. Shendelman and Perfetti in respect of their 2019 performance in lieu of grants of options that would have otherwise been made to each of them in early 2020 in respect of their 2019 performance. One quarter of the shares underlying each of these options vest on the first anniversary of the date of grant and the remaining shares vest in 36 equal installments thereafter, generally subject to the executive officer's continuous employment with us at each vesting date.

In addition, as described above in "Narrative to Summary Compensation Table — Bonus," Dr. Shendelman received a grant of fully vested options in December 2019 in lieu of payment of a cash bonus in respect of 2019 performance.

Employment Arrangements

Below are descriptions of our employment agreements with our named executive officers. The agreements generally provide for at-will employment without any specific term and set forth the named executive officer's initial base salary and eligibility for employee benefits. The key terms of the offer letters and employment agreements with our named executive officers, including potential payments upon termination or change in control, are described below. Additionally, each of Dr. Perfetti and Dr. Vignola are entitled to certain severance benefits pursuant to his agreement, the terms of which are described under "— Potential Payments and Benefits upon Termination or Change in Control" below. Each of our named executive officers has executed a form of our standard confidential information and inventions assignment agreement.

Agreement with Shoshana Shendelman

In March 2020, we entered into an employment agreement with Dr. Shendelman. Pursuant to her employment agreement, Dr. Shendelman is entitled to an annual base salary of \$577,500, and will be eligible to receive an annual performance and retention bonus of up to 50% of her annual base salary. Additionally, Dr. Shendelman is expected to be entitled to certain severance benefits pursuant to her agreement, the terms of which are described under "— Potential Payments and Benefits upon Termination or Change in Control" below.

Agreement with Mark Vignola

In August 2019, we entered into an employment agreement with Dr. Vignola. Pursuant to his employment agreement, Dr. Vignola is entitled to an annual base salary of \$400,000 and a discretionary annual bonus. Additionally, Dr. Vignola is entitled to certain severance benefits pursuant to his agreement, the terms of which are described under "— Potential Payments and Benefits upon Termination or Change in Control" below.

Agreement with Riccardo Perfetti

In August 2019, we entered into an employment agreement with Dr. Perfetti, which we subsequently amended in March 2020. Pursuant to his employment agreement, Dr. Perfetti is entitled to an annual base salary of \$450,000 (currently \$472,500 following an increase which became effective on January 1, 2020) and a discretionary annual bonus. In addition, Dr. Perfetti received a one-time sign-on bonus of \$100,000, with \$50,000 payable on the first day of his employment and the remainder payable on the one-year anniversary of his start date. Additionally, Dr. Perfetti is entitled to certain severance benefits pursuant to his agreement, the terms of which are described under "— Potential Payments and Benefits upon Termination or Change in Control" below.

Potential Payments and Benefits upon Termination or Change in Control

Regardless of the manner in which a named executive officer's employment with us terminates, the named executive officer is entitled to receive amounts earned during their term of service, including salary and accrued unused vacation pay. In addition, each named executive officer is eligible for the following payments and benefits upon a qualifying termination of employment or a change in control:

Shoshana Shendelman

Dr. Shendelman's employment agreement further provides that, notwithstanding anything in her employment agreement, any equity plan of the Company or any award agreement to the contrary, in the event of a "change in control" (as defined in the 2019 Plan), Dr. Shendelman's then-unvested outstanding equity awards will become fully vested (and exercisable, as applicable) as of the date of such change in control.

Pursuant to the terms of Dr. Shendelman's employment agreement, upon a qualifying termination of her employment by the Company without "cause" (including as a result of her death or disability) or by Dr. Shendelman for "good reason" (in each case as such terms are defined in Dr. Shendelman's employment agreement), subject to her (or her estate's, as applicable) execution of a release of claims in

favor of the Company. The severance payments and benefits consist of (i) 12 months of base salary continuation, (ii) a lump sum target annual bonus payment, (iii) continued payment for the cost of health care coverage for 12 months and (iv) accelerated vesting of any then-unvested shares subject to an outstanding option.

Mark Vignola

Pursuant to Dr. Vignola's employment agreement, if in the event of a qualifying termination, which includes an involuntary termination without "cause" and a "resignation for good reason," Dr. Vignola will be eligible to receive at least (i) nine months of his monthly base salary *plus* his target annual bonus prorated pursuant to the terms of Dr. Vignola's employment agreement, (ii) nine months of payments equal to the monthly cost of his health insurance premiums at the time of termination, and (iii) accelerated vesting of any then-unvested shares subject to an outstanding option, subject to his execution of a separation agreement and general release of claims in favor of our company.

In addition, Dr. Vignola's outstanding options under the 2016 Plan will vest in full upon the occurrence of a change in control, subject to his continued service through the closing of the change in control (as defined in the 2016 Plan).

Riccardo Perfetti

Pursuant to Dr. Perfetti's employment agreement, if in the event of a qualifying termination, which includes an involuntary termination without "cause," a "resignation for good reason" and termination due to death or disability, Dr. Perfetti will be eligible to receive at least (i) 12 months of his monthly base salary *plus* his target annual bonus, (ii) 12 months of payments equal to the monthly cost of his health insurance premiums at the time of termination, and (iii) accelerated vesting of any then-unvested shares subject to an outstanding option, subject to his execution of a separation agreement and general release of claims in favor of our company.

In addition, notwithstanding anything in his employment agreement, any equity plan of the Company or any award agreement to the contrary, in the event of a "change in control" (as defined in the 2019 Plan), Dr. Perfetti's then-unvested outstanding equity awards will become fully vested (and exercisable, as applicable) as of the date of such change in control.

Health and Welfare and Retirement Benefits; Perquisites

All of our current named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, vision, disability and life insurance plans, in each case on the same basis as all of our other employees. We generally do not provide perquisites or personal benefits to our named executive officers, except in limited circumstances.

401(k) Plan

Our named executive officers are eligible to participate in a defined contribution retirement plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees may defer eligible compensation on a pre-tax or after-tax (Roth) basis, up to the statutorily prescribed annual limits on contributions under the Code. Contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participants' directions. We currently make matching contributions into the 401(k) plan on behalf of participants equal to 100% on participant contributions up to 3% of their compensation and 50% on participant contributions up to an additional 2% of their compensation. Participants are immediately and fully vested in their contributions. The 401(k) plan is intended to be qualified under Section 401(a) of the Code with the 401(k) plan's related trust intended to be tax-exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan (except for Roth contributions) and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan. Our board of directors may elect to adopt qualified or nonqualified benefit plans in the future, if it determines that doing so is in our best interests.

Equity Incentive Plans

2019 Equity Incentive Plan

Our board of directors adopted our 2019 Plan on April 24, 2019 and our stockholders approved our 2019 Plan on April 26, 2019. Our 2019 Plan is a successor to and continuation of the 2016 Plan. The 2019 Plan became effective upon, and no stock awards were granted under the 2019 Plan until, after the date of the underwriting agreement related to the IPO. Upon the 2019 Plan's effectiveness, no further grants were made under the 2016 Plan.

Stock Awards. Our 2019 Plan provides for the grant of incentive stock options, or ISOs, within the meaning of Section 422 of the Code, to employees, including employees of any parent or subsidiary, and for the grant of nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance stock awards, performance cash awards and other forms of stock awards to employees, directors and consultants, including employees and consultants of our affiliates.

