MEDICINES CO /DE Form DEF 14A April 29, 2019

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

SCHEDULE 14A (Rule 14a-101)

INFORMATION REQUIRED IN PROXY STATEMENT

SCHEDULE 14A INFORMATION

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

Filed by the Registrant x

Filed by a Party other than the Registrant o

Check the appropriate box:

- o Preliminary Proxy Statement
- o Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- x Definitive Proxy Statement
- o Definitive Additional Materials
- o Soliciting Material Pursuant to §240.14a-12

THE MEDICINES COMPANY

(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):

- x No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
 - (1) Title of each class of securities to which transaction applies:
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O	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.				
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April 29, 2019

To our stockholders:

We are pleased to invite you to our 2019 annual meeting of stockholders. The meeting will take place on Thursday, May 30, 2019 at 10:00 a.m., local time, at our principal executive offices, located at 8 Sylvan Way, Parsippany, New Jersey 07054. Annual meetings play an important role in maintaining communication and understanding among our management, board of directors and stockholders, and we hope you will join us.

Enclosed with this letter you will find the notice of our 2019 annual meeting of stockholders, which lists the matters to be considered at the meeting, and the proxy statement related to our 2019 annual meeting of stockholders, which describes the matters listed in the notice and provides other information you may find useful in deciding how to vote. We have also enclosed our annual report to stockholders, which contains our annual report on Form 10-K for the year ended December 31, 2018 as filed with the Securities and Exchange Commission, including our audited consolidated financial statements for 2018, and other information that may be of interest to our stockholders.

The ability to have your vote counted at the meeting is an important stockholder right. Regardless of the number of shares you hold, and whether or not you plan to attend the meeting, we hope that you will cast your vote. If you are a stockholder of record, you may vote in person or by proxy over the Internet, by telephone or by returning your proxy card by mail in the envelope provided. You will find voting instructions in the proxy statement and on the enclosed proxy card. If your shares are held in "street name"—that is, held for your account by a bank, broker or other holder of record—you will receive instructions from your bank, broker or the other holder of record of your shares that you must follow for your shares to be voted.

Thank you for your ongoing support and continued interest in The Medicines Company.

Sincerely,

Mark Timney

Chief Executive Officer

THE MEDICINES COMPANY

8 Sylvan Way

Parsippany, New Jersey 07054

NOTICE OF 2019 ANNUAL MEETING OF STOCKHOLDERS

Time and Date 10:00 a.m., local time, on Thursday, May 30, 2019 Place 8 Sylvan Way, Parsippany, New Jersey 07054

Items of Business

At the meeting, we will ask you and our other stockholders to:

- (1) elect seven directors for terms to expire at our 2020 annual meeting of stockholders;
- (2) approve, in an advisory vote, the compensation of our named executive officers as presented in our proxy statement;
- ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2019; and
- (4) transact any other business as may properly come before the meeting or any postponement or adjournment of the meeting.

Our board of directors has no knowledge of any other business to be transacted at our 2019 annual meeting.

Record Date

You may vote if you were a stockholder of record at the close of business on April 11, 2019. It is important that your shares be represented and voted at the meeting. Whether or not you plan to

Proxy Voting

attend the meeting, please vote your shares by proxy over the Internet, by telephone or by returning your proxy card by mail in the enclosed postage paid envelope. You may revoke your proxy at any

time before its exercise at the meeting if you follow specified procedures.

By order of the Board of Directors, Stephen M. Rodin Secretary

April 29, 2019 Parsippany, New Jersey

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THE MEDICINES COMPANY 8 Sylvan Way Parsippany, New Jersey 07054

PROXY STATEMENT

For our Annual Meeting of Stockholders to be held on May 30, 2019

The Medicines Company, a Delaware corporation (often referred to as "the company", "we" or "us" in this document), is sending you this proxy statement and the enclosed proxy card because our board of directors (the "board") is soliciting your proxy to vote at our 2019 annual meeting of stockholders (the "annual meeting"). The annual meeting will be held on Thursday, May 30, 2019, at 10:00 a.m., local time, at our principal executive offices at 8 Sylvan Way, Parsippany, New Jersey 07054. You may obtain directions to the location of the annual meeting by contacting Investor Relations, 8 Sylvan Way, Parsippany, New Jersey 07054, email: investor.relations@themedco.com. If the annual meeting is adjourned for any reason, then the proxies submitted may be used at any reconvened annual meeting.

This proxy statement summarizes information about the proposals to be considered at the meeting and other information you may find useful in determining how to vote. The proxy card is the means by which you actually authorize another person to vote your shares in accordance with your instructions.

We are mailing this proxy statement and the enclosed proxy card to stockholders on or about April 29, 2019. In this mailing, we are also including a copy of our annual report to stockholders for the year ended December 31, 2018. Important Notice Regarding the Availability of Proxy Materials for

the Stockholder Meeting to be Held on May 30, 2019

This Proxy Statement and the Annual Report for the year ended December 31, 2018 are available at www.proxyvote.com.

Our annual report on Form 10-K for the year ended December 31, 2018, as filed with the Securities and Exchange Commission, or the SEC, and including our audited financial statements, is included in our annual report to stockholders in this mailing and is also available free of charge at our website at www.themedicinescompany.com or through the SEC's electronic data system at www.sec.gov. To request a printed copy of our Form 10-K (including exhibits), which we will provide to you free of charge, either: write to Investor Relations, The Medicines Company, 8 Sylvan Way, Parsippany, New Jersey 07054, email Investor Relations at investor.relations@themedco.com, or call (973) 290-6122.

You may request a copy of the materials relating to our 2019 annual meeting of stockholders, including the proxy statement and form of proxy for our 2019 annual meeting and the annual report to stockholders for the year ended December 31, 2018, at the website listed above, by sending an email to us at investor.relations@themedco.com, or by calling (973) 290-6122.

INFORMATION ABOUT THE ANNUAL MEETING

Who may vote?

Holders of record of our common stock at the close of business on April 11, 2019, the record date for the annual meeting, are entitled to one vote per share of common stock that they hold on each matter properly brought before the meeting. As of the close of business on April 11, 2019, 73,890,978 shares of our common stock were outstanding. A list of stockholders entitled to vote will be available at the meeting. In addition, you may contact our Secretary, Stephen M. Rodin, at the address of our principal executive office set forth above to make arrangements to review a copy of the stockholder list at our principal executive offices, for any purpose germane to the meeting, between the hours of 8:30 A.M. and 5:00 P.M., local time, on any business day from May 20, 2019 up to the time of the meeting. How may I vote my shares if I am a stockholder of record?

If you are a stockholder of record (meaning that you hold shares in your name in the records of our transfer agent, American Stock Transfer & Trust Company), you may vote your shares at the meeting in person or by proxy as follows:

You may vote in person. If you attend the annual meeting, you may vote by delivering your completed proxy card in person or you may vote by completing a ballot at the meeting. Ballots will be available at the meeting.

You may vote by mail. To vote by mail, you need to complete, date and sign the proxy card that accompanies this proxy statement and promptly mail it in the enclosed postage-paid envelope. If you vote by mail, you do not need to vote over the Internet or by telephone.

You may vote over the Internet. To vote over the Internet through services provided by Broadridge Investor Communications Solutions, Inc., please go to the following website: www.proxyvote.com, and follow the instructions at that site for submitting your proxy electronically. If you vote over the Internet, you do not need to complete and mail your proxy card or vote your proxy by telephone.

You may vote by telephone. To vote by telephone through services provided by Broadridge Investor Communications Solutions, Inc., call (800) 690-6903, and follow the instructions provided on the proxy card. If you vote by telephone, you do not need to complete and mail your proxy card or vote your proxy over the Internet. Your proxy will only be valid if you complete and return the proxy card, vote over the Internet or vote by telephone at or before the annual meeting (and prior to the times specified on the proxy card with respect to Internet and telephone voting). The persons named in the proxy card will vote the shares you own in accordance with your instructions provided on your proxy card, in your vote over the Internet or in your vote by telephone. If you return the proxy card, vote over the Internet or vote by telephone, but do not give any instructions on a particular matter described in this proxy statement, the persons named in the proxy card will vote the shares you own in accordance with the recommendations of our board of directors, which are set forth below in this proxy statement.

The proxy card enclosed with this proxy statement states the number of shares you are entitled to vote if you are a stockholder of record. If you believe that there is an error in the number of shares listed as being owned by you of record, please contact our Investor Relations department by sending an email to us at investor.relations@themedco.com or by calling (973) 290-6122.

How may I vote my shares if I hold them in "street name?"

If the shares you own are held on your behalf by an intermediary, such as a bank or brokerage firm or someone else who holds shares of record on your behalf, then your shares are held in what we refer to as "street name." If your shares are held in "street name" then you are deemed to be the beneficial owner of your shares and the bank or brokerage firm that actually holds the shares for you is the record holder of your shares and is required to vote the shares it holds on your behalf according to your instructions. The proxy materials, including voting and revocation instructions, should have been forwarded to you by the bank or brokerage firm that holds your shares. In order to vote your shares, you will need to follow the instructions that your bank or brokerage firm provides you. Many banks or brokerage firms may solicit voting instructions over the Internet or by telephone.

If you do not give instructions to your bank or brokerage firm, such firm will still be able to vote your shares with respect to certain "discretionary" items. The ratification of the appointment of Ernst & Young LLP as our independent registered public accounting firm (proposal 3) is considered a discretionary item. Accordingly, your bank or brokerage

firm may vote your shares in its discretion with respect to this matter even if you do not give instructions. However, under stock exchange rules that regulate voting by registered brokerage firms, the election of our nominees to serve as directors (proposal 1) and the advisory vote to approve the compensation of our named executive officers (proposal 2) are not considered to be discretionary items. Accordingly, your bank or brokerage firm may not vote your shares with respect to such matters if you do not give them voting instructions on the proposals.

If you provide your bank or brokerage firm with instructions with respect to one or more but not all proposals or you do not provide your bank or brokerage firm with instructions but your bank or broker exercises its discretionary authority to vote on your behalf with respect to proposal 3, your shares which are not voted on a particular matter will be treated as "broker non-votes" on that particular matter. "Broker non-votes" occur when your bank or brokerage firm submits a proxy for your shares but does not indicate a vote for a particular proposal because the bank or brokerage firm either does not have authority to vote on that proposal and has not received voting instructions from you or has discretionary authority but chooses not to exercise it. "Broker non-votes" are not counted as votes for or against the proposal in question or as abstentions, nor are they counted to determine the number of votes present for the particular proposal. We do, however, count "broker non-votes" for the purpose of determining a quorum for the meeting. If your shares are held in "street name" by your bank or broker, please check the instruction card provided by your bank or brokerage firm or contact your bank or brokerage firm to determine whether you will be able to vote by telephone or over the Internet.

Regardless of whether your shares are held in street name, you are welcome to attend the meeting. You may not vote shares held in street name in person at the meeting, however, unless you obtain a proxy, executed in your favor, from the holder of record (i.e., your bank or brokerage firm).

How may I change or revoke my vote?

If you are a stockholder of record, even if you have submitted your proxy to vote your shares, you may change or revoke your vote at any time before the taking of the vote by taking one of the following actions:

send written notice of revocation to our Secretary, Stephen Rodin, at the address of our principal executive office set forth above;

vote your shares by proxy over the Internet, by telephone or by returning a new proxy card subsequent to the initial submission of your proxy up until 11:59 p.m., Eastern time, the day before the meeting; or attend the meeting and vote in person.

If you own shares in street name, your bank or brokerage firm should provide you with instructions for changing or revoking your vote.

What constitutes a quorum?

In order for business to be conducted at the annual meeting, a quorum must be present. The holders of a majority of the shares of the capital stock of the company issued and outstanding and entitled to vote at the meeting, present in person or represented by proxy, constitute a quorum for the transaction of business. As of the record date, April 11, 2019, 73,890,978 shares of our common stock were outstanding. As a result, a quorum for the annual meeting consists of at least 36,945,490 shares of common stock, representing a majority of the shares of capital stock issued, outstanding and entitled to vote at the meeting.

Shares of common stock present in person or represented by proxy (including broker non-votes and shares that abstain or with respect to which voting instructions are provided for one or more, but not all, of the matters to be voted upon) will be counted as present for the purpose of determining whether a quorum exists for the annual meeting. However, if a broker non-vote occurs with respect to any shares of the company's common stock on any matter, then those shares will be treated as not present and not entitled to vote with respect to that matter (even though those shares are considered entitled to vote for purposes of determining whether a quorum exists because they are entitled to vote on other matters) and will not be voted.

If a quorum is not present, the meeting will be adjourned until a quorum is obtained.

What vote is required to approve each matter?

Proposal One—Election of Directors

In order for a nominee for director to be elected to office, the number of votes cast "FOR" that nominee must exceed the number of votes cast "AGAINST" that nominee, provided that if the number of nominees exceeds the number of directors to be elected (a situation we do not anticipate), the directors shall be elected by a plurality of the votes cast by the stockholders entitled to vote on the election of directors at such meeting, meaning that the seven nominees for director who receive the most votes will be elected as directors.

Proposal Two—Advisory Vote to Approve the Compensation of our Named Executive Officers

The affirmative vote of the holders of a majority of the shares of common stock present or represented by proxy and voting on the matter is needed to approve, on an advisory basis, the compensation of our named executive officers as presented in this proxy statement.

Proposal Three—Ratification of Appointment of Independent Registered Public Accounting Firm The affirmative vote of the holders of a majority of the shares of common stock present or represented by proxy and voting on the matter is needed to ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2019.

How will votes be counted?

Each share of common stock is entitled to one vote. Shares will not be voted in favor of a matter and will not be counted as voting on a matter (1) if the holder of the shares abstains from voting on a particular matter or (2) if the shares are broker non-votes. As a result of the voting standards applicable to the proposals before the annual meeting, abstentions and broker non-votes will have no effect on the outcome of voting on proposal 1, proposal 2 and proposal 3.

How does the board of directors recommend that I vote?

Our board of directors recommends that you vote:

FOR proposal one—to elect our seven nominees to our board of directors;

FOR proposal two—to approve, in an advisory vote, the compensation of our named executive officers as presented in this proxy statement; and

FOR proposal three—to ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2019.

Will any other business be conducted at the annual meeting?

Our board of directors does not know of any other business to be conducted or matters to be voted upon at the meeting. Under our bylaws, the deadline for stockholders to notify us of any proposals or nominations for director to be presented for action at the annual meeting has passed. If any other matter properly comes before the meeting, the persons named in the proxy card that accompanies this proxy statement will exercise their judgment in deciding how to vote, or otherwise act, at the meeting with respect to that matter.

Who is soliciting proxies and how, and who is paying for it?

We are soliciting proxies and will bear the costs of soliciting proxies. In addition to solicitations by mail, our directors, officers and regular employees, without additional remuneration, may solicit proxies by telephone, facsimile, email, personal interviews and other means. We may retain a proxy solicitation firm to assist in the solicitation of proxies in connection with the annual meeting of stockholders. In that event, we expect to pay such firm customary fees and expenses. We have requested brokerage houses, custodians, nominees and fiduciaries to forward copies of the proxy materials to the persons for whom they hold shares and request instructions for voting the shares. We will reimburse the brokerage houses and other persons for their reasonable out-of-pocket expenses in connection with this distribution.

How and when may I submit a proposal for the 2020 annual meeting?

If you are interested in submitting a proposal for inclusion in the proxy statement and proxy card for our 2020 annual meeting, you need to follow the procedures outlined in Rule 14a-8 of the Securities Exchange Act of 1934, as amended, or the Exchange Act. We must receive your proposal intended for inclusion in the proxy statement at our principal executive offices, 8 Sylvan Way, Parsippany, New Jersey 07054 Attention: Secretary, no later than December 31, 2019.

If you wish to propose a nominee for election to our board or present a proposal at our 2020 annual meeting, but do not wish to have the proposal considered for inclusion in the proxy statement and proxy card, you must give written notice to us at the address of our principal executive offices set forth above. Our bylaws specify the information that must be included in any such notice, including but not limited to certain information about the nominee or a reasonably detailed description of the business to be brought before an annual meeting, as applicable, and the name and number of shares of our common stock beneficially owned by the stockholder nominating such person or proposing such business. See "Information About Corporate Governance—Stockholder Nominees" below. We must receive this notice no earlier than January 31, 2020 and no later than March 1, 2020. However, if the date of our 2020

annual meeting is prior to April 30, 2020 or after July 29, 2020, we must receive your notice no earlier than the 120th day prior to our 2020 annual meeting and no later than the close of business on the later of (1) the 90th day prior to our 2020 annual meeting and (2) the 10th day following the date on which notice of the date of the meeting was mailed or public disclosure of the date of the meeting was made, whichever occurs first. If you fail to provide timely notice of a proposal to be presented at our 2020 annual meeting, the chairman of the meeting may exclude the proposal from being brought before the meeting.

How may I request to receive future proxy statements electronically?

If you would like to assist in reducing the costs that we incur in mailing proxy materials, you can consent to receiving or accessing future proxy statements, form of proxy, annual report or notices of Internet availability electronically via e-mail or the Internet. To sign up for electronic delivery, please contact Investor Relations, 8 Sylvan Way, Parsippany, New Jersey 07054, telephone: (973) 290-6122, email: investor.relations@themedco.com.

HOUSEHOLDING OF ANNUAL MEETING MATERIALS

Some banks, brokers and other record holders may be participating in the practice of "householding" proxy statements and annual reports. This means that only one copy of our proxy statement and annual report or notice of Internet availability of proxy materials may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of these documents to you if you call or write us at the following address, phone number or email: The Medicines Company, 8 Sylvan Way, Parsippany, New Jersey 07054, Attention: Investor Relations, (973) 290-6122, email: investor.relations@themedco.com. In addition, this proxy statement and our annual report are available at www.proxyvote.com. If you would like to receive separate copies of the annual report and proxy statement or notice of Internet availability of proxy materials in the future, or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, broker, or other nominee record holder, or you may contact us at the above address and phone number.

DISCUSSION OF PROPOSALS

Proposal One: Election of Directors

Our board of directors currently consists of seven directors - Alexander Denner, Geno Germano, John Kelly, Clive Meanwell, Paris Panayiotopoulos, Sarah Schlesinger and Mark Timney.