Authorized Shares. Initially, the maximum number of shares of our common stock that may be issued under our 2019 Plan is 4,530,000 shares, which is the sum of (1) 1,618,813 new shares, *plus* (2) the number of shares (not to exceed 2,911,187 shares) (i) that remain available for the issuance of awards under the 2016 Plan at the time our 2019 Plan became effective, and (ii) any shares subject to outstanding stock options or other stock awards that were granted under the 2016 Plan that (A) terminate or expire prior to exercise or settlement; (B) are forfeited because of the failure to vest; or (C) are reacquired or withheld (or not issued) to satisfy a tax withholding obligation or the purchase or exercise price. In addition, the number of shares of our common stock reserved for issuance under our 2019 Plan will automatically increase on January 1 of each calendar year, starting on January 1, 2020 through January 1, 2029, in an amount equal to 5% of the total number of shares of our capital stock outstanding on the last day of the calendar month before the date of each automatic increase, or a lesser number of shares determined by our board of directors. The maximum number of shares of our common stock that may be issued on the exercise of ISOs under our 2019 Plan is 13,000,000 shares.

Share Reserve. As of December 31, 2019, 1,749,192 shares of our common stock were reserved for issuance under the 2019 Plan, covering both the 2019 Plan and the 2016 Plan. Options to purchase 1,386,592 shares of common stock, at exercise prices ranging from \$10.00 to \$22.20 per share, or a weighted-average exercise price of \$12.75 per share, were outstanding under the 2019 Plan. Options to purchase 2,693,296 shares of common stock, at exercise prices ranging from \$0.04 to \$12.93 per share, or a weighted-average exercise price of \$3.76 per share, were outstanding under the 2016 Plan.

Shares subject to stock awards granted under our 2019 Plan that expire or terminate without being exercised in full or that are paid out in cash rather than in shares do not reduce the number of shares available for issuance under our 2019 Plan. If any shares of common stock issued pursuant to a stock award are forfeited back to or repurchased or reacquired by us for any reason, the shares that are forfeited or repurchased or reacquired will revert to and again become available for issuance under the 2019 Plan. Any shares reacquired in satisfaction of tax withholding obligations or as consideration for the exercise or purchase price of a stock award will again become available for issuance under the 2019 Plan.

The maximum number of shares of common stock subject to stock awards granted under the 2019 Plan or otherwise during any one calendar year to any non-employee director, taken together with any cash fees paid by us to such non-employee director during such calendar year for service on the board of directors, will not exceed \$750,000 in total value (calculating the value of any such stock awards based on the grant date fair value of such stock awards for financial reporting purposes), or, with respect to the calendar year in which a non-employee director is first appointed or elected to our board of directors, \$1,100,000.

Plan Administration. The compensation committee of our board of directors has generally administered the 2019 Plan and is referred to as the "plan administrator" herein. The compensation committee of our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than officers) to receive specified stock awards and (2) determine the number of shares subject to such stock awards. Under our 2019 Plan, our board of directors has the

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authority to determine award recipients, grant dates, the numbers and types of stock awards to be granted, the applicable fair market value, and the provisions of each stock award, including the period of exercisability and the vesting schedule applicable to a stock award.

Under the 2019 Plan, the board of directors also generally has the authority to effect, with the consent of any adversely affected participant, (1) the reduction of the exercise, purchase, or strike price of any outstanding award; (2) the cancellation of any outstanding award and the grant in substitution therefore of other awards, cash, or other consideration; or (3) any other action that is treated as a repricing under U.S. generally accepted accounting principles, or U.S. GAAP.

Stock Options. ISOs and NSOs are granted under stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for stock options, within the terms and conditions of the 2019 Plan; *provided* that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2019 Plan vest at the rate specified in the stock option agreement as determined by the plan administrator.

The plan administrator determines the term of stock options granted under the 2019 Plan, up to a maximum of 10 years. Unless the terms of an optionholder's stock option agreement provide otherwise, if an optionholder's service relationship with us or any of our affiliates ceases for any reason other than disability, death, or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. This period may be extended in the event that exercise of the option is prohibited by applicable securities laws or our insider trading policy. If an optionholder's service relationship with us or any of our affiliates ceases due to death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 18 months following the date of death. If an optionholder's service relationship with us or any of our affiliates ceases due to disability, the optionholder may generally exercise any vested options for a period of 12 months following the cessation of service. In the event of a termination for cause, options generally terminate upon the termination date. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionholder, (4) a net exercise of the option if it is an NSO or (5) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will or the laws of descent and distribution. Subject to approval of the plan administrator or a duly authorized officer in each case, (i) an option may be transferred pursuant to a domestic relations order, official marital settlement agreement, or other divorce or separation instrument and (ii) an optionholder may designate a beneficiary who may exercise the option following the optionholder's death.

Tax Limitations on ISOs. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an award holder during any calendar year under all of our stock plans may not exceed \$100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Unit Awards. Restricted stock unit awards are granted under restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents

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may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock unit awards that have not vested will be forfeited once the participant's continuous service ends for any reason.

Restricted Stock Awards. Restricted stock awards are granted under restricted stock award agreements adopted by the plan administrator. A restricted stock award may be awarded in consideration for cash, check, bank draft or money order, past or future services to us, or any other form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. The plan administrator determines the terms and conditions of restricted stock awards, including vesting and forfeiture terms. If a participant's service relationship with us ends for any reason, we may receive any or all of the shares of common stock held by the participant that have not vested as of the date the participant terminates service with us through a forfeiture condition or a repurchase right.

Stock Appreciation Rights. Stock appreciation rights are granted under stock appreciation right agreements adopted by the plan administrator. The plan administrator determines the purchase price or strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. A stock appreciation right granted under the 2019 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

The plan administrator determines the term of stock appreciation rights granted under the 2019 Plan, up to a maximum of 10 years. If a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability, or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. This period may be further extended in the event that exercise of the stock appreciation right following such termination of service is prohibited by applicable securities laws or our insider trading policy. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation right be exercised beyond the expiration of its term.

Performance Awards. The 2019 Plan permits the grant of performance-based stock and cash awards. Our compensation committee may structure awards so that the stock or cash will be issued or paid only following the achievement of certain pre-established performance goals during a designated performance period.

The performance goals that may be selected include one or more of the following: (i) sales; (ii) revenues; (iii) assets; (iv) expenses; (v) market penetration or expansion; (vi) earnings from operations; (vii) earnings before or after deduction for all or any portion of interest, taxes, depreciation, amortization, incentives, service fees or extraordinary or special items, whether or not on a continuing operations or an aggregate or per share basis; (viii) net income or net income per common share (basic or diluted); (ix) return on equity, investment, capital or assets; (x) one or more operating ratios; (xi) borrowing levels, leverage ratios or credit rating; (xii) market share; (xiii) capital expenditures; (xiv) cash flow, free cash flow, cash flow return on investment, or net cash provided by operations; (xv) stock price, dividends or total stockholder return; (xvi) development of new technologies or products; (xvii) sales of particular products or services; (xviii) economic value created or added; (xix) operating margin or profit margin; (xx) customer acquisition or retention; (xxi) raising or refinancing of capital; (xxii) successful hiring of key individuals; (xxiii) resolution of significant litigation; (xxiv) acquisitions and divestitures (in whole or in part); (xxv) joint ventures and strategic alliances; (xxvi) spin-offs, split-ups and the like; (xxvii) reorganizations; (xxviii) recapitalizations, restructurings, financings (issuance of debt or equity) or refinancings; (xxix) strategic business criteria, consisting of one or more objectives based on the following goals: achievement of timely development, design management or enrollment, meeting specified market penetration or value added, payor acceptance, patient adherence, peer reviewed publications, issuance of new patents, establishment of or securing of licenses to intellectual property, product development or introduction (including, without limitation, any clinical trial accomplishments, regulatory or other filings, approvals or milestones, discovery of novel products, maintenance of multiple

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products in pipeline, product launch or other product development milestones), geographic business expansion, cost targets, cost reductions or savings, customer satisfaction, operating efficiency, acquisition or retention, employee satisfaction, information technology, corporate development (including, without limitation, licenses, innovation, research or establishment of third party collaborations), manufacturing or process development, legal compliance or risk reduction, patent application or issuance goals, or goals relating to acquisitions, divestitures or other business combinations (in whole or in part), joint ventures or strategic alliances; and (xxx) other measures of performance selected by the board of directors.

The performance goals may be based on company-wide performance or performance of one or more business units, divisions, affiliates, or business segments, and may be either absolute or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Our board of directors is authorized at any time in its sole discretion, to adjust or modify the calculation of a performance goal for such performance period in order to prevent the dilution or enlargement of the rights of participants, (a) in the event of, or in anticipation of, any unusual or extraordinary corporate item, transaction, event or development; (b) in recognition of, or in anticipation of, any other unusual or nonrecurring events affecting us, or our financial statements in response to, or in anticipation of, changes in applicable laws, regulations, accounting principles, or business conditions; or (c) in view of the board of director's assessment of our business strategy, performance of comparable organizations, economic and business conditions, and any other circumstances deemed relevant. Specifically, the board of directors is authorized to make adjustments in the method of calculating attainment of performance goals and objectives for a performance period as follows: (i) to exclude the dilutive effects of acquisitions or joint ventures; (ii) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; and (iii) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends. In addition, the board of directors is authorized to make adjustments in the method of calculating attainment of performance goals and objectives for a performance period as follows: (i) to exclude restructuring and/or other nonrecurring charges; (ii) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated net sales and operating earnings; to exclude the effects of changes to generally accepted accounting standards required by the Financial Accounting Standards Board; (iv) to exclude the effects of any items that are "unusual" in nature or occur "infrequently" as determined under U.S. GAAP; (v) to exclude the effects to any statutory adjustments to corporate tax rates; and (vi) to make other appropriate adjustments selected by the board of directors.

Other Stock Awards. The plan administrator may grant other awards based in whole or in part by reference to our common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split, or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2019 Plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and maximum number of shares that may be issued on the exercise of ISOs and (4) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. Our 2019 Plan provides that in the event of certain specified significant corporate transactions (or a change in control, as defined below), unless otherwise provided in an award agreement or other written agreement between us and the award holder, the plan administrator may take one or more of the following actions with respect to such stock awards:

- Arrange for the assumption, continuation, or substitution of a stock award by a successor corporation;
- Arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation;

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- Accelerate the vesting, in whole or in part, of the stock award and provide for its termination if not exercised (if applicable) at or before the effective time of the transaction;
- Arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us;
- Cancel or arrange for the cancellation of the stock award, to the extent not vested or not exercised before the effective time of the transaction, in exchange for a cash payment, if any; or
- Make a payment equal to the excess, if any, of (A) the value of the property the participant would have received on exercise of the award immediately before the effective time of the transaction, over (B) any exercise price payable by the participant in connection with the exercise.

The plan administrator is not obligated to treat all stock awards or portions of stock awards in the same manner and is not obligated to take the same actions with respect to all participants.

Under the 2019 Plan, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction, or (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

Change in Control. In the event of a change in control, the plan administrator may take any of the above-mentioned actions. Awards granted under the 2019 Plan may be subject to additional acceleration of vesting and exercisability upon or after a change in control as may be provided in the applicable stock award agreement or in any other written agreement between us or any affiliate and the participant, but in the absence of such provision, no such acceleration will automatically occur. Under the 2019 Plan, a change in control is generally (1) the acquisition by any person or company of more than 50% of the combined voting power of our then outstanding stock, (2) a merger, consolidation or similar transaction in which our stockholders immediately before the transaction do not own, directly or indirectly, more than 50% of the combined voting power of the surviving entity (or the parent of the surviving entity) in substantially the same proportions as their ownership immediately prior to such transaction, (3) a sale, lease, exclusive license or other disposition of all or substantially all of our assets other than to an entity more than 50% of the combined voting power of which is owned by our stockholders in substantially the same proportions as their ownership of our outstanding voting securities immediately prior to such transaction, (4) a complete dissolution or liquidation of the company or (5) when a majority of our board of directors becomes comprised of individuals who were not serving on our board of directors on the date of the underwriting agreement related to the IPO, or the incumbent board, or whose nomination, appointment, or election was not approved by a majority of the incumbent board still in office.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our 2019 Plan; *provided* that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our stockholders. No ISOs may be granted after the tenth anniversary of the date our board of directors adopts our 2019 Plan. No stock awards may be granted under our 2019 Plan while it is suspended or after it is terminated.

2016 Equity Incentive Plan

General. Our board of directors adopted and our stockholders initially approved the 2016 Plan in June 2016. Our board of directors subsequently amended the 2016 Plan in December 2016, June 2018 and November 2018 (and our stockholders subsequently approved the amendments to the 2016 Plan in December 2016 and April 2019) the purpose of which was to increase the number of shares available for issuance under the 2016 Plan (the June 2018 amendment also amended the 2016 Plan to accelerate in full, all options granted under the plan, upon a change of control (as defined in the 2016 Plan)). The 2016 Plan was terminated in connection with our adoption of the 2019 Plan; however, awards outstanding under the 2016 Plan continue in full effect in accordance with their existing terms. As a result, no additional awards under the 2016 Plan will be granted and all outstanding stock awards granted under the 2016 Plan that are repurchased, forfeited, expired or are cancelled will become available for grant under the 2019 Plan in accordance with its terms. The 2016 Plan will continue to govern outstanding equity awards granted thereunder.

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Administration. Our board of directors has administered the 2016 Plan since its adoption, however, following the IPO, the compensation committee of our board of directors has generally administered the 2016 Plan. Our compensation committee has full authority and discretion to take any actions it deems necessary or advisable for the administration of the 2016 Plan. Our compensation committee may modify, extend or renew outstanding options or may accept the cancellation of outstanding options (whether granted by us or another issuer) in return for the grant of new options for the same or a different number of shares and at the same or a different exercise price.

Types of Awards. The 2016 Plan provides for the grant of incentive stock options and nonstatutory stock options to purchase shares of our common stock, equity appreciation rights awards, restricted stock awards, restricted stock units, performance awards and other stock-based awards to employees, members of our board of directors and consultants. Incentive stock options may be granted only to employees.

Options. The exercise price of options granted under the 2016 Plan may not be less than 100% of the fair market value of our common stock on the grant date. Options expire at the time determined by the administrator, but in no event more than ten years after they are granted, and generally expire earlier if the optionholder's service terminates.