The persons named in the enclosed proxy card will vote to elect each of these nominees as a director for terms to expire at our 2020 annual meeting of stockholders and until his or her successor is elected and qualified. Each of the nominees is a presently a director, and each has indicated a willingness to continue to serve as director, if elected. If a nominee becomes unable or unwilling to serve, however, the proxies may be voted for a substitute nominee selected by our board of directors.

No director or executive officer of ours, or person chosen by us to become a director or executive officer of ours, is related by blood, marriage or adoption to any other director or executive officer of ours, or person chosen by us to become a director or executive officer of ours. No director or executive officer of ours, or any associate of any such director or officer, is a party adverse to us or any of our subsidiaries, or has a material interest adverse to us or any of our subsidiaries, in any legal proceeding.

Our board of directors recommends a vote "FOR" the election of each of the nominees.

Director Nominees

Set forth below are the names of each nominee for director, the year in which each nominee first became a director, their ages as of April 1, 2019, their positions and offices with us, if any, their principal occupations and business experience for at least the past five years, their education, and the names of other public companies for which they serve as a director or have served as a director during the past five years. We have also included information about each nominee's specific experience, qualifications, attributes or skills that led our board to conclude that he or she should serve as one of our directors at the time we file our proxy statement, in light of our business and structure. In addition to the information presented below regarding each nominee's specific experience, qualifications, attributes, and skills, we believe that all of our director nominees have a reputation for integrity, honesty and adherence to high ethical standards. They each have demonstrated business acumen and an ability to exercise sound judgment, as well as a commitment of service to us and our board. Finally, we value their experience on other public company boards of directors and board committees. See "Information about Corporate Governance—Director Candidates and Nomination Process" for additional discussion of our director nomination requirements and process.

ALEXANDER J. DENNER

Age: 49

Alexander J. Denner, Ph.D. has been a director since February 2016 and chairman of the board since June 2018. Dr. Denner is the founding partner and chief investment officer of Sarissa Capital Management LP, a registered investment advisor, which he founded in 2012. Sarissa Capital focuses on improving the strategies of companies to enhance shareholder value. From 2006 to 2011, Dr. Denner served as a senior managing director at Icahn Capital, an entity through which Carl Icahn conducts his investment activities. Prior to that, he served as a portfolio manager at Viking Global Investors, a private investment fund, and Morgan Stanley Investment Management, a global asset management firm. Dr. Denner currently serves as a director of Biogen Inc., where he is also the chairperson of Biogen's nominating and governance committee and a member of the finance committee. Dr. Denner also previously served as a director of ARIAD Pharmaceuticals, Inc., where he also served as chairman, Amylin Pharmaceuticals, Inc., Bioverativ Inc., Enzon Pharmaceuticals, Inc., ImClone Systems Incorporated where he also served as chairman of the executive committee and VIVUS, Inc. Dr. Denner received his S.B. degree from the Massachusetts Institute of Technology and his M.S., M.Phil. and Ph.D. degrees from Yale University.

We believe Dr. Denner's strong background overseeing the operations, capital allocation and research and development of healthcare companies and evaluating corporate governance matters is valuable to our board and the company. In addition, Dr. Denner has extensive experience as an investor, particularly with respect to healthcare companies and has broad healthcare-industry knowledge, which is also valuable to our board and the company.

GENO J. GERMANO

Age: 58

Geno J. Germano has been a director since November 2017. Since August 2018 Mr. Germano serves as the chief executive officer and president of Elucida Oncology, Inc. From June 2016 to March 2017, Mr. Germano served as president of Intrexon Corporation, a leader in synthetic biology. He previously held the position of group president of the Global Innovative Pharma Business of Pfizer, Inc., where he led a growing global \$14 billion business with market-leading medicines and an extensive portfolio of late-stage development candidates. Mr. Germano was also co-chair of Pfizer's Portfolio Strategy and Investment Committee and, prior to that, president and general manager of Pfizer's Specialty Care and Oncology business units. Prior to joining Pfizer, Mr. Germano held numerous executive and leadership roles at Wyeth Pharmaceuticals, including president of Wyeth U.S., where he was responsible for the delivery of operational results across four business units, as well as president of its Global Pharmaceutical and Women's Healthcare Business. Mr. Germano has been a member of the Group of Fifty (G50) and served on

the board of the Biotechnology Innovation Organization, where he was a member of the executive committee and chaired the International Committee. He serves on the advisory board of the Healthcare Businesswomen's Association and was a trustee of the Albany College of Pharmacy from October 2008 to October 2017. Mr. Germano is currently a director of Sage Therapeutics, where he is also the chair of their nominating and governance committee, and was formerly a director of Zoetis Inc. and Bioverativ Inc.

We believe Mr. Germano's extensive experience in leading global biopharmaceutical businesses and, in particular, his deep knowledge of the cholesterol lowering market is valuable to our board and the company.

JOHN C. KELLY

Age: 76

John C. Kelly has been a director since April 2011, and served as our lead director from May 2015 to August 2015. From October 2009 to February 2010, Mr. Kelly served as senior vice president, finance of Pfizer Inc., or Pfizer. From March 2008 to October 2009, Mr. Kelly served as vice president and controller at Wyeth and from June 2002 to March 2008, he served as vice president, financial operations of Wyeth. Prior to joining Wyeth in 2002, he spent more than 35 years in public accounting at Arthur Andersen in various leadership capacities, including as the partner in charge of audit and business consulting practices in the New York metropolitan area. Mr. Kelly previously served as a director of C.R. Bard, Inc., a medical device company, and a subsidiary of Horizon Blue Cross Blue Shield of New Jersey. He is a certified public accountant and was an elected member of the Council of the American Institute of Certified Public Accountants. Mr. Kelly received a B.S. in business administration and an M.B.A. in international finance from Seton Hall University.

We believe Mr. Kelly's extensive experience in the pharmaceutical industry is valuable to our board and the company. In addition, Mr. Kelly's background in accounting and finance is of considerable importance in his role as chair of our audit committee.

CLIVE A. MEANWELL

Age: 61

Clive Meanwell is a founder and has been a director since 1996. Since December 2018, Dr. Meanwell has served as our chief innovation officer. Prior to December 2018, he served as our chief executive officer since February 2012, our chief executive officer and president from October 2009 to February 2012, our chief executive officer from August 2004 to October 2009, as our president from August 2004 to December 2004, our executive chairman from September 2001 to August 2004 and our chief executive officer and president from 1996 to September 2001. Dr. Meanwell was also chairman of our board from September 2001 to August 2015. Dr. Meanwell is the vice chairman of BB Biotech, a Swiss investment corporation. From 1995 to 1996, Dr. Meanwell was a partner and managing director at MPM Capital, L.P., a venture capital firm. From 1986 to 1995, Dr. Meanwell held various positions at Hoffmann-La Roche, Inc., a pharmaceutical company, including senior vice president from 1992 to 1995, vice president from 1991 to 1992 and director of product development from 1986 to 1991. Dr. Meanwell received an M.D. (M.B. Ch.B.) and a Ph.D. (M.D.) from the University of Birmingham, United Kingdom.

We believe Dr. Meanwell's extensive experience in the biopharmaceutical industry and his in-depth knowledge of our business is valuable to our board and the company. In addition, Dr. Meanwell's global operational roles, deal-making, private equity and medical experience are also of considerable importance.

PARIS PANAYIOTOPOULOS

Age: 45

Paris Panayiotopoulos has been a director since March 2017. Mr. Panayiotopoulos is a managing director in the Blackstone Life Sciences group, having joined Blackstone as part of its acquisition of Clarus Ventures LLC in December of 2018. Mr. Panayiotopoulos was an operating partner working with Clarus from March 2018 to December 2018. In addition, Mr. Panaviotopoulos serves as the executive chairman of Genevant Sciences, From 2016 to 2017, Mr. Panayiotopoulos was President and Chief Executive Officer and a member of the Board of Directors of Ariad Pharmaceuticals Inc. From 2013 through 2015, Mr. Panayiotopoulos served as President of EMD Serono, Inc., a subsidiary of pharmaceutical company Merck KGaA, Darmstadt, Germany. Prior to being appointed President of EMD Serono, Mr. Panayiotopoulos held positions of increasing responsibility within Merck KGaA, serving as President of Merck Serono, Tokyo, Japan, from 2012 through 2013; Global Chief of Staff for the CEO in Geneva, Switzerland, from 2011 through 2012; Head of Western Europe for the fertility and endocrinology franchises, in 2011; Global Director of the neurology franchise, from 2007 through 2011; and Global Strategy and Business Intelligence Director from 2004 through 2007. Prior to joining Merck KGaA, Mr. Panayiotopoulos was at Eli Lilly & Co. from 1999 to 2004. While at Merck KGaA, Mr. Panayiotopoulos led multiple partnerships, including those with Pfizer Inc., Bristol Myers Squibb, Eli Lilly & Co., Dainippon Sumitomo Pharma, Mitsubishi Tanabe Pharma, Otsuka Pharmaceutical Co. Ltd. and Incyte Corporation and served on the board of directors of BIO. Mr. Panayiotopoulos currently serves on the boards of Corbus Pharmaceuticals and Anthos Therapeutics LLC. Mr. Panayiotopoulos holds a combined B.Sc. in Chemistry and Management Studies from University College London and a M.Sc. in Marketing and Product Management from Cranfield Business School in the United Kingdom.

We believe Mr. Panayiotopoulos's strategic, operational and research and development experience at global biopharmaceutical companies is valuable to our board and the company. In addition, Mr. Panayiotopoulos's partnering leadership experience is of particular value to our board.

SARAH J. SCHLESINGER

Age: 59

Sarah J. Schlesinger has been a director since February 2018. Dr. Schlesinger has spent more than 20 years working in the field of cellular immunity. She is currently the Chair of The Rockefeller University Hospital's Institutional Review Board (IRB) and Senior Physician and Associate Professor of Clinical Investigation at The Rockefeller University. Prior to becoming Chair of the hospital's IRB, Dr. Schlesinger served as Clinical Director of the Laboratory of Molecular Immunology and Clinical Director of The Laboratory of Cellular Immunology and Physiology - the laboratory led by the late Ralph M. Steinman, M.D., 2011 Nobel Laureate in Physiology or Medicine. Before joining The Rockefeller University in 2003, Dr. Schlesinger was a scientist at the International AIDS Vaccine Initiative in New York City from 2002 to 2003, and a Research Physician/Pathologist at the Division of Retrovirology at the Walter Reed Army Institute of Research from 1996 to 2002. Dr. Schlesinger trained in Surgery at the Albert Einstein College of Medicine and began her career in pathology at Georgetown University in Washington, DC, and hospitals in New York including Buffalo General, Hospital New York and the Manhattan Eye, Ear and Throat Hospital. Dr. Schlesinger leads clinical trials and also chairs the research education and training committee of the Center for Clinical and Translational Science at The Rockefeller University Hospital. She is co-director of Rockefeller's Clinical Scholars program and the Certificate in Clinical and Translational Sciences program. Widely published in her field, Dr. Schlesinger has been recognized with numerous awards for her research and teaching. She is also a member of numerous, prominent medical societies, including the United States and Canadian Academy of Pathology, the American Association for the Advancement of Science and the College of American Pathologists, Dr. Schlesinger serves on the board of three non-profit organizations: AVAC (AIDS Vaccines Advocacy Coalition); Global Viral; and The Hastings Center, the pre-eminent center for the study of bioethics. She served as an independent director of Ariad Pharmaceuticals from 2013 until its sale to Takeda in 2017. She is currently a member of the Scientific Advisory Board of Lycera Corp., as well as a consultant to Lycera's CEO on matters of clinical development, and an independent director of Innoviva, Inc. Dr. Schlesinger graduated with honors from Wellesley College and obtained her medical doctorate from Rush Medical College in Chicago, Illinois.

We believe Dr. Schlesinger's research and development experience is valuable to our board and the company, especially as we have focused the company on the development of inclisiran.

MARK TIMNEY

Age: 54

Mark Timney has been a director and our chief executive office since December 2018. Mr. Timney is a healthcare leader with over 25 years of biopharmaceutical industry experience in multi-national companies. At Merck & Co, Mr. Timney led organizations of increasing importance and size, including president US, president Japan and president of global primary care. In these roles, he launched multiple products, many in the cardiovascular therapeutic area, led large organizations of up to 8,000 employees, and was involved in a number of important strategic transactions. After leaving Merck, Mr. Timney served as the CEO of Purdue Pharmaceuticals from 2014 to 2017 and, most recently, formed a company advising healthcare companies from 2017 to 2018. Before joining Merck, he spent 8 years working at numerous multinational pharmaceutical companies, including Zeneca Group, ICI Pharmaceuticals and Roussel Labs. Mark received a bachelor's degree in Sports Studies (majoring in Marketing) from Newcastle Polytechnic (now Northumbria University) in Newcastle in the United Kingdom.

We believe Mr. Timney's extensive experience in the biopharmaceutical industry and his leadership experience is valuable to our board and the company. In addition, Mr. Timney's commercial experience, especially in the cardiovascular therapeutic area, and deal-making experience are also of considerable importance.

Proposal Two: Advisory Vote to Approve the Compensation of our Named Executive Officers

We are providing our stockholders the opportunity to vote to approve, on an advisory, non-binding basis, the compensation of our named executive officers as disclosed in this proxy statement in accordance with the SEC's rules, including Section 14A of the Securities Exchange Act. This proposal, which is commonly referred to as "say-on-pay," gives our stockholders the opportunity to express their view on our overall 2018 executive compensation programs and policies for our named executive officers. Our board of directors recognizes that providing stockholders with an advisory vote on executive compensation may produce useful information on investor sentiment with regard to our executive compensation programs. We currently hold an advisory vote to approve the compensation paid to our named executive officers on an annual basis.

Our executive compensation programs are designed to attract, motivate, and retain our executive officers, who are critical to our success. Under these programs, our named executive officers are rewarded for the achievement of our near-term and longer-term financial and strategic goals and for driving corporate financial performance and stability. The programs contain elements of cash and equity-based compensation and are designed to align the interests of our executives with those of our stockholders.

The "Information about our Executive Officer Compensation" section of this proxy statement, including the "Compensation Discussion and Analysis" section of this proxy statement, describes in detail our executive compensation programs and the decisions made by the compensation committee with respect to the year ended December 31, 2018.

Highlights of our executive compensation program include the following:

Performance Focus. We have designed our executive compensation program to have substantial elements that are performance-based. Our cash bonus plan is tied to corporate strategic and financial goals. The plan is broad-based and applies to all employees and executives.

Long-Term Equity Incentives. In April 2018, our board of directors approved performance option grants to our employees including our named executive officers, to align compensation to the strategic direction of our company. Under the grant agreements, vesting is contingent on our achievement of four long-term goals that are tied to key company goals over the next three years, which, if achieved, we believe will maximize shareholder value. We grant equity awards broadly among our employee population on an annual basis to encourage an ownership culture and align management and our employees with our stockholders' interests. Historically, we have used a mix of stock options and restricted stock and our equity awards have had multi-year vesting periods, generally vesting over a four-year period, designed to encourage our employees and executives to focus on the long-term performance of our stock price. In addition to these time-based equity awards, in 2018 we granted options with performance-based vesting, as described above.

Executive and Director Stock Ownership and Share Retention Guidelines. We have executive stock ownership guidelines that require our chief executive officer to own shares of our common stock with a value equal to 6x his base salary and each other named executive officer to own shares of our common stock with a value equal to 1x his respective base salary, as calculated under our policy. Each named executive officer is required to retain 50% of net after tax shares obtained via the vesting of any full-value stock award until the named executive officer meets our prescribed ownership guidelines. These guidelines are in addition to our non-employee director stock ownership guidelines that require each of our directors to own shares of our common stock with a value equal to 3x the non-employee director annual retainer.

Pay Practices. We do not use many common pay practices considered to be unfriendly to stockholders. For example, we limit the perquisites that we make available to our named executive officers and we do not have excess parachute payment tax gross-up provisions in any executive compensation arrangements, including our arrangements with our chief executive officer.

Risk Assessment. Our compensation committee has reviewed our incentive compensation programs and discussed the concept of risk as it relates to our compensation program. We believe that the key features of our programs reflect sound risk management practices and that we have allocated our compensation among base salary and short and long-term compensation target opportunities in such a way as to not encourage excessive risk taking. We use risk mitigating features in our compensation programs, including that our 2018 cash bonus plan included a maximum payout for our executive officers of 150% of target.

As we describe in the "Compensation Discussion and Analysis" section of this proxy statement, our executive compensation program reflects a pay-for-performance philosophy that we believe supports our business strategy and aligns the interests of our executives with our stockholders. Our board believes this link between compensation and the achievement of our near- and long-term business goals has helped drive our performance over time. At the same time, we believe our program does not encourage excessive risk-taking by management.

Our board is asking stockholders to approve a non-binding advisory vote on the following resolution:

RESOLVED, that the compensation paid to the company's named executive officers, as disclosed pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the compensation discussion and analysis, the compensation tables and any related material disclosed in this proxy statement is hereby approved.

This proposal does not address any specific item of compensation and, as an advisory vote, is not binding. The outcome of this advisory vote does not overrule any decision by us or our board (or any committee thereof), create or imply any change to the fiduciary duties of us or our board (or any committee thereof), or create or imply any additional fiduciary duties for us or our board (or any committee thereof). However, our compensation committee and our board value the opinions expressed by our stockholders in their vote on this proposal and will consider the

outcome of the vote when making future compensation decisions for named executive officers.

Our board of directors recommends a vote "FOR" this proposal to approve the compensation of our named executive officers.

Proposal Three: Ratification of Appointment of Independent Registered Public Accounting Firm Our audit committee, consisting of independent members of our board of directors, has appointed the firm of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2019, subject to ratification by our stockholders at the annual meeting. Ernst & Young LLP has been our independent registered public accounting firm since our inception in 1996. If this proposal is not approved at the meeting, our audit committee will reconsider this appointment.