Changes in Capitalization. If we at any time change the number of shares of common stock issued without new consideration (such as by stock dividend or stock split), the total number of shares of common stock reserved for issuance under the 2016 Plan, the maximum number of shares of common stock which may be made subject to incentive stock options during the term of the 2016 Plan, and the number of shares of common stock covered by each then outstanding award will be equitably adjusted and the aggregate consideration payable to us, if any, will not be changed.

Corporate Transactions. Unless in connection with a change of control, in the event of any merger, consolidation or reorganization of us with or into another entity other than a merger, consolidation or reorganization in which we are the continuing entity and which does not result in the outstanding shares of our common stock being converted into or exchanged for different securities, cash or other property, or any combination thereof, we may substitute, on an equitable basis for each share of common stock then subject to an outstanding award, the number and the kind of shares of stock, other securities, cash or other property to which holders of shares of common stock will be entitled pursuant to the transaction.

Change of Control. Unless otherwise expressly provided in the applicable award agreement governing an award, upon a change of control, our board of directors (or a committee thereof) may:

- Provide for the acceleration of vesting with respect to, all or any portion of an award;
- Cancel an award for a cash payment equal to the fair market value which, in the case of stock options will be deemed to be equal to the excess, if any, of the value of the consideration to be paid in the change of control transaction to holders of the same number of shares of common stock subject to the options over the aggregate exercise price;
- Provide for the issuance of a substitute award that will substantially preserve the otherwise applicable terms of any affected award;
- Terminate unvested stock options without providing accelerated vesting; or
- Take any other action with respect to the awards our board of directors or committee deems appropriate.

The treatment of awards upon a change of control may vary among the award types and participants in the sole discretion of our board of directors.

In general, a "change of control" means the acquisition of the company by another entity by means of any transaction or series of related transactions, unless our stockholders of record immediately prior to such transaction or series of related transactions hold, immediately after such transaction or series of related transactions, at least 50% of the voting power of the surviving or acquiring entity; or a sale of all or substantially all of our assets, subject to certain exceptions.

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Transferability. A participant may not transfer stock awards under the 2016 Plan other than by will, the laws of descent and distribution, or as otherwise provided under the 2016 Plan.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend or terminate the 2016 Plan; *provided* that such action is approved by our stockholders to the extent stockholder approval is necessary. As described above, the 2016 Plan will terminate upon the effective date of the 2019 Plan.

2019 Employee Stock Purchase Plan

Our board of directors adopted, the 2019 Employee Stock Purchase Plan, or the ESPP, on April 24, 2019 and our stockholders subsequently approved the ESPP on April 26, 2019. The ESPP became effective immediately prior to the date of the underwriting agreement related to the IPO. The purpose of the ESPP is to secure the services of new employees, to retain the services of existing employees, and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. The ESPP qualifies as an “employee stock purchase plan” within the meaning of Section 423 of the Code for U.S. employees.

Share Reserve. Following the IPO, the ESPP authorized the issuance of 180,000 shares of our common stock under purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each calendar year, beginning on January 1, 2020 through January 1, 2029, by the lesser of (1) 1% of the total number of shares of our common stock outstanding on the last day of the calendar month before the date of the automatic increase and (2) 360,000 shares; *provided* that before the date of any such increase, our board of directors may determine that such increase will be less than the amount set forth in clauses (1) and (2). As of the date hereof, no shares of our common stock have been purchased under the ESPP.

Administration. Our board of directors administers the ESPP and may delegate its authority to administer the ESPP to our compensation committee. The ESPP is implemented through a series of offerings under which eligible employees are granted purchase rights to purchase shares of our common stock on specified dates during such offerings. Under the ESPP, we may specify offerings with durations of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for employees participating in the offering. An offering under the ESPP may be terminated under certain circumstances.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, up to 15% of their earnings (as defined in the ESPP) for the purchase of our common stock under the ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for the accounts of employees participating in the ESPP at a price per share that is at least the lesser of (1) 85% of the fair market value of a share of our common stock on the first date of an offering or (2) 85% of the fair market value of a share of our common stock on the date of purchase.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in the ESPP, as determined by our board of directors, including: (1) being customarily employed for more than 20 hours per week, (2) being customarily employed for more than five months per calendar year or (3) continuous employment with us or one of our affiliates for a period of time (not to exceed two years). No employee may purchase shares under the ESPP at a rate in excess of \$25,000 worth of our common stock based on the fair market value per share of our common stock at the beginning of an offering for each calendar year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under the ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital stock measured by vote or value under Section 424(d) of the Code.

Changes to Capital Structure. In the event that there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend,

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combination of shares, exchange of shares, change in corporate structure, or similar transaction, the board of directors will make appropriate adjustments to: (1) the class(es) and maximum number of shares reserved under the ESPP, (2) the class(es) and maximum number of shares by which the share reserve may increase automatically each year, (3) the class(es) and number of shares subject to and purchase price applicable to outstanding offerings and purchase rights and (4) the class(es) and number of shares that are subject to purchase limits under ongoing offerings.

Corporate Transactions. In the event of certain significant corporate transactions, any then-outstanding rights to purchase our stock under the ESPP may be assumed, continued, or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue, or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within 10 business days before such corporate transaction, and such purchase rights will terminate immediately.

Under the ESPP, a corporate transaction is generally the consummation of: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction and (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately before such transaction are converted or exchanged into other property by virtue of the transaction.

ESPP Amendment or Termination. Our board of directors has the authority to amend or terminate our ESPP; *provided* that except in certain circumstances such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to our ESPP as required by applicable law or listing requirements.

Non-Employee Director Compensation

Prior to April 2019, we did not have a formal compensation policy with respect to service on our board of directors, but we reimbursed our non-employee directors for direct expenses incurred in connection with attending meetings of our board of directors or its committees, and occasionally granted stock options.

In April 2019, our board of directors approved a non-employee director compensation policy that became effective in connection with the IPO. Under this policy, we pay each of our non-employee directors a cash retainer for service on the board of directors and for service on each committee on which the director is a member. The chairperson of each committee receives a higher retainer for such service. These retainers are payable in arrears in four equal quarterly installments on the last day of each quarter; *provided* that the amount of such payment is prorated for any portion of such quarter that the director is not serving on our board of directors or the applicable committee. No retainers were paid in respect of any period prior to the completion of the IPO. The retainers to be paid to non-employee directors for service on the board of directors and for service on each committee of the board of directors on which the director is a member are as follows:

Position	Annual Service Retainer	Chairperson Additional Retainer
Board of Directors	\$40,000	\$ —
Audit committee	7,500	15,000
Compensation committee	6,000	12,000
Nominating and corporate governance committee	4,000	8,000

In addition, under our non-employee director compensation policy, each non-employee director elected to our board of directors after the completion of the IPO received an option to purchase 20,460 shares of our common stock. In connection with the IPO, each of our non-employee directors also received options to purchase 20,460 shares of our common stock under our 2019 Plan upon the pricing of the IPO with an exercise price per share equal to the initial public offering price per share. The shares subject to each such stock option will vest monthly over a three-year period, subject to the director's continued service as a director. Further, on the date of each annual meeting of stockholders held after the completion of the IPO, each non-employee director that continues to serve as a non-employee director

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will receive an option to purchase 10,230 shares of our common stock. The shares subject to each such stock option will vest in equal monthly installments over the 12 months following the date of grant and, notwithstanding the foregoing, will be fully vested on the date of Company's next annual stockholder meeting, subject to the director's continued service as a director. The exercise price per share of these options will equal the fair market value of our common stock on the date of grant. All options granted under this policy will vest in full upon the occurrence of a change in control (as defined in the 2019 Plan) prior to the termination of the director's continuous service.

This policy is intended to provide a total compensation package that enables us to attract and retain qualified and experienced individuals to serve as directors and to align our directors' interests with those of our stockholders.

2019 Director Compensation Table

The following table sets forth information regarding the compensation earned for service on our board of directors by our non-employee directors during the year ended December 31, 2019. Dr. Shendelman also served on our board of directors, but did not receive any additional compensation for their service as a director and therefore is not included in the table below. The compensation for Dr. Shendelman as a named executive officer is set forth above under "— Summary Compensation Table."

Name	Director Compensation (\$)	Option Awards ⁽²⁾ (\$)	Total (\$)
Les Funtleyder	23,333	601,713 ⁽³⁾	625,046
Franklin M. Berger, CFA ⁽¹⁾	—	114,197 ⁽⁴⁾	114,197
Joel S. Marcus	33,942	240,026 ⁽⁵⁾	273,968
Teena Lerner, Ph.D.	38,555	240,026 ⁽⁵⁾	278,581
Stacy J. Kanter	38,440	125,829 ⁽⁶⁾	164,269
Jay Skyler	34,796	125,829 ⁽⁶⁾	160,625

(1) Mr. Berger was a member of our board of directors until the date of the IPO.

(2) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during fiscal year 2019 computed in accordance with ASC 718. Assumptions used in the calculation of these amounts are included in the notes to our financial statements included in the Annual Report. These amounts do not reflect the actual economic value that will be realized by our non-employee directors upon the vesting of the stock options, the exercise of the stock options or the sale of the common stock underlying such stock options.

(3) Represents an option to purchase 27,624 shares of our common stock granted in March 2018 at an exercise price of \$1.44 per share.

(4) Represents an option to purchase 35,911 shares of our common stock granted in March 2019 at an exercise price of \$4.70 per share.

(5) Represents options to purchase 35,911 shares of our common stock granted in March 2019 at an exercise price of \$4.70 per share and 20,460 shares of our common stock granted in May 2019 at an exercise price of \$10.00 per share

(6) Represents an option to purchase 20,460 shares of our common stock granted in May 2019 at an exercise price of \$10.00 per share.

The following table provides information regarding the number of shares of common stock underlying stock options granted to our non-employee directors that were outstanding as of December 31, 2019.

Name	Option Awards Outstanding at December 31, 2019
Les Funtleyder	198,414 ⁽²⁾
Franklin M. Berger, CFA ⁽¹⁾	—
Joel S. Marcus	78,824 ⁽³⁾
Teena Lerner, Ph.D.	78,824 ⁽³⁾
Stacy J. Kanter	20,460 ⁽⁴⁾
Jay Skyler	20,460 ⁽⁴⁾

(1) Mr. Berger was a member of our board of directors until the date of the IPO.

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- (2) Represents (i) an option to purchase 18,453 shares of our common stock granted June 22, 2016, which was fully vested as of December 31, 2019; (ii) an option to purchase 159,502 shares of our common stock granted March 7, 2019, which accelerated in full and vested on May 28, 2019; and (iii) an option to purchase 20,460 shares of our common stock granted on June 4, 2019, of which six-thirty-sixths were vested as of December 31, 2019 and the remainder vests monthly thereafter in one-thirty-sixth increments.
- (3) Represents (i) an option to purchase 18,453 shares of our common stock granted March 21, 2017, which was fully vested as of December 31, 2019; (ii) an option to purchase 35,911 shares of our common stock granted March 18, 2019, of which one-third was fully vested as of December 31, 2019 and the remainder vests yearly in one-third increments; and (iii) an option to purchase 20,460 shares of our common stock granted May 13, 2019, of which seven-thirty-sixths were vested as of December 31, 2019 and the remainder vests monthly thereafter in one-thirty-sixth increments.
- (4) Represents an option to purchase 20,460 shares of our common stock granted May 13, 2019, of which seven-thirty-sixths were vested as of December 31, 2019 and the remainder vests monthly thereafter in one-thirty-sixth increments.

Rule 10b5-1 Sales Plans

Our directors and executive officers may adopt written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell our common shares on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or officer when entering into the plan, without further direction from them. The director or officer may amend a Rule 10b5-1 plan in some circumstances and may terminate a plan at any time. Our directors and executive officers also may buy or sell additional shares outside of a Rule 10b5-1 plan when they are not in possession of material nonpublic information subject to compliance with the terms of our insider trading policy.

Prohibitions against Hedging and Pledging

As part of our insider trading policy, all directors and employees of the Company, including our executive officers, are prohibited from engaging in hedging or monetization transactions (such as prepaid variable forwards, equity swaps, collars and exchange funds) involving our securities, holding our securities in a margin account or pledging our securities as collateral for a loan.

CERTAIN RELATIONSHIPS AND TRANSACTIONS

The following includes a summary of certain relationships and transactions, including transactions since January 1, 2018 and any currently proposed transactions, to which we were or are to be a participant, in which (1) the amount involved exceeded or will exceed the lesser of (i) \$120,000 or (ii) 1% of the average of our total assets for the last two completed fiscal years, and (2) any of our directors, executive officers or holders of more than 5% of our capital stock, or any affiliate or member of the immediate family of the foregoing persons, had or will have a direct or indirect material interest, other than compensation and other arrangements that are described under the section titled “Executive and Director Compensation” in this proxy statement.

We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that we would pay or receive, as applicable, in arm’s-length transactions.

Columbia University License Agreements

In October 2016, we entered into a license agreement with Columbia University (the “2016 Columbia Agreement”) whereby, Columbia University granted us a royalty-bearing, sublicensable license that is exclusive with respect to certain patents, and non-exclusive with respect to certain know-how, in each case to develop, manufacture, and commercialize aldose reductase inhibitor products, including AT-001, AT-003 and AT-007. The license grant is worldwide with the exception of a single patent family covering AT-001 and AT-003 for which the license grant excludes China, Taiwan, Hong Kong and Macao. Under the 2016 Columbia Agreement, we are obligated to use commercially reasonable efforts to research, discover, develop and market licensed products for commercial sale in the licensed territory, and to comply with certain obligations to meet specified development funding milestones within defined time periods. Columbia University retains the right to conduct, and grant third parties the right to conduct, non-clinical academic research using the licensed technology; *provided* that such research is not funded by a commercial entity or for-profit entity or results in rights granted to a commercial or for-profit entity. As the technology licensed to us under the 2016 Columbia Agreement was developed as a result of a U.S. government grant, the licenses granted to us under the agreement are subject to the terms of such grant, and to standard rights of the U.S. government under the Bayh-Dole Act, including the grant to the government of a non-exclusive, worldwide, freedom to operate license under any patents, and the requirement, absent a waiver, to manufacture products substantially in the United States.