We expect representatives of Ernst & Young LLP to be present at the annual meeting. They will have the opportunity to make a statement if they desire to do so and will also be available to respond to appropriate questions. Our board of directors recommends a vote "FOR" this proposal to ratify the selection of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2019.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEES AND OTHER MATTERS

The following table sets forth the fees billed to us for the fiscal years ended December 31, 2018 and December 31, 2017 by Ernst & Young LLP:

Fee Category 2018 2017 Audit Fees⁽¹⁾ \$1,396,454 \$2,483,034 All Other Fees⁽²⁾ 2,000 2,000 Total Fees \$1,398,454 \$2,485,034

Audit fees consist of fees for the audit of our annual financial statements on Form 10-K, the review of the interim financial statements included in our quarterly reports on Form 10-Q, services related to business development and financing activities, and other professional services provided in connection with statutory and regulatory filings or engagements.

(2) All other fees consist of access to Ernst & Young LLP's online research database.

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

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

From time to time, the audit committee may delegate pre-approval authority to a committee member for specified types of services. Any such pre-approval must be reported to the audit committee at its next scheduled meeting. We did not approve any services provided to us by Ernst & Young LLP in 2018 or 2017 using the "de minimis" exception under the SEC rules.

REPORT OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

The audit committee reviewed our audited financial statements for the year ended December 31, 2018 and discussed these financial statements with the company's management and Ernst & Young LLP, our independent registered public accounting firm for the year ended December 31, 2018. Our management is primarily responsible for the financial reporting process, including maintaining an adequate system of disclosure controls and procedures and internal control over financial reporting, and for the preparation of consolidated financial statements in accordance with generally accepted accounting principles. Our independent registered public accounting firm is responsible for performing an independent audit of, and issuing a report on, those financial statements and the effectiveness of internal control over our financial reporting. The audit committee is responsible for providing independent, objective oversight of these processes. The audit committee's duties and responsibilities do not include conducting audits or accounting reviews.

The audit committee also reviewed and discussed the matters required by Public Company Accounting Oversight Board (PCAOB) Auditing Standard No. 1301, Communications with Audit Committees (AS 1301), with Ernst & Young LLP. This Statement requires Ernst & Young LLP to discuss with our audit committee, among other things, the following:

methods to account for significant unusual transactions;

the effect of significant accounting policies in controversial or emerging areas for which there is a lack of authoritative guidance or consensus;

the process used by management in formulating particularly sensitive accounting estimates and the basis for the registered public accounting firm's conclusions regarding the reasonableness of those estimates; and

disagreements with management over the application of accounting principles, the basis for management's accounting estimates and the disclosures in the financial statements.

Ernst & Young LLP provided to the audit committee the written disclosures and the letter required by the current version of Public Company Accounting Oversight Board (PCAOB) Rule 3526 (Communications with Audit Committees concerning Independence), and the audit committee discussed with the independent registered public accounting firm that firm's independence.

Based on its review of the audited financial statements, discussions with management and the independent registered public accounting firm, and its review of the representations and information provided by management and the independent registered public accounting firm

including those described above, the audit committee recommended to our board of directors that the audited financial statements be included in the company's annual report on Form 10-K for the year ended December 31, 2018. By the Audit Committee of the Board of Directors

John C. Kelly (Chair) Alexander J. Denner Sarah J. Schlesinger

PRINCIPAL STOCKHOLDERS

The following table presents information that we are aware of regarding the beneficial ownership of our common stock as of April 1, 2019 for each of our named executive officers, directors and each person, entity or group of affiliated persons whom we know to beneficially own more than 5% of our common stock. The table also sets forth such information for our directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC. Except as indicated by footnote, to our knowledge, the persons named in the table have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them, subject to applicable community property laws. Shares subject to options, warrants or other rights held by such person to purchase shares of common stock that were exercisable as of April 1, 2019 or will become exercisable within 60 days of April 1, 2019 are deemed to be beneficially owned by the person holding such options for the purpose of computing ownership of such person, but are not treated as outstanding for the purpose of computing the ownership of any other person. The percentage of our total outstanding common stock beneficially owned by each such person in the table is calculated using 73,548,643 shares of common stock outstanding as of April 1, 2019.

The information presented in the table below is not necessarily indicative of beneficial ownership for other purposes. Unless otherwise indicated in the footnotes, the address of each of the individuals named below is: c/o The Medicines Company, 8 Sylvan Way, Parsippany, New Jersey 07054.

Number of Percentage

	Shares	of	ige
Beneficial Owner:	of Common	Common	
Delicificial Owlief.	Stock	Stock	
	Beneficially	Beneficially	
	Owned	Owned	
Named Executive Officers			
Mark Timney ⁽¹⁾	29,789	*	
Christopher Visioli (2)	64,031	*	
Christopher Cox ⁽³⁾	341,589	*	
Clive Meanwell ⁽⁴⁾	1,539,080	2.09	%
William O'Connor ⁽⁵⁾	137,204	*	
Stephen Rodin ⁽⁶⁾	172,987	*	
Independent Directors			
Alexander Denner ⁽⁷⁾	3,701,077	5.03	%
Geno Germano ⁽⁸⁾	12,907	*	
John Kelly ⁽⁹⁾	142,492	*	
Paris Panayiotopoulos ⁽¹⁰⁾	34,388	*	
Sarah Schlesinger ⁽¹¹⁾	12,907	*	
All directors and executive officers as a group (11 persons) ⁽¹²⁾	6,188,451	8.41	%
Other 5% Stockholders			
BlackRock, Inc. ⁽¹³⁾	11,407,224	15.51	%
Boxer Capital, LLC ⁽¹⁴⁾	4,010,742	5.45	%
FMR LLC ⁽¹⁵⁾	11,079,326	15.06	%
Iridian Asset Management, LLC ⁽¹⁶⁾	3,743,851	5.09	%
The Vanguard Group, Inc. (17)	6,859,838	9.33	%
Vanguard Specialized Funds - Vanguard Health Care Fund ⁽¹⁸⁾	5,617,020	7.64	%
Wellington Management Group, LLP ⁽¹⁹⁾	10,326,420	14.04	%
Westfield Capital Management Company, L.P.(20)	4,604,719	6.26	%

^{*}Represents beneficial ownership of less than 1%.

- (1) None of Mr. Timney's options are exercisable within 60 days of April 1, 2019.
- (2) Includes options to purchase 56,779 shares that are exercisable within 60 days of April 1, 2019.

Includes options to purchase 283,602 shares that are exercisable within 60 days of April 1, 2019 and 334,955 shares of common stock in an account that Mr. Cox holds a power of attorney with respect to and that members

- (3) shares of common stock in an account that Mr. Cox holds a power of attorney with respect to and that members of the his immediate family may be considered to have a pecuniary interest in. Mr. Cox disclaims beneficial ownership of the shares held by this account except to the extent of his pecuniary interest therein.
- (4) Includes options to purchase 1,245,965 shares that are exercisable within 60 days of April 1, 2019.

- (5) Includes options to purchase 115,322 shares that are exercisable within 60 days of April 1, 2019.
- (6) Includes options to purchase 144,848 shares that are exercisable within 60 days of April 1, 2019.

Consists of options to purchase 54,648 shares that are exercisable within 60 days of April 1, 2019, 6,663 shares held directly by Dr. Denner and 3,636,000 shares held by funds managed by Sarissa Capital Management LP (such

- (7) funds, the "Sarissa Funds"). Dr. Denner is the Chief Investment Officer of Sarissa Capital Management LP and the managing member of the general partner of the Sarissa Funds. By virtue of the foregoing, Dr. Denner may be deemed to indirectly beneficially own (as that term is defined in Rule 13d-3 of the Securities Exchange Act of 1934, as amended) the shares that the Sarissa Funds directly beneficially own.
- (8) Includes options to purchase 9,141 shares that are exercisable within 60 days of April 1, 2019.
- (9) Includes options to purchase 114,007 shares that are exercisable within 60 days of April 1, 2019.
- (10) Includes options to purchase 17,718 shares that are exercisable within 60 days of April 1, 2019.
- (11) Includes options to purchase 9,141 shares that are exercisable within 60 days of April 1, 2019.
- Includes options to purchase an aggregate of 2,051,171 shares that are exercisable within 60 days of April 1, 2019.
- (13) Includes shares held by BlackRock, Inc. and certain of its subsidiaries. BlackRock, Inc. has sole power to vote or direct the vote of 11,222,707 shares and the sole power to dispose or to direct the disposition of 11,407,224 shares. The address of BlackRock, Inc. is 55 East 52nd Street, New York, New York 10055. This information is based on a Schedule 13G/A filed with the SEC on February 11, 2019.
 - Includes shares held by Boxer Capital, LLC ("Boxer Capital"), Boxer Asset Management Inc. ("Boxer Management"), Braslyn Ltd. ("Braslyn"), Avid Group Ltd. ("Avid"), Joe Lewis, and Tuesday Thirteen, Inc. ("Tuesday Thirteen"). Boxer Management is the managing member and majority owner of Boxer Capital. Joe Lewis is the sole indirect owner and controls Boxer Management, Braslyn, Avid and Tuesday Thirteen. Boxer Capital and Boxer Management have shared power to vote or to direct the vote of the 232,000 shares that they beneficially own. Avid has shared power to vote or to direct the vote of the 3,075,202 shares that it beneficially owns. Braslyn
- (14) has shared power to vote or to direct the vote of the 703,440 shares that it beneficially owns. Tuesday Thirteen has shared power to vote or direct the vote of the 100 shares that it beneficially owns. Joe Lewis has shared power to vote or to direct the vote of the 4,010,742 shares that he beneficially owns. The principal business address of Boxer Capital is 11682 El Camino Real, Suite 320, San Diego, CA 92130. The principal business address of Boxer Management, Braslyn, Avid, Tuesday Thirteen and Joe Lewis is: Cay House, EP Taylor Drive N7776, Lyford Cay, New Providence, Bahamas. This information is based on a Schedule 13G/A filed with the SEC on February 14, 2019.
- (15) FMR LLC has sole power to vote or direct the vote of 1,607,178 shares and the sole power to dispose of 11,079,326 shares. Members of the family of Ms. Abigail P. Johnson, a Director, the chairman and the chief executive officer of FMR LLC, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other FMR LLC Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act ("Fidelity Funds") advised by Fidelity Management & Research Company ("FMR Co"), a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of

Trustees. Fidelity Management & Research Company carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees. The address of FMR LLC is 245 Summer Street, Boston, Massachusetts, 02210. This information is based on a Schedule 13G/A filed with the SEC on February 13, 2019. Iridian Asset Management LLC held shared voting and dispositive power over 3,743,851 shares. Messrs. David L. Cohen and Harold J. Levy may be deemed to possess beneficial ownership of the shares of common stock beneficially owned by Iridian by virtue of their indirect controlling ownership of Iridian and having the power to

- (16) vote and direct the disposition of shares of common stock as joint Chief Investment Officers of Iridian. The principal business address of Iridian Asset Management LLC is 276 Post Road West, Westport, CT 06880-4704. This information is based on Schedule 13G/A filed by Iridian Asset Management LLC with the SEC on February 6, 2019.
 - The Vanguard Group has sole power to vote or direct to vote 136,234 of the shares, shared power to vote or to direct to vote of 13,338 of the shares, sole power to dispose or direct the disposition of 6,717,004 of the shares and shared power to dispose or to direct the disposition of 142,834 of the shares. Includes 129,496 shares beneficially owned by Vanguard Fiduciary Trust Company, a wholly owned subsidiary of The Vanguard Group,
- (17) Inc. as a result of Vanguard Fiduciary Trust Company serving as investment manager of collective trust accounts. Vanguard Investments Australia, Ltd., a wholly owned subsidiary of The Vanguard Group, Inc., is the beneficial owner of 20,076 shares as a result of Vanguard Investments Australia, Ltd. serving as investment manager of Australian investment offerings. The address of The Vanguard Group, Inc. is 100 Vanguard Boulevard, Malvern, Pennsylvania 19355. The information is based on a Schedule 13G/A filed with the SEC on February 11, 2019.
- The Vanguard Specialized Funds Vanguard Health Care Fund has sole power to vote or direct to vote 5,617,020 of the shares. The address of The Vanguard Specialized Funds Vanguard Health Care Fund is c/o The Vanguard Group, Inc. is 100 Vanguard Boulevard, Malvern, Pennsylvania 19355. The information is based on a Schedule 13G/A filed with the SEC on January 31, 2019.

Includes shares owned by various investors for which Wellington Management Group, LLP serves as investment advisor with shared power to direct investments and shared power to vote 2,954,704 of the shares and with shared power to dispose or to direct the disposition of 10,326,420 of the shares. Certain of these shares are owned by

(19) Vanguard Health Care Fund, and may be duplicative of shares described in footnote 18 of this table. The address of Wellington Management Group, LLP is 280 Congress Street, Boston, Massachusetts 02210. This information is based on a Schedule 13G/A filed by Wellington Management Group, LLP with the SEC on February 12, 2019.

Westfield Capital Management Company L.P. has sole power to vote or direct to vote 3,464,219 shares and sole power to dispose or direct the disposition of 4,604,719 shares. The address of Westfield Capital Management Company L.P. is 1 Financial Center, Boston, Massachusetts 02111. The information is based on a Schedule 13G filed with the SEC on February 7, 2019.

INFORMATION ABOUT CORPORATE GOVERNANCE

We believe that good corporate governance is important to ensure that we are managed for the long-term benefit of our stockholders. In assessing and implementing our corporate governance practices, we have been mindful of the provisions of the Sarbanes-Oxley Act of 2002, the rules of the SEC and the NASDAQ rules. We expect to continue to review and, when appropriate, further strengthen our corporate governance procedures in the future. We describe below our corporate governance structure and the key corporate governance practices that we have adopted.

Board of Directors

Our board of directors is responsible for establishing our broad corporate policies and overseeing the management of the company. Our chief executive officer and our other executive officers are responsible for our day-to-day operations. Our board evaluates our corporate performance and approves, among other things, our corporate strategies and objectives, operating plans, major commitments of corporate resources and significant policies. Our board also evaluates and appoints our executive officers.

Our board of directors met 12 times during 2018, including regular, special and telephonic meetings. Each director who served as a director during 2018 attended at least 75% of the aggregate of: (1) the total number of board meetings held during the period of 2018 during which he or she was a director and (2) the total number of meetings held by all board committees on which he or she served during the period of 2018 during which he or she was a member of such committees.

Board Independence

Rule 5605 of the NASDAQ rules requires a majority of a listed company's board of directors to be comprised of independent directors. In addition, the NASDAO rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members and compensation committee members also satisfy independence criteria set forth in Rule 10A-3 and Rule 10C-1, respectively, under the Exchange Act. Under NASDAQ Rule 5605(a)(2), a director will only qualify as an "independent director" if, in the opinion of our board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee: (1) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries; or (2) be an affiliated person of the listed company or any of its subsidiaries. In addition, in affirmatively determining the independence of any director who will serve on a company's compensation committee, Rule 10C-1 under the Exchange Act requires that a company's board of directors consider all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: (i) the source of compensation of the director, including any consulting, advisory or other compensatory fee paid by such company to the director; and (ii) whether the director is affiliated with the company or any of its subsidiaries or affiliates.

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, other

than Mark Timney and Clive Meanwell, representing 5 out of 7 directors, has a relationship 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 Rule 5605(a)(2) of the NASDAQ rules. Our board of directors has also determined that John Kelly, Alexander Denner and Sarah Schlesinger, who comprise our audit committee, Dr. Denner and Paris Panayiotopoulos, who comprise our nominating and corporate governance committee, and Mr. Panayiotopoulos and Drs. Denner and Schlesinger, who comprise our compensation committee, each satisfy the independence standards for such committees established by the SEC and the NASDAQ rules, as applicable.

Mr. Timney and Dr. Meanwell are employees and therefore are not independent under applicable SEC and NASDAQ rules. Our independent directors meet regularly in executive sessions without management present. Only independent directors serve on our standing board committees.

Board Leadership Structure

To assure effective independent oversight, the board has adopted a number of governance practices, including executive sessions of the independent directors after substantially all board meetings.

In June 2018, the board determined, that from a corporate governance perspective, it was advisable to have an independent chair and appointed Alexander Denner as our chairman. Previously, Fredric Eshelman was our executive chairman from November 2017 to June 2018 and our non-executive chair from August 2015 to November 2017.

Dr. Denner is responsible for:

chairing meetings of the board;

preparing the agenda for each meeting of the board of directors and determining the need for special meetings of our board of directors:

consulting with our chief executive officer and independent directors on matters relating to corporate governance and board performance;

facilitating communications between other members of our board of directors and our chief executive officer; and

meeting with any director who is not adequately performing his or her duties as a member of our board of directors or any committee.

Board Committees

Our board of directors has a standing audit committee, compensation committee and nominating and corporate governance committee. The members of these committees are:

		Nominating and
Audit	Compensation	Corporate
		Governance
		Alexander Denner
John Kelly (Chair)	Paris Panayiotopoulos (Chair)	(Chair)
		Paris
Alexander Denner	Alexander Denner	Panayiotopoulos
Sarah Schlesinger	Sarah Schlesinger	

In June 2018, Drs. Denner and Schlesinger joined the audit committee and compensation committee and Mr. Panayiotopoulos joined the compensation committee as chair.

Each of the audit committee, compensation committee and nominating and corporate governance committee operate under a charter and each committee reviews its respective charter at least annually. A current copy of the charter for each of the audit committee, the compensation committee, and the nominating and corporate governance committee is posted on the "Company–Corporate Governance" section of our website, www.themedicinescompany.com. Audit Committee

Our audit committee's responsibilities include:

appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;

overseeing the work of our independent registered public accounting firm, including through the receipt and consideration of certain reports from such firm;

reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures;

monitoring our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;

overseeing our risk management policies;

establishing policies regarding hiring employees from the independent registered public accounting firm and procedures for the receipt, retention and treatment of accounting-related complaints and concerns; meeting independently with our independent registered public accounting firm and management; and preparing the audit committee report (which is included elsewhere in this proxy statement) required by the SEC.

Our board of directors has determined that all of the audit committee members are independent as defined under the NASDAQ rules, including the independence requirements contemplated by Rule 10A-3 under the Exchange Act.