As consideration for entering into the 2016 Columbia Agreement, we made a nominal upfront payment to Columbia University and, following the occurrence of certain trigger events, issued to Columbia University 486,077 shares, equal to 5% of our outstanding common stock on a fully diluted basis at the time of issuance. We will be required to make further payments to Columbia University of up to an aggregate of \$1.3 million for the achievement of specified development and regulatory milestones, and up to an aggregate of \$1.0 million for the achievement of a specified level of aggregate annual net sales, in each case in connection with products covered by the 2016 Columbia Agreement. We will also be required to pay tiered royalties to Columbia University in the low- to mid-single digit percentages on our, our affiliates’ and our sublicensees’ net sales of licensed products, subject to specified offsets and reductions. In addition, we are required to make specified annual minimum royalty payments to Columbia University in the mid six figures beginning on the 10th anniversary of the effective date of the agreement. As of April 23, 2020, we have not granted any sublicenses under the 2016 Columbia Agreement. However, if we sublicense the rights granted under the 2016 Columbia Agreement to one or more third parties, we will be required to pay to Columbia University a portion of the net sublicensing revenue received from such third parties, at percentages between 10% and 20%, depending on the stage of development at the time such revenue is received from such third parties.

Columbia University is responsible for the prosecution and maintenance of the licensed patents, in consultation with us, and subject to a requirement to give due consideration to our comments, at our expense. We have the first right, but not the obligation, to control the enforcement of licensed patents exclusively licensed to us against third parties. We are required to indemnify Columbia University for any third party claims that arise from or relate to the 2016 Columbia Agreement.

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The 2016 Columbia Agreement will terminate upon the expiration of all our royalty payment obligations in all countries. We may terminate the 2016 Columbia Agreement for convenience upon 90 days' written notice to Columbia University. At its election, Columbia University may terminate the 2016 Columbia Agreement, or convert the licenses granted to us into non-exclusive, non-sublicensable licenses, in the case of (a) our uncured material breach upon 30 days' written notice (which shall be extended to 90 days if we are diligently attempting to cure such material breach), (b) our failure to achieve the specified development and funding milestone events, or (c) our insolvency. The 2016 Columbia Agreement may not be assigned by us without Columbia University's consent, except to any successor to all or substantially all of our business to which the 2016 Columbia Agreement relates and upon notice to Columbia University.

In January 2019, the Company entered into a second license agreement with Columbia University (the "2019 Columbia Agreement"). Pursuant to the 2019 Columbia Agreement, Columbia University granted the Company a royalty-bearing, sublicensable license that is exclusive with respect to certain patents, and non-exclusive with respect to certain know-how, in each case to develop, manufacture and commercialize PI3k inhibitor products. The license grant is worldwide. Under the 2019 Columbia Agreement, the Company is obligated to use commercially reasonable efforts to research, discover, develop and market licensed products for commercial sale in the licensed territory, and to comply with certain obligations to meet specified development and funding milestones within defined time periods. Columbia University retains the right to conduct, and grant third parties the right to conduct, non-clinical academic research using the licensed technology; *provided* that such research is not funded by a commercial entity or for-profit entity or results in rights granted to a commercial or for-profit entity. As consideration for entering into the 2019 Columbia Agreement, the Company made a nominal upfront payment to Columbia University. The Company will be required to make further payments to Columbia University of up to an aggregate of \$1.3 million for the achievement of specified development and regulatory milestones, and up to an aggregate of \$1.0 million for the achievement of a specified level of aggregate annual net sales, in each case in connection with products covered by the 2019 Columbia Agreement. The Company will also be required to pay tiered royalties to Columbia University in the low-to mid-single digit percentages on the Company's, its affiliates' and its sublicensees' net sales of licensed products, subject to specified offsets and reductions. In addition, the Company is required to make specified annual minimum royalty payments to Columbia University, which is contingent upon the approval of the licensed products, in the mid-six figures beginning on the tenth anniversary of the effective date of the 2019 Columbia Agreement.

The Company has not granted any sublicenses under the 2019 Columbia Agreement. However, if the Company sublicenses the rights granted under the 2019 Columbia Agreement to one or more third parties, it will be required to pay Columbia University a portion of the net sublicensing revenue received from such third parties, at percentages between 10% and 50%, depending on the stage of development at the time such revenue is received from such third parties. The 2019 Columbia Agreement will terminate upon the expiration of all the Company's royalty payment obligations in all countries. The Company may terminate the 2019 Columbia Agreement for convenience upon 90 days' written notice to Columbia University. At its election, Columbia University may terminate the 2019 Columbia Agreement, or convert the licenses granted to the Company into non-exclusive, non-sublicensable licenses, in the case of (a) the Company's uncured material breach upon 30 days' written notice (which shall be extended to 90 days if the Company is diligently attempting to cure such material breach), (b) the Company's failure to achieve the specified development and funding milestone events, or (c) the Company's insolvency.

Preferred Stock and Warrant Financings and Convertible Note and Warrant Financing

Series A Preferred Stock Financing and Warrants

Between January and March 2017, we issued an aggregate of 3,093,898 shares of our Series A Preferred Stock at a price per share of \$2.26 in five closings for total gross proceeds of \$7.0 million. The first two closings occurred in January 2017, at which time we issued an aggregate of 2,299,266 shares of our Series A Preferred Stock for gross cash proceeds of approximately \$5.2 million. The third and fourth closings occurred in February 2017, at which time we issued an additional 749,496 shares of our Series A Preferred Stock for gross cash proceeds of approximately \$1.7 million. The fifth closing occurred in March 2017, at which time we issued an additional 45,137 shares of our Series A Preferred Stock for

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gross cash proceeds of \$0.1 million. In connection with the last closing of the Series A Preferred Stock financing and pursuant to that certain Placement Agency Agreement by and between us and Brookline Capital Markets, a division of CIM Securities, LLC, or Brookline, serving as placement agent, dated October 7, 2016, as amended and restated on November 23, 2016, in March 2017, certain employees of Brookline were issued 10-year warrants, entitling such individuals to purchase up to an aggregate of 309,389 shares of our common stock at an exercise price of \$2.49 per share.

The table below sets forth the number of shares of our Series A Preferred Stock purchased by our directors, holders of more than 5% of our capital stock and their affiliated entities or immediate family members. Each share of Series A Preferred Stock in the table below automatically converted into one share of our common stock immediately upon the completion of the IPO. For a description of the material rights and privileges of the Series A Preferred Stock, see Note 9 to the notes to our financial statements included in the Annual Report.

Name	Series A Preferred Stock (#)	Aggregate Cash Purchase Price (\$)
Franklin M. Berger, CFA ⁽¹⁾	244,032	552,125
Joel S. Marcus ⁽²⁾	110,497	250,000
Alexandria Venture Investments, LLC ⁽²⁾	800,716	1,811,625

(1) Mr. Berger was a member of our board of directors until the date of the IPO.

(2) Mr. Marcus, a member of our board of directors, is the Executive Chairman and founder of Alexandria Real Estate Equities, Inc., the managing member of Alexandria Venture Investments, LLC, or Alexandria Venture. Alexandria Real Estate Equities, Inc. has full voting and investment power with respect to the shares owned by the Alexandria Venture.

Convertible Note Financing and Warrants

In February 2018, we issued an aggregate principal amount of \$6.0 million of convertible notes in two closings, or the 2018 Notes. The first closing occurred on February 8, 2018, at which time we issued an aggregate principal amount of \$5.7 million in convertible notes. The second closing occurred on February 14, 2018, at which time we issued a principal amount of \$0.3 million in one convertible note. The 2018 Notes accrued interest at a rate of 15% per annum. On November 5, 2018, we closed on a portion of the Series B Preferred Stock financing described below. At that time, all 2018 Notes and the then accrued interest totaling approximately \$6.6 million were converted into 1,097,721 shares of Series B Preferred Stock. In connection with the closing of the convertible note financing and pursuant to that certain Placement Agency Agreement by and between us and Brookline, dated January 18, 2018, in November 2018, certain employees of Brookline were issued 10-year warrants, entitling such individuals to purchase up to an aggregate of 76,847 shares of our common stock at an exercise price of \$6.59 per share.