Our board of directors has also determined that each of John Kelly and Alexander Denner qualifies as an audit committee financial expert. In deciding whether members of our audit committee qualify as financial experts within the meaning of the SEC regulations and the listing standards of the NASDAQ rules, our board considered the nature and scope of experiences and responsibilities members of our audit committee have previously had with reporting companies. Each member of our audit committee is an independent director as defined under the NASDAQ rules, including the independence requirements contemplated by Rule 10A-3 under the Exchange Act.

The audit committee met six times during 2018, including regular, special and telephonic meetings.

Compensation Committee

Our compensation committee's responsibilities include:

annually reviewing and approving corporate goals and objectives relevant to the compensation of our chief executive officer and our other executive officers;

overseeing the evaluations of our senior executives;

reviewing and approving, or making recommendations to the board with respect to, the compensation of our chief executive officer and other executive officers;

reviewing and making recommendations to the board relating to management succession planning;

overseeing and administering our cash and equity incentive plans; and

reviewing and making recommendations to the board with respect to director compensation.

The compensation committee may form, and delegate authority to, one or more subcommittees as it deems appropriate from time to time under the circumstances. The compensation committee is directly responsible for the appointment and oversight of any compensation consultants and other advisors it retains.

The compensation committee met six times during 2018, including regular, special and telephonic meetings. Information concerning the compensation committee's processes and procedures regarding director compensation is set forth under "—Compensation of Directors" in this proxy statement. Information concerning the compensation committee's processes and procedures regarding compensation for our named executive officers is set forth under "Information About our Executive Officer Compensation—Compensation Discussion and Analysis" in this proxy statement.

Our board of directors has the authority to grant awards and to adopt, amend and repeal the administrative rules, guidelines and practices relating to our 2013 stock incentive plan (the "2013 plan"), and to interpret the provisions of the 2013 plan. Pursuant to the terms of the 2013 plan, our board of directors has delegated its authority under the 2013 plan to its compensation committee. Accordingly, the compensation committee administers the 2013 plan, including granting options and other awards under the 2013 plan. The compensation committee generally selects the recipients of awards under the 2013 plan and, subject to the terms of the 2013 plan, determines:

the number of shares of common stock covered by options and the dates upon which such options become exercisable;

the exercise price of options (which, in accordance with the 2013 plan, may not be less than 100% of the fair market value of our common stock on the date of grant);

the duration of options (which, in accordance with the 2013 plan, may not be longer than 10 years); and

• the number of shares of common stock subject to any restricted stock or other stock-based awards and the terms and conditions of such awards, including issue price, conditions for repurchase and repurchase price.

Role of the Compensation Consultant. Our compensation committee has retained Radford, an Aon Hewitt Consulting Company, as its independent compensation consultant. Radford reports directly to the compensation committee and does not provide any other services to us. The compensation committee generally relies on Radford to provide it with comparison group benchmarking data and information as to market practices and trends. Radford does not make specific base salary and/or short- and long-term incentive award recommendations, although it does provide award ranges for the compensation committee to consider.

Representatives of Radford attend compensation committee meetings upon request of the compensation committee chair as well as preparatory meetings as necessary. Radford attends executive sessions of the compensation committee as requested. Radford interacts directly with members of our management only on matters under the compensation committee's oversight and with the knowledge and permission of the compensation committee chairperson. In November 2018, our compensation committee considered the relationships that Radford has with us, the members of our compensation committee and our executive officers, as well as the policies that Radford has in place to maintain its independence and objectivity. Based on the compensation committee's evaluation, as well as the consideration by our executive officers of the policies that Radford has in place to maintain its independence and objectivity, the compensation committee has determined that Radford's work for the compensation committee has not raised any conflicts of interest.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee's responsibilities include:

*dentifying individuals qualified to become board members;

recommending to the board the persons to be nominated by the board for election as directors at the annual meeting of stockholders;

recommending to the board the directors to serve on the board committees and as lead director;

overseeing the evaluation of the board of directors; and

developing corporate governance guidelines and principles.

Our board of directors has adopted a series of corporate governance guidelines to assist the board in the exercise of its duties and responsibilities, which is posted on the "Company–Corporate Governance" section of our website, www.themedicinescompany.com.

The nominating and corporate governance committee met one time in 2018, including regular, special and telephonic meetings.

Director Candidates and Nomination Process

The process followed by our nominating and corporate governance committee to identify and evaluate director candidates includes requests to board members and others for recommendations, meetings from time to time to evaluate biographical information and background material relating to potential candidates and interviews of selected candidates by members of the committee and the board.

The nominating and corporate governance committee evaluates director candidates based upon a number of criteria as set forth in our corporate governance guidelines, including:

reputation for integrity, honesty and high ethical standards;

demonstrated business acumen, experience and ability to exercise sound judgments in matters that relate to our current and long-term objectives and willingness and ability to contribute positively to our decision-making process; commitment to understanding our business and our industry;

adequate time to attend and participate in meetings of the board of directors and its committees;

ability to understand the sometimes conflicting interests of the various constituencies of our company, which include stockholders, employees, customers, governmental units, creditors and the general public and to act in the interest of all stockholders; and

such other attributes, including independence, that satisfy requirements imposed by the SEC and The NASDAQ Stock Market.

Our corporate governance guidelines also provide that candidates should not be discriminated against on the basis of race, religion, national origin, sex, sexual orientation, disability or any other basis proscribed by law and that our nominating and corporate governance committee should consider the value of diversity of our board of directors when evaluating particular candidates. The nominating and corporate governance committee has not adopted any formal or informal diversity policy and treats diversity as one of the criteria to be considered by the committee. The nominating and corporate governance committee does not assign specific weights to particular criteria that the committee reviews and no particular criterion is a prerequisite for the consideration of any prospective nominee. We believe that the backgrounds and qualifications of our directors, considered as a group, should provide a composite and diverse mix of experience, knowledge and abilities that will allow our board of directors to fulfill its responsibilities.

From time to time, we engage an independent search firm to help us identify and screen director candidates.

Policy Regarding Holdover Directors

As a condition to being nominated by our board for re-election as a director, our corporate governance guidelines require each incumbent nominee for director to deliver to the board an irrevocable resignation that will become effective if (1) in the case of an uncontested election, the votes cast "for" such nominee's election do not exceed the votes cast "against" such nominee's election (with "abstentions" and "broker non-votes" not counted as a vote "for" or "against such nominee's election), which we refer to as the required vote, and (2) the board determines to accept such

resignation in accordance with the corporate governance guidelines. An incumbent director who does not receive the required vote in an uncontested election will continue to serve as a director while the nominating and corporate governance committee (or group of other independent, disinterested directors in certain circumstances) and the board decide whether to accept or reject his or her resignation.

If any incumbent director in an uncontested election does not receive the required vote, the nominating and corporate governance committee and the board will follow the following procedures in deciding whether or not to accept the nominee's resignation, all of which procedures will be completed within 90 days following the certification of the stockholder vote from such meeting:

The nominating and corporate governance committee will recommend to the board the action to be taken with respect to such resignation (which can range from accepting the resignation, to maintaining the director but addressing what the committee believes to be the underlying cause of the against votes, to resolving that the director will not be re-nominated in the future for election, to rejecting the resignation). In reaching its recommendation, the nominating and corporate governance committee will consider all factors it deems relevant, which may include: any stated reasons why stockholders voted against such director, any alternatives for curing the underlying cause of the votes against such director, the total number of shares voting, how such shares were voted, the number of broker non-votes, the director's tenure, the director's qualifications, the criteria for nomination as a director set forth the corporate governance guidelines, the director's past and expected future contributions to us and the overall composition of the board, including whether accepting the resignation would cause the company to fail to meet any applicable SEC or NASDAQ Stock Market requirement.

Our board will act on the nominating and corporate governance committee's recommendation and in doing so, will consider all of the factors considered by the committee and such additional factors as it deems relevant.

Following our board's determination, we will promptly publicly disclose our board's decision regarding the resignation and if such resignation is rejected, the rationale behind the decision.

If our board accepts a nominee's resignation, then it may fill the resulting vacancy or may decrease the size of the board pursuant to our bylaws.

Stockholder Nominees

Stockholders may recommend individuals to the nominating and corporate governance committee for consideration as potential director candidates. Any such proposals should be forwarded to the nominating and corporate governance committee in writing at our principal executive offices at 8 Sylvan Way, Parsippany, New Jersey 07054 Attention: Stephen Rodin, Secretary, and should include appropriate biographical and background material to allow the nominating and corporate governance committee to properly evaluate the potential director candidate and the number of shares of our stock beneficially owned by the stockholder proposing the candidate. Assuming that biographical and background material has been provided on a timely basis, any recommendations received from stockholders will be evaluated in the same manner as potential nominees proposed by the nominating and corporate governance committee. If our board of directors determines to nominate a stockholder-recommended candidate and recommends his or her election, then his or her name will be included in our proxy card for our next annual meeting. Stockholders also have the right under our bylaws to directly nominate director candidates, without any action or recommendation on the part of the nominating and corporate governance committee or the board, by following the procedures set forth under "Information About The Annual Meeting—How and when may I submit a proposal for the 2020 annual meeting?" in this proxy statement. Under our bylaws, to directly nominate director candidates, stockholders must provide written notice to our Secretary at 8 Sylvan Way, Parsippany, New Jersey 07054, with the information required by our bylaws, including but not limited to:

as to the director candidate:

all information relating to such candidate that is required to be disclosed pursuant to Section 14(a) of the Exchange Act, including such person's written consent to being named in the proxy statement as a nominee and to serving as a director, if elected; and

a description of all direct and indirect compensation and other material monetary arrangements during the past three years, or any other material relationships between or among the nominating stockholder and the proposed director candidate; and

as to the stockholder proposing the director candidate and the director candidate:

such person's name and address;

the number of shares of our common stock beneficially owned by such person;

- any derivative, swap or other transaction or series of transactions engaged in, directly or indirectly, by such
 person, the purpose or effect of which is to give the economic risk similar to ownership of shares of any class or
- series of the company (any of the foregoing, a "Synthetic Equity Interest");

•any proxy pursuant to which such person has or shares the right to vote any shares of any class or series of the company;

any short interest of such person in any shares of any class or series of the company or similar arrangement (a "Short Interest");

any significant equity interest, Synthetic Equity Interest or Short Interest of such person in any principal competitor of the company;

any performance-related fees (other than an asset-based fee) to which such person is entitled based on any increase or decrease in the price or value of shares of any class or series of the company or any Synthetic Equity Interest or Short Interest:

•any direct or indirect interest of such person in any contract with the company or any principal competitor of the company;

any pending or threatened litigation in which such person is a party or material participant involving the company or any of its officers or directors or affiliates;

any material transaction occurring during the then immediately preceding 12-month period between such person and the company; and

any other information that would be required to be disclosed in a proxy statement or other filing required to be made in connection with the solicitation of proxies in support of the nomination pursuant to Section 14(a) of the Exchange Act.

The details of this notice requirement are included in our bylaws, which are available through our public filings on our website or on the SEC's website. Candidates nominated by stockholders in accordance with the procedures set forth in our bylaws to nominate a director directly will not be included in our proxy card for our next annual meeting.

Board Risk Oversight

Management is responsible for the day-to-day management of risks the company faces, while our board, as a whole and through its committees, has responsibility for the oversight of risk management. In general, our board oversees risk management activities relating to business strategy, acquisitions, capital allocation, organizational structure and certain operational risks. In its risk oversight role, our board of directors has the responsibility to satisfy itself that the risk management processes designed and implemented by management are adequate and functioning as designed. Our board believes that full and open communication between management and the board of directors is essential for effective risk management and oversight. Our non-executive chairman meets regularly with our chief executive officer and other senior officers to discuss strategy and risks facing the company. Members of senior management attend the quarterly board meetings and are available to address any questions or concerns raised by the board on risk management-related and any other matters. Each quarter, our board of directors receives presentations from senior management on strategic matters involving our operations. Our board typically holds in person, strategic planning sessions with senior management three times every year to discuss strategies, key challenges, and risks and opportunities for the company.

While our board is ultimately responsible for risk oversight at our company, our three standing board committees assist our board in fulfilling its oversight responsibilities in certain areas of risk. The audit committee assists our board in fulfilling its oversight responsibilities with respect to risk management in the areas of financial reporting and internal controls. The compensation committee assists our board in fulfilling its oversight responsibilities with respect to the management of risks arising from our compensation policies and programs. The nominating and governance committee assists the board in fulfilling its oversight responsibilities with respect to the management of risks

associated with board organization, membership and structure for our directors and executive officers, and corporate governance.

Code of Conduct and Ethics

Our board has adopted a written global code of conduct and ethics applicable to all of our directors and employees, including our principal executive officer and our principal financial officer. The revised global code of conduct and ethics, with a summary of the revisions, is available on the "Company–Corporate Governance" section of our website, www.themedicinescompany.com.

Any waiver of the global code of conduct and ethics for directors or executive officers, or any amendment to the code that applies to directors or executive officers, may only be made by the board of directors. We intend to file a Form 8-K or post on our website, at the address and location specified above, all disclosures that are required by law or the applicable NASDAQ rules concerning an amendment to, or waiver from, a provision of the global code of conduct and ethics. In 2018 through the date hereof, no such waivers have been requested or granted.

Stockholder Communications with the Board of Directors

Any stockholder may contact the board of directors or a specified individual director by writing to the attention of the board of directors or a specified individual director and sending such communication to our principal executive offices at 8 Sylvan Way, Parsippany, New Jersey 07054 Attention: Stephen Rodin, Secretary. Each communication from a stockholder should include the following information in order to permit stockholder status to be confirmed and to provide an address to forward a response if deemed appropriate: (1) the name, mailing address and telephone

number of the stockholder sending the communication; (2) the number of shares held by the stockholder; and (3) if the stockholder is not a record owner of our securities, the name of the record owner of our securities beneficially owned by the stockholder.

Our Secretary will forward all appropriate communications to the board of directors or individual members of the board of directors as specified in the communication.

Director Attendance at the Annual Meeting

As set forth in our corporate governance guidelines, directors are expected to attend the annual meeting of stockholders. All of our current directors attended our 2018 annual meeting of stockholders.

Compensation of Directors

Compensation Program. Every two years, our compensation committee reviews and makes recommendations to our board regarding the level of compensation of our non-employee directors. To determine the appropriate level of compensation for our non-employee directors, our compensation committee has historically obtained data from a number of different sources including publicly available data describing director compensation in peer companies (for 2018, the 2018 Peer Group is described in "Information About Our Executive Officer Compensation—Compensation Discussion and Analysis—Role of the Compensation Consultant and Management and Peer Group Development" below). The compensation committee reviewed the compensation of our non-employee directors in January 2017 and decided to keep the compensation level unchanged. The compensation committee will next review director compensation in the second half of 2019.

Our compensation program for non-employee directors consists of a cash component and an equity component. The equity component includes stock option grant awards and restricted stock awards. The compensation committee designs the cash component by considering as a target the 50th percentile of cash compensation paid to directors at companies included in the data from the compensation committee's consultant, Radford, and the board's equity compensation to be at a value at or near the 50th percentile of the value of equity compensation paid to directors at companies included in the data from Radford. Each of these components is shown in the table below. We do not pay directors who are also our employees any additional compensation for serving on our board.

We have stock ownership guidelines for our independent directors to help ensure that they each maintain an equity stake in the company, and by doing so, appropriately link their interests with those of our other stockholders. These stock ownership guidelines provide that within a five-year period from the director's appointment or initial election, a director should attain and hold shares of our stock (not including unexercised stock options) of no less than three times the director's annual cash retainer. All of our directors are currently in compliance with our stock ownership guidelines, other than Geno Germano and Sarah Schlesinger, who remain within the five-year grace period to achieve the guideline level of ownership.

Cash Compensation. The following table describes the cash compensation for each non-employee director under our compensation program. The cash compensation is payable on a quarterly basis.

Type of Fee	Compensation
Type of Fee	Program
Annual retainer for each board member	\$55,000
Additional annual retainer for non-executive chairman	\$10,000
Compensation for each board meeting attended in a year in excess of 10 meetings	\$3,000
Additional annual retainer for committee members:	
Audit committee chair	\$25,000
Other audit committee members	\$12,500
Compensation committee chair	\$20,000
Other compensation committee members	\$10,000
Nominating and corporate governance committee chair	\$15,000

Other nominating and corporate governance committee members	\$7,500
Compensation for each committee meeting attended in a year in excess of 10 meetings, per	\$1,500
committee	\$1,500

For the purposes of the board compensation policy, to determine whether a board member or committee member attended in excess of 10 meetings during the year, the number of meetings attended in person and by telephone are aggregated. In addition, directors are reimbursed for travel (including reimbursement of air transportation costs) and out-of-pocket expenses in connection with their attendance at board meetings and other company matters. Each of our directors is also entitled to indemnification by the company pursuant to individual indemnification agreements between the company and such director.

Equity Compensation. Each non-employee director is eligible to receive stock options and shares of restricted stock under our 2013 plan. The table below describes the initial and annual equity compensation for each non-employee director and the additional annual equity compensation to our non-executive chairman under our compensation program:

Type of Grant	Equity Awards	Grant Date	Vesting Schedule
Initial equity grant	\$320,000 grant value in stock options	The date the director is initially elected to the board	Stock options vest in one installment 36 months after the grant date
Annual equity grant	\$255,000 grant value split equally between stock options and restricted shares	The date of the annual meeting of stockholders	Stock options and restricted stock vest in one installment 12 months after the grant date
Additional annual equity grant to our non-executive chairman	Stock option to purchase 5,000 shares of common stock	The date of the annual meeting of stockholders	Stock options vest in one installment 12 months after the grant date

The options granted to directors have an exercise price equal to the closing price of our common stock on The NASDAQ Global Select Market on the date of grant and have a ten-year term. We have a policy in place providing that if an independent director in good standing voluntarily retires and has completed at least one full term of service, any unvested stock options and restricted stock that were granted to the director as an annual award would vest immediately following the director's retirement and all stock options granted to the director as an annual award would remain exercisable until the expiration of the option's original 10-year term.

The following table shows the compensation for fiscal year 2018 for each non-employee director who served as a director during 2018. See the "2018 Summary Compensation Table" below for information on compensation paid to Mark Timney and Clive Meanwell. Fredric Eshelman did not receive director compensation in 2018 as he served as our executive chairman from November 2017 to June 2018 and as an employee director from June 2018 to August 2018. As noted above, our employee directors do not receive additional compensation for services as a director. 2018 Director Compensation

	Fees			
	Earned	Stock	Option	
Name	or	Awards	Awards	Total (\$)
	Paid in	(\$)(1)	(\$)(2)	
	Cash (\$)			
William Crouse	\$31,250(3)	\$—		\$31,250
Alexander Denner	\$90,784(4)	\$127,517	\$127,511	\$345,812
Geno Germano	\$16,750(5)	127,517	\$127,511	\$271,778
Robert Hugin	\$6,227 (6)	_	_	\$6,227
John Kelly	\$83,000(7)	\$127,517	\$127,511	\$338,028
Armin Kessler	\$26,042(8)	_	_	\$26,042
Paris Panayiotopoulos	\$73,444(9)	\$127,517	\$127,511	\$328,472
Sarah Schlesinger	\$59,062(10)	127,517	\$447,519(14)	\$634,098
Hiroaki Shigeta	\$27,084(11))—	_	\$27,084
Melvin Spigelman	\$28,125(12))—	_	\$28,125
Elizabeth Wyatt	\$28,125(13))—	_	\$28,125

⁽¹⁾ These amounts represent the aggregate grant date fair value of restricted stock granted by us during 2018, determined in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or FASB ASC Topic 718. For a detailed discussion of our grant date fair value calculation methodology,

including assumptions and estimates inherent therein, please see Note 10 to our notes to our consolidated financial statements in our Annual Report on Form 10-K filed on February 27, 2019. The per share grant date fair value of the award granted to each non-employee director on the date of our 2018 annual meeting of stockholders was \$33.86. At December 31, 2018, each of our non-employee directors (other than Messrs. Crouse, Hugin, Kessler and Shigeta, Dr. Spigelman and Ms. Wyatt) held 3,766 shares of unvested restricted stock.

These amounts represent the grant date fair value of stock options granted by us during 2018, determined in accordance with FASB ASC Topic 718. For a detailed discussion of our grant date fair value calculation methodology, including assumptions and estimates inherent therein, please see Note 10 to our notes to our consolidated financial statements in our Annual Report on Form 10-K filed on February 27, 2019. At December 31, 2018, the total number of shares subject to compensatory options held by each of our non-employee directors were:

- Mr. Crouse, 89,866; Dr. Denner, 54,648; Mr. Germano, 36,384; Mr. Hugin, 49,568; Mr. Kelly, 114,007; Mr. Kessler, 49,568; Mr. Panayiotopoulos, 34,277; Dr. Schlesinger, 35,524; Mr. Shigeta, 49,568; Dr. Spigelman, 89,866; and Ms. Wyatt, 99,866.
 - Mr. Crouse announced his retirement from the board in February 2018, effective as of our annual shareholders
- (3) meeting in May 2018. Until March 2018, Mr. Crouse served as chair of the compensation committee. During 2018, Mr. Crouse received \$31,250 as board and compensation committee chair retainers.
 - In June 2018, Dr. Denner became our non-executive chair of the board and a member of the audit committee and compensation committee. In addition, during 2018 Dr. Denner served as chair of the nominating and corporate
- (4) governance committee. During 2018, Dr. Denner received \$87,784 in board, nominating and corporate governance committee chair, audit committee and compensation committee retainers and \$3,000 for board meetings attended in a year in excess of 10 meetings.
 - Mr. Germano was the chair of the compensation committee from March 2018 to June 2018. During 2018, Mr.
- (5) Germano received \$13,750 as board and compensation committee chair retainers and \$3,000 for board meetings attended in a year in excess of 10 meetings.
- (6) Mr. Hugin retired from the board in February 2018. Until his retirement, Mr. Hugin served on the compensation committee. During 2018, Mr. Hugin received \$6,227 as board and compensation committee retainers.
- Mr. Kelly was the chair of the audit committee in 2018. During 2018, Mr. Kelly received \$80,000 in board and audit committee chair retainers and \$3,000 for board meetings attended in a year in excess of 10 meetings.
 - Mr. Kessler did not stand for re-election at last year's annual shareholder meeting in May 2018. Prior to May 2018,
- (8)Mr. Kessler served on the nominating and corporate governance committee. During 2018, Mr. Kessler received \$26,042 in board and nominating and corporate governance committee retainers.
- Mr. Panayiotopoulos was a member of the nominating and corporate governance committee in 2018 and in June (9) 2018 became a member of the audit committee and compensation committee. During 2018, Mr. Panayiotopoulos
- received \$73,444 in board, audit committee, compensation committee and nominating and corporate governance committee retainers.
 - Dr. Schlesinger joined the board in February 2018 and in June 2018 became a member of the audit committee and
- (10) compensation committee. During 2018, Dr. Schlesinger received \$59,062 as board, audit committee and compensation committee retainers.
 - Mr. Shigeta did not stand for re-election at last year's annual shareholder meeting in May 2018. Prior to May
- (11)2018, Mr. Shigeta served on the compensation committee. During 2018, Mr. Shigeta received \$27,084 in board and compensation committee retainers.
 - Dr. Spigelman did not stand for re-election at last year's annual shareholder meeting in May 2018. Prior to May
- (12)2018, Dr. Spigelman served on the audit committee. During 2018, Dr. Spigelman received \$28,125 in board and audit committee retainers.
 - Ms. Wyatt did not stand for re-election at last year's annual shareholder meeting in May 2018. Prior to May 2018,
- (13)Ms. Wyatt served on the audit committee. During 2018, Ms. Wyatt received \$28,125 in board and audit committee retainers.
- (14) Dr. Schlesinger joined the board in February 2018 and was awarded an initial equity grant of \$320,000 at that time.

Certain Related Party Transactions

In accordance with our audit committee charter, our audit committee is responsible for reviewing and approving the terms and conditions of all related party transactions.

Our board of directors is committed to upholding the highest legal and ethical conduct in fulfilling its responsibilities and recognizes that related party transactions can present a heightened risk of potential or actual conflicts of interest. Accordingly, as a general matter, it is our preference to avoid related party transactions.

In accordance with our audit committee charter, members of the audit committee, all of whom are independent directors, review and approve all related party transactions for which approval is required under applicable laws or

regulations, including SEC rules and regulations and the NASDAQ rules. Current SEC rules define a related party transaction to include any transaction, arrangement or relationship in which we are a participant and the amount involved exceeds \$120,000, and in which any of the following persons has or will have a direct or indirect interest: our executive officers, directors or director nominees;

any person who is known to be the beneficial owner of more than 5% of our common stock;

any person who is an immediate family member, as defined under Item 404 of Regulation S-K, of any of our executive officers, directors or director nominees or beneficial owners of more than 5% of our common stock; or any firm, corporation or other entity in which any of the foregoing persons is employed or is a partner or principal or in a similar position or in which such person, together with any other of the foregoing persons, has a 5% or greater beneficial ownership interest.

In addition, the audit committee reviews and investigates any matters pertaining to the integrity of management, including conflicts of interest and adherence to our global code of conduct and ethics. Under our global code of conduct and ethics, our directors, officers and employees are expected to avoid any relationship, influence or activity that would cause or even appear to cause a conflict of interest.

In January 2018, Christopher Cox, our executive vice president and our chief corporate development officer, rejoined the law firm Cadwalader, Wickersham & Taft, LLP ("Cadwalader") as a partner. During 2018, Mr. Cox remained employed with us and continued to lead certain company

functions and initiatives, including corporate strategy, business development and investor relations. In March 2019, Mr. Cox separated from the company and rejoined Cadwalader on a full-time basis. Stephen Rodin, our executive vice president, general counsel and secretary, has been, and will continue to be, responsible for the retention and management of outside counsel. Since 2015, we have retained Cadwalader as corporate and transactional legal counsel. We and Cadwalader had agreed on certain procedures to address potential conflicts that could have arisen out of Mr. Cox's dual roles from January 2018 to March 2019.

Compensation Committee Interlocks and Insider Participation

None of the prior or current members of the compensation committee was a current or former officer or employee of our company and none of whom had any related person transaction involving us required to be reported under Item 404(a) of Regulation S-K.

None of our executive officers has served as a director or member of the compensation committee (or other committee serving an equivalent function) of any other entity whose executive officers served as one of our directors or a member of the compensation committee.

INFORMATION ABOUT OUR EXECUTIVE OFFICER COMPENSATION

Compensation Discussion and Analysis

Executive Summary

Our compensation program is designed to attract, retain, and motivate executive talent, promote the achievement of key strategic and financial performance measures and align executives' incentives with our corporate strategies and business objectives and the creation of long-term stockholder value. The main components of our program are base salary; annual cash bonus; equity awards (consisting of stock option and restricted stock awards); health and life insurance and other employee benefits; and severance and change-of-control benefits.

Beginning in 2016, the compensation committee purposefully modified our compensation program to support our strategy to unlock and maximize stockholder value by narrowing the operational focus of the company. Our compensation committee reviewed our executive compensation program and, following extensive discussion between the compensation committee, its independent compensation consultant (Radford) and our management team, the compensation program was rebalanced with a view to moving from lower-risk, short-term, cash-based compensation to higher-risk, longer-term, equity-based compensation, which we believe better mirrors the pay mix more commonly found at emerging biotech firms and increases incentives that will only be realized with long-term success. For example, the compensation committee has frozen executive officers' base salary increases since 2016 and instituted a company-wide base salary freeze in 2018, excluding increases in connection with promotions, and in April 2018 granted stock options with performance-based vesting to further align compensation to the strategic direction of our company.

Our Performance

As a result of successfully executing on our strategy to unlock and maximize stockholder value by narrowing our operational focus, we are now solely focused on the development of inclisiran as a transformative treatment for atherosclerotic cardiovascular disease (ASCVD). During 2018, we successfully restructured our business and executed on our development plan for inclisiran, a first-in-class drug candidate with the potential to deliver potent, durable, and consistent lowering of LDL-C levels via twice-a-year dosing. In 2018, we continued progressing inclisiran's development, with no material safety issues to date, which paves the way for top-line pivotal trial readouts expected in the third quarter of 2019. The continued progress in 2018 for inclisiran included:

In the first quarter of 2018, we reached our enrollment target for the ORION-9, ORION-10, and ORION-11 Phase III clinical trials of inclisiran ahead of schedule by 14 weeks, 10 weeks, and 14 weeks, respectively. These pivotal trials are designed to confirm inclisiran's safety and efficacy, as well as provide data required for New Drug Application and Marketing Authorization Application submissions in the United States and Europe, respectively.

In each of January 2018, March 2018, June 2018, and September 2018, the Independent Data Monitoring Committee (IDMC) for the ongoing inclisiran Phase III clinical trials conducted its planned reviews of un-blinded safety and efficacy data from the trials, and recommended that the trials continue as designed and conducted, without modification. A fifth and sixth planned review of un-blinded safety and efficacy data from the trials was conducted by the IDMC in January 2019 and April 2019, respectively, with the same recommendation that the trials continue as designed and conducted, without modification.

In January 2018, we announced that we had achieved commercial scale manufacturing for inclisiran.

In October 2018, we, together with Oxford University in the United Kingdom and the TIMI Study Group in the United States, commenced the ORION-4 cardiovascular outcomes trial to assess whether inclisiran, compared to placebo, reduces recurrent major adverse cardiovascular events in approximately 15,000 patients with ASCVD.

In November 2018, the U.S. Patent and Trademark Office granted our composition of matter patent for inclisiran. This patent is expected to be the principal U.S. patent covering inclisiran and runs through mid-2034, with potential patent term extension and pediatric exclusivity likely to further extend market exclusivity.

In addition to inclisiran developments in 2018, we also significantly enhanced our capital position as we progress in the pivotal 2019 year, including:

In January 2018, we completed the sale of our infectious disease business unit to Melinta Therapeutics, Inc. (Melinta), significantly strengthening our cash position and substantially reducing our cost structure.

In August 2018 and October 2018, we divested non-core legacy assets Angiomax and pre-clinical infectious disease assets, respectively, and discontinued the regulatory authorizations and related commitments regarding Ionsys.

In December 2018, we announced and subsequently completed our offering of \$172.5 million aggregate principal amount of 3.50% convertible senior notes due 2024 (inclusive of the over-allotment option). The net proceeds from the offering (inclusive of the full exercise of the over-allotment option) were \$166.7 million, after deducting the commissions and our offering expenses, significantly enhancing the company's capital position.

Our achievements in 2018 further progressed our ability to realize inclisiran's potential unique profile, vast global market opportunity, and long-dated exclusivity, setting the stage for significant shareholder value creation.

Our Named Executive Officers

Our named executive officers for 2018 are Mark Timney, our chief executive officer, Christopher Visioli, our chief financial officer, Clive Meanwell, our chief innovation officer and former chief executive officer, William O'Connor, our former chief financial officer, and our next most highly compensated executive officers who were executive officers as of the end of 2018: Christopher Cox, our former executive vice president and chief corporate development officer; and Stephen Rodin, our executive vice president, general counsel, and secretary.

Our Pay Practices

Our compensation program emphasizes pay-for-performance and is designed to link the pay of our executive officers to our overall financial and operational performance and our executive officers' contribution to stockholder value. To further align with our stockholders, we also have sought to incorporate stockholder-friendly practices into our pay program.

What We Do

Performance Focus. We have designed our executive compensation program to have substantial elements that are performance-based.

At-Risk Compensation. In 2018, approximately 92% of our former chief executive officer's compensation consisted of variable compensation elements dependent on our achievement of corporate performance goals and objectives and our stock price performance. In December 2018, Mark Timney was appointed our chief executive officer and approximately 95% of his compensation package is dependent on our achievement of corporate performance goals and objectives and our stock price performance.

Annual Cash Compensation. Our annual cash bonus plan is tied to corporate strategic and financial goals. The plan is broad-based and applies to all employees and executives.

Equity Incentives. In April 2018, our board of directors approved performance option grants to our employees, including our named executive officers, to align compensation to the strategic direction of our company. Under the grant agreements, vesting is contingent on our achievement of four long-term goals that are tied to key company goals over the next three years, which, if achieved, we believe will maximize shareholder value. In 2018, a significant majority of the equity granted to employees, including our named executive officers, was performance-vesting based. We grant equity awards broadly among our employee population on an annual basis to encourage an ownership culture and align management and our employees with our stockholders' interests. Historically, we have used a mix of stock options and restricted stock and our equity awards have had multi-year vesting periods, generally vesting over a four-year period, designed to encourage our employees and executives to focus on the long-term performance of our stock price. In addition to these time-based equity awards, in 2018 we granted options with performance-based vesting, as described above.

Executive and Director Stock Ownership and Share Retention Guidelines. We have adopted executive stock ownership guidelines that require our chief executive officer to own shares of our common stock with a value equal to 6x his base salary and each other named executive officer to own shares of our common stock with a value equal to 1x his respective base salary, as calculated under our policy. Each named executive officer is required to retain 50% of net after tax shares obtained via the vesting of any full-value stock award until the named executive officer meets our prescribed ownership guidelines.

Risk Assessment. Our compensation committee has reviewed our incentive compensation programs and discussed the concept of risk as it relates to our compensation program. We believe our approach to goal setting, setting of targets with payouts at multiple levels of performance, and evaluation of performance results assist in mitigating excessive or inappropriate risk-taking. Key features of our programs reflect sound risk management practices. We believe we have allocated our compensation among base salary and short- and long-term compensation target opportunities in such a way as to not encourage excessive risk-taking. Further, with respect to our incentive compensation programs, compensation is generally linked to both corporate performance and individual performance. Our corporate targets are applicable to our executives and employees alike, regardless of business unit. We believe this encourages consistent behavior across the organization, rather than establishing different performance metrics depending on a person's position in the company or their business unit. The mix of equity award instruments used under our long-term incentive program includes full value stock awards, which also mitigate risk. Finally, we believe that the multi-year vesting of our equity awards properly account for the time horizon of risk.

Independent Compensation Committee and Consultant. Our compensation committee, which is composed entirely of independent directors, provides independent oversight of our compensation programs. Our compensation committee uses an independent executive compensation consulting firm that reports directly to the committee and provides no other services for the company.

Stockholder Engagement. The company is committed to open and regular communication with our stockholders, and takes the opportunity to engage with stockholders to understand their perspectives.

What We Don't Do

Limited Perquisites. Our named executive officers receive only limited perquisites.

No Tax Gross-ups. We do not have excess parachute payment tax or other tax gross-up provisions in our executive compensation arrangements, including our arrangements with our chief executive officer.

No "Single-Trigger" Change-in-Control Protections. Change-in-control protections for our named executive officers are limited to "double-trigger" arrangements.

No Guaranteed Bonuses. We do not provide guaranteed bonuses to our named executive officers.

No Hedging or Pledging of Company Stock. Our insider trading policy expressly bars ownership of financial instruments or participation in investment strategies that hedge the economic risk of owning our stock and prohibits the purchase of our securities on margin, the borrowing against our securities held in a margin account, and the pledge of our securities as collateral for a loan, except in circumstances where the person that wishes to pledge our securities as collateral for a loan clearly demonstrates the financial capacity to repay the loan without resort to the pledged securities and receives the approval of our chief financial officer or general counsel.

Consideration of 2018 Say-on-Pay Vote Results and Stockholder Engagement

In May 2018, our board reviewed the results of our 2018 "say-on-pay" vote in which approximately 98.7% of the shares present or represented and voting on the matter were voted in favor of the advisory vote on our executive compensation program. After taking into consideration stockholder support for our executive compensation program reflected in the say-on-pay vote results, the compensation committee decided to continue to apply the same philosophy, compensation objectives, and governing principles as it has used in past years when making subsequent decisions or adopting subsequent policies regarding named executive officer compensation.