Series B Preferred Stock Financing and Warrants

Between November 2018 and February 2019, we issued an aggregate of 3,347,052 new shares of our Series B Preferred Stock at a price per share of \$7.49 in five closings for total gross cash proceeds of approximately \$25.1 million, or the Series B Financing. In connection with the Series B Financing, in November 2018, the \$6.0 million of the 2018 Notes and the related \$0.6 million of accrued interest converted into 1,097,721 shares of our Series B Preferred Stock. The first two closings of the Series B Financing occurred in November 2018, at which time we issued an aggregate of 2,748,437 new shares of our Series B Preferred Stock for total gross cash proceeds of approximately \$20.6 million. The third and fourth closings occurred in December 2018, at which time we issued an aggregate of 155,690 new shares of our Series B Preferred Stock for total gross cash proceeds of approximately \$1.2 million. The fifth closing occurred in February 2019, at which time we issued 442,925 shares of our Series B Preferred Stock for total gross cash proceeds of approximately \$3.3 million.

In connection with the last closing of the Series B Financing and pursuant to that certain Placement Agency Agreement by and between us and Brookline, dated August 28, 2018, or the Series B Placement Agency Agreement, in April 2019, certain employees of Brookline were issued 10-year warrants, entitling

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such individuals to purchase up to an aggregate of 96,128 shares of our common stock at an exercise price of \$8.24. We have also agreed to issue additional warrants to purchase shares of our common stock to such individuals pursuant to the Series B Placement Agency Agreement for a period through 12 months from the last closing date, which number shall represent (i) 2% of the aggregate number of shares of Series B Preferred Stock sold to our officers, directors and existing investors as of the date of the Series B Placement Agency Agreement and their respective affiliates; (ii) 4% of the aggregate number of shares of Series B Preferred Stock sold to certain agreed upon investors as listed in the Series B Placement Agency Agreement; and (iii) 6% of the aggregate number of shares of Series B Preferred Stock sold to all other investors; and in each case after accounting for the conversion of all such shares of Series B Preferred Stock into our common stock.

The table below sets forth the number of shares of Series B Preferred Stock purchased by our executive officers, directors, holders of more than 5% of our capital stock and their affiliated entities or immediate family members. Each share of our outstanding preferred stock automatically converted into one share of our common stock immediately upon the completion of the IPO. For a description of the material rights and privileges of the Series B Preferred Stock, see Note 9 to the notes to our financial statements included in the Annual Report.

Name	Series B Preferred Stock (#)	Cancellation of Indebtedness (Note Conversion) (\$)	Cash Purchase Price of Series B Preferred Stock (\$)	Aggregate Purchase Price (\$)
Franklin M. Berger, CFA ⁽¹⁾	294,695	1,272,568	615,955	1,888,523
Affiliates of E Squared ⁽²⁾	675,744	46,608	5,001,684	5,048,292
Joel S. Marcus ⁽³⁾	135,192	288,596	651,530	940,126
Entities affiliated with Alexandria Venture ⁽⁴⁾	1,614,860	1,673,052	10,000,059	11,673,111

(1) Mr. Berger was a member of our board of directors until the date of the IPO. 212,430 shares of Series B Preferred Stock held by Mr. Berger were issued as a result of the conversion of his 2018 Note.

(2) Consists of (a) 7,734 shares of our Series B Preferred Stock held by Edward Ilyadzhonov and (b) 668,010 shares of our Series B Preferred Stock held by A1, a Series of E Squared Investment Fund, LLC, or A1. 7,734 shares of Series B Preferred Stock held by Mr. Ilyadzhonov were issued as a result of the conversion of his 2018 Note. Mr. Funtleyder, our interim Chief Financial Officer and a member of our board of directors, is a healthcare portfolio manager at E Squared Capital Management, LLC, or E Squared, which is the general manager of A1. Mr. Ilyadzhonov, the founder, Managing Partner and Chief Investment Officer of E Squared, has full voting and investment power with respect to shares owned by A1.

(3) Mr. Marcus is a member of our board of directors. 48,176 shares of Series B Preferred Stock held by Mr. Marcus were issued as a result of the conversion of his 2018 Note.

(4) Consists of (a) 370,883 shares of our Series B Preferred Stock held by Alexandria Venture and (b) 1,243,977 shares of our Series B Preferred Stock held by Alexandria Equities No. 7, LLC, or Alexandria Equities. 279,281 shares of Series B Preferred Stock held by Alexandria Venture were issued as a result of the conversion of its 2018 Note. Mr. Marcus, a member of our board of directors, is the Executive Chairman and founder of Alexandria Real Estate Equities, Inc., the managing member of Alexandria Venture and the parent company of ARE-QRS Corp., which is the general partner of Alexandria Real Estate Equities L.P., which is the managing member of ARE-Special Services, LLC, which is the managing member of the Alexandria Equities. Alexandria Real Estate Equities, Inc. has full voting and investment power with respect to the shares owned by the Alexandria Venture. ARE-QRS Corp. has full voting and investment power with respect to the shares owned by the Alexandria Equities.

Investors' Rights Agreement

We are party to an amended and restated investors' rights agreement, dated November 5, 2018, with the holders of our preferred stock, including our directors, Teena Lerner, Joel S. Marcus and Les Funtleyder, our former director, Franklin M. Berger, and all holders of more than 5% of our capital stock. This agreement provides that these holders are entitled to certain registration rights, including the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we otherwise file. In addition to the registration rights, this agreement provides for certain information rights and rights of first offer in favor of certain holders of our outstanding preferred stock with regard to certain issuances of our capital stock. The information rights and rights of first offer terminated upon the completion of the IPO. The registration rights will terminate upon the earliest of (i) the closing of

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a deemed liquidation event, (ii) with respect to each stockholder, the date when such stockholder can sell all of its registrable shares without limitation during a three-month period without registration pursuant to Rule 144 of the Securities Act or another similar exemption under the Securities Act and (iii) May 16, 2022.

Other Transactions

We have entered into certain employment-related agreements with our executive officers that, among other things, provide for compensatory and certain change in control benefits. For a description of these agreements and arrangements, see the section titled “Executive and Director Compensation — Employment Arrangements” in this proxy statement. We have also entered into agreements with our non-employee directors that provide for compensatory benefits. For a description of these agreements, see the section titled “Executive and Director Compensation — Non-Employee Director Compensation” in this proxy statement.

We have also granted stock options to our executive officers and directors. For a description of these stock options, see the section titled “Executive and Director Compensation” in this proxy statement.

Indemnification Agreements

We have entered or intend to enter, and intend to continue to enter, into separate indemnification agreements with some of our directors and executive officers, in addition to the indemnification provided for in our Amended and Restated Bylaws (the “Bylaws”). These indemnification agreements provide our directors and executive officers with contractual rights to indemnification and, among other things, require us to indemnify our directors and officers for certain expenses, including attorneys’ fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as a director or officer, or any other company or enterprise to which the person provides services at our request. For more information regarding these indemnification agreements, see “Management — Limitation on Liability and Indemnification Matters” in the Annual Report.

Related Party Transaction Policy

We have adopted a written related party transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related party transactions. For purposes of this policy only, a “related person transaction” is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we and any related person are participants involving an amount that exceeds or will exceed the lesser of (1) \$120,000 or, for such time as the Company qualifies as a “smaller reporting company” (2) 1% of the average of our total assets for the last two completed fiscal years. Transactions involving compensation for services provided to us as an employee, consultant or director are not considered related-person transactions under this policy. A transaction, arrangement or relationship in which a related person’s participation is solely due to the related person’s position as a director of an entity that is participating in such transaction, arrangement or relationship shall not be considered a related person transaction under this policy. A “related person” is any executive officer, director, nominee to become a director or a holder of more than 5% of our capital stock, or any affiliate or member of the immediate family of the foregoing.

Under the policy, where a transaction has been identified as a related-person transaction, management must present information regarding the proposed related-person transaction to our nominating and corporate governance committee or, where review by our nominating and corporate governance committee would be inappropriate due to a conflict of interest, to the board of directors or another independent body of our board of directors, for review. The presentation must include a description of, among other things, all of the parties, the direct and indirect interests of the related persons, the purpose of the transaction, the material facts, the benefits of the transaction to us and whether any alternative transactions are available, an assessment of whether the terms are comparable to the terms available from unrelated third parties and management’s recommendation with respect to the related person transaction. To identify related party transactions in advance, we rely on information supplied by our executive officers, directors and certain significant stockholders.

The nominating and corporate governance committee shall consider all the relevant available facts and circumstances, including, but not limited to, whether the related person transaction is on terms no

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less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person's interest in the transaction. The nominating and corporate governance committee shall approve only those related person transactions that, in light of known circumstances, are in, or are not inconsistent with, the best interests of the Company and its stockholders, as the nominating and corporate governance committee determines in the good faith exercise of its discretion.

All of the transactions described in this section were entered into prior to the adoption of this policy. Although we did not have a written policy for the review and approval of transactions with related persons prior to our IPO, our board of directors reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to a director's or officer's relationship or interest in the agreement or transaction were disclosed to our board of directors. Our board of directors took this information into account when evaluating the transaction and in determining whether such transaction was fair to us and in the best interest of all our stockholders.

STOCKHOLDER PROPOSALS FOR 2021 ANNUAL MEETING

Submission of Stockholder Proposals for Inclusion in Next Year’s Annual Meeting Proxy Statement

Any proposal or proposals by a stockholder intended to be included in the proxy statement and form of proxy relating to the 2021 Annual Meeting of Stockholders must be received by the Company no later than December 24, 2020 and must comply with the other proxy solicitation rules promulgated by the SEC and with the procedures set forth in the Bylaws. Proposals should be sent to the Secretary of the Company at 545 Fifth Avenue, Suite 1400, New York, NY 10017. Nothing in this paragraph shall be deemed to require the Company to include in its proxy statement and proxy relating to the 2021 Annual Meeting of Stockholders any stockholder proposal which may be omitted from the proxy materials according to applicable regulations of the SEC in effect at the time the proposal is received.

Other Stockholder Proposals for Presentation at Next Year’s Annual Meeting

A stockholder who wishes to submit a proposal or nominate a candidate to serve as a director for consideration at the 2021 Annual Meeting of Stockholders outside the processes of Rule 14a-8 under the Exchange Act and therefore will not be included in the proxy statement for such meeting must timely deliver a written notice in accordance with the requirements, including eligibility and information required in such notice, set forth in Section 5 of the Bylaws. To be timely, such written notice must be received by the Secretary of the Company at its principal executive offices, 545 Fifth Avenue, Suite 1400, New York, NY 10017, not earlier than the close of business on February 4, 2021, nor later than the close of business on March 6, 2021. In the event that next year’s annual meeting is not scheduled to occur within 30 days of June 4, 2021 (the anniversary of the Annual Meeting), the written notice must be received (i) not earlier than the close of business on the 120th day prior to such annual meeting and (ii) not later than the close of business on the later of the 90th day prior to such annual meeting or the 10th day following the day on which public announcement of the date of such meeting is first made.

OTHER MATTERS

The Company knows of no other matters to be submitted to the stockholders at the Annual Meeting, other than the proposals referred to in this proxy statement. If any other matters properly come before the stockholders at the Annual Meeting, it is the intention of the proxy holders to vote the shares represented thereby on such matters in accordance with their best judgment.

By Order of the Board of Directors,



Shoshana Shendelman, Ph.D.
Chair, President, Chief Executive Officer and
Secretary

New York, New York
April 23, 2020



APPLIED THERAPEUTICS, INC.
545 FIFTH AVENUE, SUITE 1400
NEW YORK, NY 10017

VOTE BY INTERNET - www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information. Vote by 11:59 P.M. ET on 06/03/2020. 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/APLT2020

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. Vote by 11:59 P.M. ET on 06/03/2020. 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:

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

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

<p>The Board of Directors recommends you vote FOR the following:</p> <p>1. Election of Directors</p> <p style="padding-left: 20px;">Nominees</p> <p>01) Les Funtleyder 02) Stacy Kanter</p> <p>The Board of Directors recommends you vote FOR the following proposal:</p> <p>2. To ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the fiscal year 2020.</p> <p>NOTE: To transact other business that may properly come before the meeting or any adjournment or postponement 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>	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">For All</td> <td style="width: 33%;">Withhold All</td> <td style="width: 33%;">For All Except</td> <td style="width: 33%;">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.</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;">_____</td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"></td> <td style="width: 33%;">For</td> <td style="width: 33%;">Against</td> <td style="width: 33%;">Abstain</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; border: 1px solid black; height: 20px;"></td> <td style="width: 50%; border: 1px solid black; height: 20px;"></td> </tr> <tr> <td style="font-size: small;">Signature [PLEASE SIGN WITHIN BOX] Date</td> <td style="font-size: small;">Signature (Joint Owners) Date</td> </tr> </table>	For All	Withhold All	For All Except	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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____		For	Against	Abstain		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			Signature [PLEASE SIGN WITHIN BOX] Date	Signature (Joint Owners) Date
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	For	Against	Abstain																		
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Signature [PLEASE SIGN WITHIN BOX] Date	Signature (Joint Owners) Date																				

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Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:
The Notice and Proxy Statement and the Annual Report on Form 10-K are available at www.proxyvote.com

**APPLIED THERAPEUTICS, INC.
Annual Meeting of Stockholders
June 4, 2020 10:30 AM Eastern Time**

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned hereby appoint(s) Shoshana Shendelman as proxy holder, with the power to appoint her substitute, and hereby authorize(s) her to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common Stock of APPLIED THERAPEUTICS, INC. that the undersigned is entitled to vote at the Annual Meeting of Stockholders to be held at 10:30 AM, Eastern Time on June 4, 2020, via live webcast at www.virtualshareholdermeeting.com/APLT2020, and any adjournment or postponement thereof.

THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED AS DIRECTED BY THE STOCKHOLDER(S). IF NO SUCH DIRECTIONS ARE MADE, THIS PROXY WILL BE VOTED FOR THE ELECTION OF THE NOMINEES LISTED ON THE REVERSE SIDE FOR THE BOARD OF DIRECTORS AND FOR PROPOSAL 2.

Continued and to be signed on reverse side