Objectives and Philosophy of Our Executive Compensation Program

The primary objectives of our compensation committee with respect to executive compensation are to: attract, retain, and motivate the best possible executive talent;

ensure that executive compensation is aligned with our corporate strategies and business objectives;

promote the achievement of key strategic and financial performance measures by linking cash and equity incentives to the achievement of measurable corporate and individual performance goals; and

align executives' incentives with the creation of long-term stockholder value.

To achieve these objectives, the compensation committee evaluates our executive compensation program with the goal of setting compensation at levels that are competitive with those of other companies in our industry and our region that compete with us for executive talent. Our executive compensation program consists of a base salary, an annual cash incentive component, and a long-term equity compensation component, including the grant of stock options and restricted stock that vest over multi-year periods or, in the case of our performance options, upon the achievement of four long-term goals. Base salaries are intended to establish the minimum or base-line competitive compensation level that sits beneath the variable compensation components. Through our cash bonus program, our executive compensation program ties a substantial portion of each executive's overall compensation to key strategic goals, typically including financial goals, competitive goals, and human strategy goals. Integrating these goals into our cash incentive program allows us to promote specific initiatives by directly linking success in these targeted goals with individuals' awards. In addition, we believe that the long-term equity compensation component of our executive compensation program helps to retain our executives and aligns their interests with those of our stockholders by allowing them to participate in the longer term success of our company as reflected in stock price appreciation. Role of the Compensation Consultant and Management and Peer Group Development

The compensation committee retains the consulting firm Radford, an Aon Hewitt company, to advise the committee in connection with the committee's determination of the appropriate peer group of companies against which it should compare its compensation practices, and the evaluation of base salaries, percentage bonus targets, and equity awards for our named executive officers. The compensation committee also consults with our chief executive officer in determining compensation packages of our other named executive officers.

As part of its engagement, Radford identifies a peer group of publicly traded companies that have business life cycles, revenues, market capitalizations, products, and number and capabilities of employees that are roughly comparable to ours and against which we compete for executive talent. In 2017, due to our stated plan to divest our infectious disease business and restructure the company to focus solely on the development of inclisiran, Radford proposed a peer group aligned with our business as it was currently constituted, which included the commercial stage infectious disease business, and a peer group based on a development stage focused organization, which reflected our planned divestiture of our infectious disease business. Upon our divestiture of the infectious disease business (which was prior to the compensation committee's 2018 compensation deliberations and decisions), the compensation committee used the

development stage focused peer group for 2018, which is reflected below. In particular, the development stage peer group selection criteria used in selecting the 2018 peer group consisted of companies that most closely met the following criteria:

industry focus, with targeted companies operating in the biopharmaceutical industry;

stage of operations, with targeted companies having clinical stage products;

market capitalization targeted from approximately 1/3x to approximately 3x our market value at the time of the compensation committee's evaluation; and

headcount targeted from approximately 1/3x to approximately 3x our headcount at the time of the compensation committee's evaluation.

When selecting the 2018 peer group, the compensation committee did not consider revenue as a peer group selection criterion due to our sole focus on the development asset, inclisiran.

The compensation committee, in conjunction with senior management, reviews the peer group presented by Radford to determine whether any adjustments to the composition of the group are needed, including evaluating historical and potential peer companies that fall outside one of the selection criteria, but are otherwise aligned with the selection criteria. As a result, our peer group may change from year-to-year. After the final determination of the peer group by the compensation committee, Radford analyzes the executive compensation programs of these companies, together with Radford's Global Life Sciences Survey and the SIRS Executive Compensation Survey, and provides the compensation committee with executive compensation data. We refer to the blend of the peer group data and the Radford composite survey data for each year as the market compensation data.

In November 2018, the compensation committee, working with Radford and our senior management, reviewed our peer group. As a result, the compensation committee adjusted the composition of the peer group by removing six companies that no longer fit our peer group profile and adding nine companies, Alder BioPharmaceuticals, Inc., Biohaven Pharmaceuticals Holding Company Ltd., Blueprint Medicines Corporation, Cara Therapeutics Inc., Deciphera Pharmaceuticals, Inc., Intra-Cellular Therapies Inc., MyoKardia, Inc., Rhythm Pharmaceuticals, Inc., and Zogenix, Inc., which fit our peer group profile. The compensation committee removed Alnylam Pharmaceuticals, Inc., Ionis Pharmaceuticals, Inc., Ironwood Pharmaceuticals Inc., Juno Therapeutics, Inc., Nektar Therapeutics, and Pacira Pharmaceuticals, Inc. because they no longer matched the selection criteria for our peer group. We refer to the companies that remain in, or were added to, the 2018 peer group as the 2019 peer group. The 2018 and 2019 peer groups are listed below.

2018 Peer Group

- Acceleron Pharma, Inc.
- Agios Pharmaceuticals Inc.
- Alnylam Pharmaceuticals, Inc.
- Amicus Therapeutics, Inc.
- Array BioPharma Inc.
- bluebird bio Inc.
- Esperion Therapeutics, Inc.
- Global Blood Therapeutics Inc.
- Intercept Pharmaceuticals, Inc.
- Ionis Pharmaceuticals, Inc.
- Ironwood Pharmaceuticals Inc.
- Juno Therapeutics, Inc.
- **Nektar Therapeutics**
- Pacira Pharmaceuticals, Inc.
- Sage Therapeutics
- Ultragenyx Pharmaceuticals Inc. •

2019 Peer Group

- Acceleron Pharma, Inc.
- Agios Pharmaceuticals Inc.
- Alder BioPharmaceuticals, Inc.
- Amicus Therapeutics, Inc.
- Array BioPharma Inc.
- Biohaven Pharmaceuticals Holding Company Ltd.
- bluebird bio Inc.
- **Blueprint Medicines Corporation**
- Cara Therapeutics Inc.
- Deciphera Pharmaceuticals, Inc.
- Esperion Therapeutics, Inc.
- Global Blood Therapeutics Inc.
- Intercept Pharmaceuticals, Inc.
- Intra-Cellular Therapies Inc.
- MyoKardia, Inc.
- Rhythm Pharmaceuticals, Inc.
- Sage Therapeutics
- Ultragenyx Pharmaceuticals Inc.
- Zogenix, Inc.

We compete with many other companies for executive personnel. Accordingly, the compensation committee generally targets base salary and target total cash compensation, including base salary and target bonus, for executives at the 50th percentile of compensation paid to similarly situated executives based on the market compensation data. The compensation committee generally targets equity compensation for executives at the 50th percentile of equity compensation paid to similarly situated executives based on the market compensation data. The compensation committee may vary these general targets with respect to executives based on the job responsibilities, experience, and performance levels of the individuals and overall company performance.

Components of our Executive Compensation Program

The primary elements of our executive compensation program are:

- •base salary;
- •annual cash bonus;
- •equity awards, including stock option and restricted stock awards;
- •health and life insurance and other employee benefits; and
- •severance and change-of-control benefits.

In addition, from time to time, we make new hire awards and utilize special bonus programs as part of our executive compensation program. In 2018, Mr. Timney received a new hire equity award and cash sign-on bonus upon his commencement of employment but no special bonus program was instituted during the year.

We do not have any formal or informal policy or target for allocating compensation between long-term and short-term compensation, between cash and non-cash compensation or among the different forms of non-cash compensation. Instead, the compensation committee, after reviewing information provided by Radford, determines what it believes to be the appropriate level and mix of the various compensation components within the targeted percentiles for overall cash and equity compensation.

Base Salary. The compensation committee uses base salary to recognize the experience, skills, knowledge, and responsibilities required of all our employees, including our executives. Base salaries of our named executive officers are reviewed at least annually by the compensation committee. The compensation committee will also adjust base salaries as warranted throughout the year for promotions, changes in market compensation that it may become aware of, or other changes in the scope or breadth of an executive's role or responsibilities. Each year, the compensation committee, after consulting with Radford and certain members of our senior management, determines a baseline merit increase percentage, if any, for all employees. No baseline merit increases were given in 2018, as all employee base salaries remained at their 2017 levels, except for any adjustments for promotions or certain reductions to executive officers. Historically, during the compensation committee's review of each named executive officer's salary, the baseline merit increase percentage is then considered for adjustment based on the executive's success in meeting or exceeding individual performance objectives, promoting our core values and demonstrating leadership abilities. In addition, in previous years the compensation committee considered adjustments from time-to-time to realign salaries with market levels competitive with the 50th percentile of base salaries offered for positions comparable to those held by our named executive officers, as adjusted to reflect individual responsibilities, performance, and experience, based on the market compensation data.

In February 2018, with respect to 2018 base salaries, the compensation committee decided to leave base salaries unchanged for named executive officers other than Dr. Meanwell and Mr. Rodin. While Radford did not recommend compensation reductions for our executive officers, in light of the 2018 peer group analysis, our management recommended base salary reductions for Dr. Meanwell and Mr. Rodin. Based on management's recommendation, the compensation committee approved a reduction in Dr. Meanwell's and Mr. Rodin's base salaries by 24.5% and 4.6%, respectively. In February 2019, with respect to 2019 base salaries, the compensation committee decided to leave base salaries unchanged for all employees, including named executive officers.

The following table presents each named executive officer's 2017 and 2018 base salary and the percentage change in base salary between the periods:

		Percent
		Change
2017 Salary	2018 Salary	from
		2017 to
		2018
_	\$600,000	_
\$375,000	\$375,000	_
\$500,000	\$500,000	_
\$896,447	\$677,000	(24.5)%
\$476,625	\$476,625	_
\$471,750	\$450,000	(4.6)%
	\$375,000 \$500,000 \$896,447 \$476,625	\$375,000 \$375,000 \$500,000 \$500,000 \$896,447 \$677,000 \$476,625 \$476,625

- (1) Mr. Timney was appointed our chief executive officer on December 10, 2018, replacing Dr. Meanwell who now serves as our chief innovation officer.
- Mr. Visioli was appointed our chief financial officer on March 21, 2018, replacing Mr. O'Connor, who remained with the company as a special advisor to the chief executive officer on a full-time basis through June 30, 2018 and on a part-time basis thereafter until his departure from the company on December 31, 2018. Mr. O'Connor's salary was pro-rated while he was a part-time employee.

Annual Cash Bonus Plan. We have an annual cash bonus plan that covers all of our employees, including our named executive officers. The annual cash bonus plan is intended to motivate our named executive officers to work toward the achievement of company strategic, operational and financial goals, and to reward our named executive officers when their efforts result in success for the company. The compensation committee approves goals for each year and determines potential total bonus amounts based on achievement of those goals.

Bonus targets under the annual cash bonus plan are calculated as a percentage of the applicable named executive officer's base salary. For 2017, Dr. Meanwell's bonus target percentage was 100% of his base salary, Messrs. O'Connor, Cox, and Rodin's bonus target percentages were 60% of their respective base salaries, and Mr. Visioli's bonus target percentage was 40% of his base salary. While Radford did not recommend compensation reductions for our executive officers, in light of the 2018 peer group analysis, our management recommended bonus target reductions for Dr. Meanwell and Mr. Rodin. Based on management's recommendation, the compensation committee approved a reduction of Dr. Meanwell's and Mr. Rodin's bonus target percentages to 70% and 45%, respectively, of their base salaries for 2018. In addition, Mr. O'Connor's

bonus target was reduced to 45% following his retirement as chief financial officer of the company. Mr. Timney's bonus percentage is 65% of his base salary, but he was not eligible for a 2018 bonus under our annual cash bonus plan as he did not commence employment with the company until December 2018. In February 2019, with respect to 2019 bonus targets, the compensation committee decided to leave bonus target percentages unchanged for the named executive officers. The table below presents the effect of the bonus target reductions for Dr. Meanwell and Messrs. O'Connor and Rodin, together with base salary reductions discussed above, on their respective total target cash compensation from 2017 to 2018:

Named Executive	2017 Total Cash	2018 Total Cash	Change in Total Cash
Officer	Compensation Target(1)	Compensation Target(2)	Compensation Target (%)
Clive Meanwell	\$1,792,894	\$1,150,900	(35.8)%
William O'Connor	\$762,600	\$691,106	(9.4)%
Stephen Rodin	\$754,800	\$652,500	(13.6)%

- This column represents the annual base salary and bonus target amount for Dr. Meanwell and Messrs. O'Connor and Rodin for 2017.
- This column represents the annual base salary and bonus target amount for Dr. Meanwell and Messrs. O'Connor and Rodin for 2018; see below for their actual 2018 cash bonus payout.

Corporate Goals. The corporate goals adopted by the compensation committee generally conform to the financial metrics contained in the internal business plan adopted by our board of directors, as well as to certain operational goals. The compensation committee works with the chief executive officer to develop corporate goals that they believe are challenging but can be reasonably achieved over the year. The corporate goals for 2018 were collectively allocated a corporate goal value of 100 points, with the corporate goal award value for "financial goals" collectively representing 30 points, "competitive goals" collectively representing 55 points, and a "human strategy goal" representing 15 points.

In setting the company bonus factor, the compensation committee retains the discretion to give more or less credit for corporate goals and to give credit for our overall annual performance and our achievement of additional accomplishments during the fiscal year that were not contemplated by the approved corporate goals. In such event, the corporate goal award values for a specific goal may be adjusted and award values for additional achievements may be added to the total possible corporate goal award values. The company bonus factor may reflect the discretion of the compensation committee.

Under the annual cash bonus plan, if we achieve the target performance level of each corporate goal, then the corporate goal award value credited would equal 100 out of a total target of 100 and the company bonus factor would be 100%. For 2018, the company bonus factor could range from 0% to 150% based on the level of achievement of the corporate goals. When calculating cash bonuses, the actually determined company bonus factor for the year is multiplied by each named executive officer's cash bonus target.

Bonus Determinations. In February 2019, the compensation committee evaluated our 2018 actual performance against our 2018 corporate goals. The following table sets out our 2018 corporate goals, the weighting for each goal, the achievement percentage as determined by the compensation committee in February 2019, and the resulting award value:

Corporate Goal	Wei	ght	Result	Award Value
Financial	30	%		
Perform operations on budget - Inclisiran R&D \$152.2M G&A \$35.5M Restructuring \$52.2M (total ≤\$240M), maintain cash balance ≥\$42 million at December 31, 2018 (assuming financing activities)		%	Met (100%) - Inclisiran R&D \$141.0M vs. \$152.2M - G&A \$34.9M vs. \$35.5M - Restructuring \$42.6M vs. \$52.2M - Cash balance at December 31, 2018 of \$80M vs. \$42M excluding financing activities	10
Divest remaining business elements - divest, shut-down, or spin out Angiomax, the preclinical infectious disease program and Ionsys without net cash burn	10	%	Met (100%) - over \$2.6 million of cash flow from divestitures of Angiomax and preclinical infectious disease program and Ionsys shutdown with no net cash burn	10
Monetize Melinta assets (stock and royalty streams)	10	%	Did not meet (0%) - royalty monetization or stock sale not completed in 2018	0
Competitive Manage pre-clinical inclisiran projects efficiently - non-clinical activities completed and off development critical path on budget	552.5	%	Met (100%) - all non-clinical activities completed on time and on budget. Non-clinical activities remained off the critical path during 2018	2.5
Complete enrollment of ORION-9, ORION-10, and ORION-11 by mid-year - meeting all patient enrollment criteria targets on budget	27.5	5 %	Exceeded (120%) - enrollment of ORION-9, ORION-10, and ORION-11 were each completed ahead of schedule and on budget	33
Manage inclisiran manufacturing development keep manufacturing off development critical path and on budget; improve cost of goods to certain levels	15	%	Exceeded (110%) - CMC activities completed on time and within budget and kept off critical path. Several opportunities identified and created to potentially achieve cost of goods reductions earlier and more aggressively versus the base plan	16.5
Initiate inclisiran cardiovascular outcomes trial enrollment - secure regulatory approvals in the US and EU with first patient enrolled by June 30, 2018	5	%	Partially met (75%) - US and EU approvals secured; first patient enrolled in October 2018 (but does not impact our ability to meet overall recruitment completion goal by end of 2019)	3.8
Create strategic go-to-market analysis and plan - plan presented to Board in May 2018 and for approval by end-year 2018	1 5	%	Partially met (75%) - go-to-market plan presented mid-year; plan not approved by year end	3.8
Human Strategy	15	%		
Restructure and reshape to agile organization - Key leaders in place headcount 60	15	%	Exceeded (110%) - reduced headcount from 351 to 60 or less; all key leaders in place by end of Q2 2018 and total headcount 60	16.5
restructured company being focused on and dire	ectly base youts	dual alig d en to o	achievements in 2018, due to all employees of the ned to the company goals, the compensation committeen tirely on corporate goal achievement. The 96% compour named executive officers:	

	Named Executive Officer	2019 Colomy	2018 Bonus	2018	2018 Actual Bonus
Named Executive Officer		2016 Salary	Target (%)	Bonus Target (\$)	Payment (1)
	Mark Timney	\$600,000	65%	\$390,000	_
	Christopher Visioli	\$375,000	40%	\$150,000	\$144,000
	Christopher Cox(2)	\$500,000	60%	\$300,000	_
	Clive Meanwell	\$677,000	70%	\$473,900	\$454,944
	William O'Connor(3)	\$387,258	45%	\$174,266	\$167,295

Stephen Rodin \$450,000 45% \$202,500 \$194,400

- (1) This column represents the actual cash bonus payment made to our named executive officers. For 2018, named executive officers' bonus amounts were determined based entirely on corporate goal achievement.
 - Mr. Cox departed the company March 15, 2019. As part of discussions regarding his departure, Mr. Cox agreed to
- (2) forgo his 2018 bonus in exchange for other compensation. See section "—Potential Payments Upon Termination or Change of Control".
- Mr. O'Connor retired as our chief financial officer March 21, 2018 but remained with the company as a special advisor to the chief executive officer on a full-time basis through June 30, 2018 and on a part-time basis thereafter until his departure from the company on December 31, 2018. Mr. O'Connor's 2018 salary was \$476,200, but his salary was pro-rated while he was a part-time employee.

Stock Option and Restricted Stock Awards. Our equity award program is the primary vehicle for offering long-term incentives to our executives, including our named executive officers. We believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture, and help to align the interests of our named executive officers and our stockholders. Equity grants are intended as both a reward for contributing to the long-term success of our company and an incentive for future performance. We have historically only granted equity with time-based vesting, which is intended to further our goal of executive retention by providing an incentive to our named executive officers to remain in our employ during the vesting period. In April 2018, our board of directors approved performance option grants to our employees, including our named executive officers, to align compensation to the strategic focus of our company. Under the grant agreements, vesting is contingent on our achievement of four long-term goals that we believe, if achieved, will maximize shareholder value. In determining the size of equity grants to our executives, our compensation committee considers comparable equity awards received by executives in our peer group, our company-level performance, the applicable executive's performance, the amount of equity previously awarded to the executive, the vesting schedule of such previous awards, and the recommendations of management and consultants to the compensation committee. All of the equity grants to our named executive officers are approved by the compensation committee or the board. Historically, annual equity awards to our named executive officers were typically granted in conjunction with the annual review of their individual performance. This review typically occurred at the regularly scheduled meeting of the compensation committee held in the first quarter of each year. This allowed the compensation committee to receive audited financial statements for the previous year prior to making award determinations. However, in 2018, the compensation committee did not grant equity awards in respect of the 2017 performance of employees, including our named executive officers. Instead of the traditional annual equity award, the compensation committee approved a forward-looking equity award grant program comprised primarily of performance options tied to the achievement of key corporate milestones over the next three years, which aligns compensation to the strategic direction of our company. This program was implemented for the 57 employees that remained with the company when our announced restructuring was completed.

The 2018 equity award program was determined by the compensation committee in discussions with Radford and the full board and following a careful analysis of annual equity award practices by companies in the 2018 peer group. The equity award program consists of:

restricted stock, effective as of March 1, 2018, as a smaller, initial grant to employees of the restructured company; and

performance option awards, effective April 24, 2018, as a significant grant tied to key company goals over the next three years.

Our performance option grants vest upon achievement of goals set by the board in March 2018. Forty percent of the performance options vest based on the timing of the approval of inclisiran in the United States, 20% of the performance options vest based on the timing of the approval of inclisiran in Europe, 20% of the performance options vest based on key manufacturing cost metrics and 20% of the performance options vest based on the timing of the completion of enrollment in our cardiovascular outcomes trial. In certain circumstances, if a performance optionholder remains employed with us through June 30, 2020, and is subsequently terminated, he or she will remain eligible for

vesting in any performance options that have not been forfeited as of the termination date if the performance goals are achieved. Restricted shares vest in annual increments of 25% over a period of four years, commencing on the first anniversary of the date of grant.

As part of the approved equity program discussed above, in the first half of 2018, the compensation committee approved the following restricted stock and performance option awards to our named executive officers. Mr. O'Connor was not eligible for the grants made in 2018 since he retired as chief financial officer in March 2018 and was not considered a member of the restructured company.

	Number of	Number of
	Shares	Shares
Named Executive Officer	Underlying	of
	Performance	Restricted
	Options*	Stock**
Mark Timney	_	
Christopher Visioli	120,000	4,167
Christopher Cox	150,000	15,000
Clive Meanwell	585,000	22,589
William O'Connor		
Stephen Rodin	120,000	6,250
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^{*}Effective date of April 24, 2018.

^{**}Effective date of March 1, 2018 for Messrs. Visioli, Cox and Rodin; April 24, 2018 for Dr. Meanwell.

Although Mr. Timney was not awarded an equity award in 2018 as part of the equity program described above because his appointment as our chief executive officer did not commence until December 10, 2018, he did receive a new hire equity award on December 10, 2018, in the form of (i) a stock option to purchase 450,000 shares of our common stock, at an exercise price of \$20.79 per share, that vests as to 25% on December 10, 2019, and then in 36 equal monthly installments thereafter, and (ii) a performance stock option to purchase 550,000 shares of our common stock, subject to the same performance metrics as the 2018 performance option grants to the other named executive officers described above.

In February 2019, based on discussions with Radford, the compensation committee decided to grant all stock options with time-based vesting over a four-year period in equal monthly installments, instead of a stock option and restricted stock mix, to our named executive officers for their respective performances in 2018. In determining these stock option awards, the compensation committee analyzed this data comparing the value of the options granted by companies represented in the 2018 market compensation data and the size of the equity grants as a percentage of the overall ownership of those companies. In February 2019, the compensation committee approved the following stock option awards to our named executive officers for 2018, to be effective as of March 1, 2019.

Named Executive Officer	Number of Shares Underlying Options
Mark Timney(1)	_
Christopher Visioli	65,000
Christopher Cox(2)	_
Clive Meanwell	95,000
William O'Connor(2)	
Stephen Rodin	65,000
	. 1 1

- (1) Mr. Timney was appointed chief executive officer on December 10, 2018 and was not eligible for a 2019 equity award in respect of 2018 performance.
- (2) Messrs. Cox and O'Connor departed the company on March 15, 2019 and December 31, 2018, respectively, and were not eligible for a 2019 equity award in respect of 2018 performance. As part of discussions regarding his departure, Mr. Cox agreed to forgo his 2019 equity award in exchange for other compensation. See the discussion under "——Potential Payments Upon Termination or Change of Control," below.

Executive Stock Ownership and Share Retention Guidelines. We have adopted executive stock ownership guidelines to help ensure that our executives each maintain an equity stake in the company, and by doing so, appropriately link their interests with those of our other stockholders. These guidelines require our chief executive officer to own shares of our common stock with a value equal to six times (6x) his base salary and each other named executive officer to own shares of our common stock with a value equal to one times (1x) his respective base salary, as calculated under our policy. Our named executive officers are required to retain 50% of net after tax shares obtained via the vesting of any full-value stock award until the named executive officer meets our prescribed ownership guidelines. Common stock of the company held by the executive (whether acquired through the exercise of an option, the settlement of an equity award, through an employee benefit plan or otherwise) is counted toward the guideline. Unvested equity awards and unexercised stock options are not counted toward the guideline. To be in compliance, the executive must hold the lesser of: (1) the number of shares needed to equal the designated value based on the company's then-current prior 30-day closing price or (2) the number of shares needed to equal the designated value based on the company's prior 30-day closing price at the time the executive initially became subject to the guidelines. Executives have a five-year period from the date on which they become subject to the guidelines to acquire the required shares.

These guidelines are in addition to our non-employee director stock ownership guidelines described in "Information About Corporate Governance—Compensation of Directors" above.

Associate Retirement Stock Policy. If an employee voluntarily retires at or after age 60 and has at least 10 years of service to the company, any stock options granted to the employee as an annual award would remain exercisable until the earlier of three years following the termination of service or the expiration of the options' original 10-year term.

Benefits and Other Compensation. We maintain broad-based benefits that are provided to all employees, including health and dental insurance, life and disability insurance, and a 401(k) plan. Named executive officers are eligible to participate in all of our employee benefit plans, in each case on the same basis as other employees. We make matching contributions of 50% of an employee's contributions under our 401(k) plan up to a maximum of 6% of an employee's eligible earnings.

Perquisites. We limit the perquisites that we make available to our named executive officers. Generally, named executive officers are not entitled to any benefits that are not otherwise available to all of our employees. For example, we do not provide pension arrangements, post-retirement health coverage, or similar benefits to our named executive officers or our employees. Similarly, our health and insurance plans are the same for all employees. We may from time to time reimburse moving, travel, and housing expenses for our named executive officers that we require to relocate during the course of performing services for us.

Severance and Change-of-Control Benefits. Pursuant to severance agreements we have entered into with each of our named executive officers, and the provisions of our amended and restated 2004 stock incentive plan (the "2004 plan") and our 2013 plan, our executives are

entitled to specified benefits in the event of the termination of their employment under specified circumstances, including termination following a change of control of our company. We have provided more detailed information about these benefits, along with estimates of their value under various circumstances, under the captions "—Employment Agreements" and "—Potential Payments Upon Termination or Change in Control" below. We believe providing these benefits help us compete for executive talent and that our severance and change-of-control benefits are generally comparable to severance packages offered to executives by the companies in our peer groups.

Our practice has been to structure change-of-control benefits as "double trigger" benefits. In other words, the change of control does not itself trigger benefits; rather, benefits are paid only if, during a one-year period after the change of control, the executive's employment is terminated by us or our successor without "cause," or by the executive for "good reason", as each is defined in the severance agreements. We believe a "double trigger" maximizes stockholder value because it avoids an unintended windfall to executives in the event of a friendly change of control, while still providing executives appropriate incentives to cooperate in negotiating any potential change of control in which they believe they may lose their jobs.

Employment Agreements

Mr. Timney serves as our chief executive officer pursuant to the terms of an employment agreement, dated December 10, 2018. The initial term of the agreement is through December 31, 2021, and renews automatically on a yearly basis unless either party provides written notice of non-renewal at least 90 days prior to the expiration of the then-current term. The agreement provides Mr. Timney an annual base salary of \$600,000, subject to upward adjustment in the discretion of our board, and eligibility to receive an annual cash bonus targeted at 65% of his annual base salary, subject to meeting company and personal performance goals determined at the discretion of our board. Mr. Timney must consent to any downward adjustment to his annual base salary or annual cash bonus target. In addition to the new hire equity grant described above, the employment agreement also provided Mr. Timney with a cash sign-on bonus of \$50,000 both as a hiring inducement and to assist him with relocation expenses to the Parsippany. New Jersey area (which is subject to repayment if Mr. Timney is terminated by us for cause or resigns without good reason within the first two years of the agreement's term). The agreement provides for the payment of accrued rights upon a termination and, except upon a termination for cause, the payment of any bonus earned but not yet paid prior to the termination date. In the event of a termination by the company without cause or Mr. Timney with good reason, Mr. Timney will be entitled to any payments or benefits provided pursuant to the provisions of the severance agreement between the company and Mr. Timney described under the caption "-Potential Payments Upon Termination or Change in Control" below. Pursuant to a noncompetition agreement, Mr. Timney has agreed not to compete with us during the term of his employment and for a period of one year after his termination.

Dr. Meanwell serves currently as our chief innovation officer and served as our chief executive officer pursuant to the terms of an employment agreement, which was amended on May 26, 2016 and November 14, 2017. The initial term of the agreement was through December 31, 2016, and renews automatically on a yearly basis unless either party provides written notice of non-renewal at least 90 days prior to the expiration of the then-current term. The agreement provides Dr. Meanwell an annual base salary of \$896,447, subject to upward adjustment in the discretion of our board, and eligibility to receive an annual cash bonus targeted at 100% of his annual base salary, subject to meeting company and personal performance goals determined at the discretion of our board. Dr. Meanwell must consent to any downward adjustment to his annual base salary or annual cash bonus target. In February 2018, Dr. Meanwell agreed to a reduction of his base salary to \$677,000 and his annual cash bonus target to 70% of his annual base salary. The agreement provides for the payment of accrued rights upon a termination and, except upon a termination for cause, the payment of any bonus earned but not yet paid prior to the termination date. In the event of a termination by the company without cause or Dr. Meanwell with good reason, Dr. Meanwell will be entitled to any payments or benefits provided pursuant to the provisions of the severance agreement between the company and Dr. Meanwell described under the caption "—Potential Payments Upon Termination or Change in Control" below. Pursuant to a noncompetition agreement, Dr. Meanwell has agreed not to compete with us during the term of his employment and for a period of one year after his termination.

Messrs. Visioli and Rodin do not have employment agreements with the company. They have each entered into a noncompetition agreement, pursuant to which each has agreed not to compete with us during the term of his

employment and for a period of one year after his termination. Mr. Cox departed the company on March 15, 2019 and Mr. O'Connor departed the company on December 31, 2018, but neither had an employment agreement with us. We have also entered into severance agreements with each of our named executive officers as described below in the section "—Potential Payments Upon Termination or Change in Control" below.

Each of our named executive officers is also entitled to indemnification by the company pursuant to an indemnification agreements entered into between the company and such officer.

Tax and Accounting Considerations

Section 162(m) of the Code generally disallows a tax deduction to any public company for compensation paid to certain "covered employees" in a taxable year to the extent that compensation to each covered employee exceeds \$1.0 million. For taxable years ending December 31, 2017 and earlier, "covered employees" generally referred to a company's chief executive officer and certain other named executive officers (other than its chief financial officer) in the year that the compensation was paid. Compensation paid to "covered employees" was historically not subject to this deduction limitation if it was considered "qualified performance-based compensation" within the meaning of Section 162(m) of the Code.

The exemption from Section 162(m)'s deduction limitation for "qualified performance-based compensation" has been repealed by the Tax Cuts and Jobs Act, effective for taxable years beginning after December 31, 2017, such that compensation paid to our covered executive officers in excess of \$1.0 million will not be deductible unless it qualifies for transition relief applicable to certain arrangements in place as of November 2, 2017 (the scope of which is uncertain under the legislation). In addition, beginning with taxable years beginning after December 31, 2017, "covered employees" generally was expanded to include our chief financial officer; also, each individual who is a covered employee for any taxable year beginning after December 31, 2016 will remain a covered employee for all future years. The compensation committee periodically reviews the potential consequences of Section 162(m) of the Code on executive compensation and will monitor changes in the tax laws, particularly in light of the recent changes to 162(m) of the Code. The compensation committee may and does, in its judgment, authorize compensation payments that are not deductible under Section 162(m) of the Code. Although the compensation committee does consider the deductibility of executive compensation when designing our executive compensation programs, it is only one factor that the compensation committee takes into account, and the compensation committee believes that it is necessary to retain flexibility to provide compensation that will attract, retain, and motivate our executives - including our named executive officers - even if such compensation is not tax deductible.

In addition, in determining the size and type of equity awards, the compensation committee also considered the potential impact of FASB ASC Topic 718.

Compensation Committee Report

The Compensation Committee of the Board of Directors has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussions, the Compensation Committee recommended to the Board of Directors that the Compensation Discussion and Analysis be included in this proxy statement on Schedule 14A.

By the Compensation Committee of the Board of Directors

Paris Panayiotopoulos (Chair) Alexander J. Denner Sarah J. Schlesinger

Our Current Executive Officers

Below is information about each of our executive officers other than Mark Timney, our chief executive officer, and Clive Meanwell, our chief innovation officer (whose respective biographies are listed with other members of our board of directors under the caption "Proposal One: Election of Directors"). The information below includes each officer's age as of April 1, 2019, his position with us, the length of time he has held each position and his business experience for at least the past five years and his education. Our board of directors elects our officers annually, and officers serve until they resign or we or our board terminate their position. There are no family relationships among any of our directors, nominees for director and executive officers.

STEPHEN M. RODIN

Age: 43

Steve Rodin has been our general counsel and secretary since March 2014. He also served as our deputy general counsel from March 2010 to March 2014 and associate general counsel from October 2007 to March 2010. Prior to October 2007, Mr. Rodin was an attorney at the law firm of Proskauer Rose LLP in New York where his practice focused on corporate, commercial and securities law. Mr. Rodin received an A.B. from Georgetown University and a J.D. from Vanderbilt University Law School.

CHRISTOPHER J. VISIOLI

Age: 43

Chris Visioli has been our chief financial officer and treasurer since March 2018. He previously served as our senior vice president, financial strategy from January 2015 to March 2018 and our vice president, cardiovascular care from January 2013 to December 2014. Mr. Visioli joined us in June 2003 and has worked in a variety of leadership roles in the organization, including finance, business development, investor relations, strategy, planning, and business leadership of the cardiovascular care unit. He has led many efforts in the organization to acquire products and establish partnerships in addition to leading long-term strategy and financial planning work. Prior to joining us and before going to business

school, Mr. Visioli was a management consultant for Ernst & Young LLP. Mr. Visioli received a BS in electrical engineering from Cornell University and an MBA from Columbia Business School.

Compensation of Our Named Executive Officers

The tables below present information about the compensation of our named executive officers for the year ended December 31, 2018.

2018 Summary Compensation Table

The following table presents a summary of the total annual compensation awarded to, earned by or paid to each of our named executive officers for the year ended December 31, 2018 and each of the previous two fiscal years to the extent the named executive officer was a named executive officer for such prior year.

Non-Equity

						Non-Equit	L y	
Name and Principal Position	Year	Salary (\$)	Bonus (\$) (1)	Awards	Option S Awards	Incentive Plan	Compensa	Total ation (\$)
		(4)	(Ψ) (1)	(\$)(2)	(\$)(2)	Compens-(\$)(3)	a (\$) (4)	(Ψ)
	2018	\$36,538	\$50,000		\$8,637,505		_	\$8,724,043
Mark Timney								
Chief Executive Officer(5)								
		\$375,000			36 1,430,076		\$9,050	\$2,096,762
Christopher Visioli		\$320,000			1\$314,193	\$112,640	\$8,658	\$890,509
Chief Financial Officer(6)	2016	\$320,000	\$75,000	\$138,63	3 \$ 286,015	\$139,674	\$8,658	\$967,983
Christopher Cox	2018	\$500,000	_	\$499,05	56 1,787,595	_	\$10,044	\$2,796,689
Former Chief Corporate	2017	\$500,000		\$600,04	1\$ 1,396,383	\$258,000	\$9,744	\$2,764,169
Development Officer(7)	2016	\$422,436	\$100,000	_	\$3,500,009	\$266,993	\$9,445	\$4,298,883
	2018	\$750,149		\$655.30	0\$6,971,621	\$454 944	\$4,934	\$8,836,955
Clive Meanwell		\$896,447			0\$24,189,111		\$5,148	\$7,607,885
Chief Innovation Officer(5)		\$896,447			0\$136,450,640		\$2,935	\$6,703,456
	2010	¢207.250				¢167.010	\$760 5 07	¢1 222 965
William O'Connor		\$387,258			— 1 6 077 450	\$167,010	\$769,597	
Former Chief Financial Officer(6)		\$476,625			19977,458	\$245,939	\$11,304	\$2,131,345
. ,	2016	\$465,000	\$100,000	\$240,00)\$552,100	\$287,203	\$11,164	\$1,655,470
Stephen Rodin	2018	\$453,625	_	\$207,93	3 \$ 1,430,076	\$194,400	\$9,030	\$2,295,069
General Counsel and Secretary	2017	\$471,750		\$300,02	2\$837,830	\$243,423	\$8,730	\$1,921,779
Ocheral Counsel and Secretary	2016	\$425,000	\$100,000	\$240,00	\$552,100	\$264,792	\$8,632	\$1,590,527
The emounts remarkant never ent o	f (;) a	¢50 000 ac	ah aian ar	. h	anid to Mr. T	'immarrin a	annaatian .	ruith his

The amounts represent payment of (i) a \$50,000 cash sign-on bonus paid to Mr. Timney in connection with his

These amounts represent the grant date fair value of equity-based awards granted by us during the applicable year,

These amounts represent the payouts under our annual cash bonus plan, which is described under the (3) "—Compensation Discussion and Analysis" section above.

⁽¹⁾ commencement of employment with us, and (ii) special transaction bonuses for extraordinary efforts in 2016 in connection with transactions by the company.

determined in accordance with FASB ASC Topic 718. For a detailed discussion of our grant date fair value calculation methodology, including assumptions and estimates inherent therein, please see Note 10 to our notes to our consolidated financial statements in our Annual Report on Form 10-K filed on February 27, 2019.

⁽⁴⁾ These amounts include life insurance premium payments and, for Messrs. Cox, O'Connor, Rodin, and Visioli, 401(k) match payments, made by us on behalf of the named executive officer for his benefit. For. Mr. O'Connor,

the amount for fiscal 2018 also includes the cash severance payments (\$714,938), payment of accrued vacation, and COBRA continuation benefits (\$38,990) that he became entitled to under his severance agreement with us upon his departure on December 31, 2018.

- (5) Mr. Timney was appointed our chief executive officer on December 10, 2018, replacing Dr. Meanwell who now serves as our chief innovation officer.
- (6) Mr. Visioli was appointed our chief financial officer on March 21, 2018, replacing Mr. O'Connor, who remained with the company as a special advisor to the chief executive officer through 2018.
- (7)Mr. Cox separated from the company on March 15, 2019.

Grants of Plan-Based Awards

The following table summarizes information regarding non-equity incentive payouts and restricted stock awards and options granted to each of our named executive officers during the year ended December 31, 2018.

Estimated Possible Payouts Under Non-Equity Incentive Plan Awards

			I Iuli I I Wuli	as					
Name	Approval Date	Grant Date	Thaeghold	Maximum (\$)	All Other Stock Awards: Number of Shares of Stock or Units (#)		All Other Option Awards: Number of Securities Underlying Options (#)	(%/\\n)()	Grant Date Fair Value of Stock and Option Awards (\$)(2)
Mark Timney		12/10/2018 12/10/2018			(#)		450,000 550,000	(3)\$ 20.79 (4)\$ 20.79	\$3,879,015 \$4,758,490
Christopher Visioli	4/24/2018 2/20/2018 —	4/24/2018 3/1/2018 —	\$ 150,000	\$225,000	4,167	(5)	120,000	(4)\$ 29.01	\$1,430,076 \$138,636
Christopher Cox	4/24/2018 2/20/2018 —	4/24/2018 3/1/2018 —	-\$300,000	\$450,000	15,000	(5)	150,000	(4)\$ 29.01	\$1,787,595 \$499,050
Clive Meanwell	4/24/2018 4/24/2018 —	4/24/2018 4/24/2018 —	\$ 473,900	\$710,850	22,589	(5)	585,000	(4)\$ 29.01	\$6,971,621 \$655,307
William O'Connor	_	_	\$ 174,266	\$261,399					
Stephen Rodin	4/24/2018 4/24/2018	4/24/2018 3/1/2018	\$ 202,500	\$303,750	6,250	(5)	120,000	(4)\$ 29.01	\$1,430,076 \$207,938

The per-share exercise price of each stock option award is equal to the closing price of our common stock on the grant date reported by The NASDAQ Global Select Market.

The options vest as to 25% on December 10, 2019 and in 36 equal monthly installments thereafter. The options are

⁽²⁾ Grant date fair value computed in accordance with FASB ASC Topic 718.

⁽³⁾ subject to accelerated vesting upon a termination without "cause" or a resignation for "good reason", as each is defined in our severance agreements. See "—Potential Payments Upon Termination or Change of Control."

⁽⁴⁾ These performance option grants become exercisable upon our achievement of four long-term goals that are tied to key company goals over the next three years. The options are subject to accelerated vesting upon a termination after a change-in-control. See "—Compensation Discussion and Analysis—Components of our Executive Compensation Program" and "—Potential Payments Upon Termination or Change of Control." No more than 100%

of the number of performance options granted can vest, and there is no specific "threshold" amount of options that may vest.

The shares of restricted stock vest in annual increments of 25% over four years commencing on the first anniversary of the date of grant. The restricted stock awards are subject to accelerated vesting upon a termination without "cause" or a resignation for "good reason," as each is defined in our severance agreements. See "—Potential Payments Upon Termination or Change of Control."

Outstanding Equity Awards at Fiscal Year-End

The following tables provide information on holdings of stock option awards and stock awards as of December 31, 2018 by our named executive officers. Each equity grant is shown separately for each named executive officer.

	Option A	Awards				Stock Awards		
Name	Underly Unexerc	Number of essecurities in the desired in the desire	e	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock that Have Not Vested (\$)(1)	
Mark Timney		450,000 550,000	(2) (3)	\$ 20.79 \$ 20.79	12/9/2028 12/9/2028			
Christopher Visioli	6,000 6,635 1,441 3,477 4,063 15,250 8,236 6,917		(4) (5) (6)	\$ 17.45 \$ 22.04 \$ 31.49 \$ 30.55 \$ 28.77 \$ 28.77 \$ 33.04 \$ 52.70 \$ 29.01	2/17/2021 2/23/2022 2/28/2023 2/28/2024 2/28/2025 2/28/2025 2/28/2026 2/28/2027 4/23/2028	1,134 (9 1,921 (1)\$3,981)\$21,705 0)\$36,768 1)\$79,756	
Christopher Cox	214,062 30,741	88,143 39,524 150,000	(6)	\$ 32.49 \$ 52.70 \$ 29.01	2/24/2026 2/28/2027 4/23/2028	8.539 (1	0)\$163,436	
Clive Meanwell	60,000 15,620 240,000 150,000 64,568 131,483 219,727	_ _ _	(4)	\$ 7.31 \$ 13.54 \$ 17.45 \$ 22.04 \$ 31.49 \$ 30.55 \$ 28.77	2/19/2020 12/7/2020 2/18/2021 2/24/2022 2/28/2023 2/29/2024 2/28/2025		1)\$287,100	

	204,721 92,222	93,055 118,571 585,000	(5) \$ 33.04 (6) \$ 52.70 (3) \$ 29.01	2/28/2026 2/28/2027 4/23/2028	9,775 (8)\$187,094 22,700(9)\$434,478 25,617(10)\$490,309 22,589(11)\$432,353
William O'Connor					
	448	_	\$ 31.49	2/28/2023	
	6,705		\$ 30.55	2/29/2024	
	27,833	1,855	(4) \$ 28.77	2/28/2025	
	32,755	14,889	(5) \$33.04	2/28/2026	
	21,518	27,667	(6) \$52.70	2/28/2027	
					1,238 (8)\$23,695

3,632(9)\$69,516 5,978(10)\$114,419

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Stephen Rodin 5,000 —
                               $8.38 8/3/2019
             7,500 —
                               $7.31 2/19/2020
              10,000 —
                               $13.57 12/1/2020
             7,500 —
                               $17.45 2/18/2021
             3,516 —
                               $22.04 2/24/2022
             2,196 —
                               $31.49 2/28/2023
             3,582 —
                               $30.55 2/29/2024
             40,000 —
                               $30.07 3/2/2024
             4,688 312
                           (4) $28.77 2/28/2025
             32,755 14,889 (5) $33.04 2/28/2026
              18,445 23,714 (6) $52.70 2/28/2027
                    120,000(3) $29.01 4/23/2028
                                                208 (8)$3,981
                                                3,632(9)$69,516
                                                5,124(10)$98,073
                                                6,250(11)119,625
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- (1) Calculated by multiplying the number of unvested shares by \$19.14, the closing price per share of our common stock on The NASDAQ Global Select Market on December 31, 2018.
- (2) 25% of these options become exercisable on December 10, 2019 and the remaining become exercisable in 36 equal monthly installments commencing one month thereafter.
- These performance option grants become exercisable upon our achievement of four long-term goals that are tied to (3)key company goals over the next three years. See "—Compensation Discussion and Analysis—Components of our Executive Compensation Program".
- (4) These options become exercisable in 48 equal monthly installments, commencing one month after March 1, 2015. Three installments remained unvested as of December 31, 2018.
- (5) These options become exercisable in 48 equal monthly installments, commencing one month after March 1, 2016. 15 installments remained unvested as of December 31, 2018.
- (6) These options become exercisable in 48 equal monthly installments, commencing one month after March 1, 2017. 27 installments remained unvested as of December 31, 2018.
- (7) 25% of these options became exercisable on February 25, 2017 and the remaining become exercisable in 36 equal monthly installments commencing one month thereafter.
- (8) These shares of restricted stock vest on March 1, 2019.
- (9) These shares of restricted stock vest in two equal installments on March 1, 2019 and on March 1, 2020.
- These shares of restricted stock vest in three equal installments on March 1, 2019, March 1, 2020 and March 1, 2021.

These shares of restricted stock vest in four equal installments on March 1, 2019, March 1, 2020, March 1, 2021 and March 1, 2022.

Option Exercises and Stock Vested

The following table sets forth information regarding options exercised by our named executive officers during the fiscal year ended December 31, 2018. Amounts shown under the column "Value Realized on Exercise" represent the difference between the option exercise price and the closing sale price of our common stock on the date of exercise multiplied by the number of shares for which the option was exercised. The amounts shown under the column "Value Realized on Vesting" represent the number of shares of restricted stock that vested multiplied by the closing sale price of our common stock on the vesting date.

	Option	Awards	Stock Awards			
	Number	r	Number			
	of	Value	of	Value		
	Shares	Realized	Shares	Realized		
Name	Acquire	edon	Acquire	edn		
	on	Exercise	on	Vesting		
	Exercis	e(\$)	Vesting(\$)(1)			
	(#)		(#)			
Mark Timney		_	_	_		
Christopher Visioli		_	2,235	\$74,358		
Christopher Cox			2,847	\$94,720		
Clive Meanwell			44,685	\$1,486,670		
William O'Connor			7,673	\$255,281		
Stephen Rodin			4,141	\$137,771		

The shares of restricted stock all vested on March 1, 2018. The closing price per share of our common stock on the NASDAQ Global Select Market on March 1, 2018 was \$33.27.

Potential Payments Upon Termination or Change of Control

Severance Agreements. We have entered into severance agreements with our named executive officers in order to induce each of these officers to maintain his continued commitment to us. The agreements generally provide for severance pay, reimbursement of health care premiums, payment of reasonable outplacement assistance and accelerated equity award vesting in the event that (i) we terminate the officer's employment without cause, as defined in the agreements, or (ii) the officer terminates his employment for good reason, as defined in the agreements. If an officer's employment is terminated for cause, no benefits are provided to the officer under the agreements. These severance agreements supersede any similar provisions in any employment agreement or letter agreement we previously entered into with the officer.

The agreements provide as follows:

Termination prior to a change in control. If we terminate the employment of the officer without cause, or if the officer resigns for good reason, before a change in control event, as defined in the agreements, he would be entitled to: severance pay equal to one year of annual base salary, paid in a lump sum; up to one year of health care premium reimbursement (or equivalent cash payment) and payment of reasonable outplacement assistance (or reimbursement and/or payment for a shorter period if the officer commences employment with a new employer before the end of the period); and one year of accelerated vesting for equity awards outstanding prior to the termination date. In the case of Mr. Timney, under these circumstances, he would be entitled to severance pay equal to eighteen months of continued base salary; up to eighteen months of health care premium reimbursement (or equivalent cash payment) and payment of reasonable outplacement assistance (or reimbursement and/or payment for a shorter period if Mr. Timney commences employment with a new employer before the end of the period); and eighteen months of accelerated vesting for equity awards outstanding prior to the termination date. In the case of Dr. Meanwell, under these circumstances, he would be entitled to severance pay equal to two years of annual base salary, paid in a lump sum; up to one year of health care premium reimbursement (or equivalent cash payment) and payment of reasonable outplacement assistance (or reimbursement and/or payment for a shorter period if Dr. Meanwell commences employment with a new employer before the end of the period); and two years of accelerated vesting for equity awards outstanding prior to the termination date.

Termination after a change in control. If we terminate the employment of the officer without cause, or if the officer resigns for good reason, during the one-year period following a change in control event, he would be entitled to: severance pay equal to one-and-a-half years of annual base salary plus an amount equal to one-and-a-half times his bonus target under our annual cash bonus plan, paid in a lump sum; up to one-and-a-half years of health care premium

reimbursement (or equivalent cash payment) and payment of reasonable outplacement assistance (or reimbursement and/or payment for a shorter period if the officer commences employment with a new employer before the end of the period); and his outstanding equity awards would be accelerated in full. In the case of Mr. Timney and Dr. Meanwell, under these circumstances, they would each be entitled to: severance pay equal to two years of annual base salary plus an amount equal to two times his bonus target under our annual cash bonus plan, paid in a lump sum; up to two years of health care premium reimbursement (or equivalent cash payment) and payment of reasonable outplacement assistance (or reimbursement and/or payment for a shorter period if the officer commences employment with a new employer before the end of the period); and his outstanding equity awards would be accelerated in full. In the event any payments are subject to the excise tax imposed under Section 4999 of the code (the "golden parachute" tax), the payments will be subject to a contingent cutback whereby the payments will be automatically reduced so that no portion is subject to the excise tax, unless payment of the full amount taking into account all taxes would be greater than the reduced amount.

In addition to any other amounts that may be payable to the officers under the severance agreements, if we terminate the employment of an officer for any reason, such officer will receive accrued rights, payment for any accrued but unused vacation days subject to then-current company policy, payment for unreimbursed business expenses incurred through the termination date, as defined in the agreement, and, except if we terminate the employment of the officer for cause, for any bonus earned but not yet paid prior to the termination date.

In order to receive any of these benefits, the officer must deliver a general release in favor of us.

On March 21, 2018, William O'Connor, our former chief financial officer, stepped down as chief financial officer, effective immediately, but remained as a special advisor to the chief executive officer until December 31, 2018. Further, Mr. O'Connor's employment with the company was reduced to part-time effective as of July 1, 2018. Under Mr. O'Connor's severance agreement, he received the following severance benefits:

a lump sum payment equal to \$714,938.04, less all applicable statutory tax withholdings and deductions;

for the shorter of a period of twelve months after the resignation date or until Mr. O'Connor commences employment with a new employer, payment of COBRA health insurance premiums by us on behalf of Mr. O'Connor;

accelerated vesting of all stock options and restricted shares that Mr. O'Connor held immediately prior to his termination which would have vested within one year after the termination date; and

an extended period to exercise vested options for a period of twelve months after the termination date.

Mr. O'Connor remains subject to the non-solicitation, confidentiality and related provisions of his invention and non-disclosure agreement and non-solicitation agreement with us.

On March 15, 2019, Christopher Cox, our former chief corporate development officer, ended employment with us as he rejoined the law firm Cadwalader as a partner on a full-time basis. Under Mr. Cox's separation agreement, he received receive the following severance benefits:

payment of COBRA health insurance premiums by us on behalf of Mr. Cox for a period of twelve months;

accelerated vesting of all stock options and restricted shares that Mr. Cox held immediately prior to his separation which would have vested within eighteen months after the separation date; and

an extended period to exercise vested options for a period of twelve months after the separation date.

Mr. Cox remains subject to the non-solicitation, confidentiality and related provisions of his invention and non-disclosure agreement and non-solicitation agreement with us.

Equity Incentive Plans and Award Agreements. Our 2013 plan provides that all restricted stock awards granted thereunder become free from all conditions or restrictions upon the occurrence of a termination event (as defined in the 2013 plan) to the restricted stockholder during the one-year period following a change in control event (as defined in the 2013 plan). Our 2013 plan provides that all options granted thereunder, including the performance option grants, become immediately exercisable upon the occurrence of a termination event (as defined in the 2013 plan) to the optionholder during the one-year period following a change in control event (as defined in the 2013 plan). The stock option agreements governing options awarded under our 2013 plan to all of our employees provide for accelerated vesting of 50% of an optionholder's unvested options upon such optionholder's death or disability (within the meaning of Section 22(e)(3) of the Code). All of such optionholder's vested options are exercisable for a period of one year following the date of the death or disability of the optionholder, provided, that the options have not expired and, in the case of disability, such optionholder has not been terminated for cause.

Potential Payments. The table below reflects the potential payments and benefits to which our named executive officers (other than Messrs. Cox and O'Connor) would be entitled under the severance agreements and the equity incentive plans described above if the named executive officer's employment with us was terminated without cause or due to death or disability or the officer resigned for good reason. The amounts shown in the table below for those named executive officers assume that those terminations were effective as of December 31, 2018, and that all eligibility requirements to receive such payments and benefits were met. The closing price per share of our common stock on The NASDAQ Global Select Market on December 31, 2018 was \$19.14.

The table below also reflects the payments and benefits to which each of Messrs. Cox and O'Connor is entitled under their separation agreements as of their termination dates on March 15, 2019 and December 31, 2018, respectively. The closing price per share of our common stock on the NASDAQ Global Select Market on March 15, 2019 and

December 31, 2018 was \$27.13 and \$19.14, respectively.

Name	Bonus for Year of Termination	Cash Severance	Vacation Payout	Value of Accelerated Equity(1)	Health and Welfare	Outplacement Services(2)	^{nt} Total
Mark Timney Prior to a Change of Control: Termination without Cause or Resignation for Good Reason Termination due to Death or Disability	_ _	\$900,000 —	\$2,746 —	\$— —		\$ 18,000 —	\$972,037 —
Within One Year After a Change of Control: Termination without Cause or Resignation for Good Reason(3) Termination due to Death or Disability	\$ 780,000 —	\$1,200,000 —	\$2,746 —	\$— —	\$68,388 —	\$ 24,000 —	\$2,075,134 —
Christopher Visioli Prior to a Change of Control: Termination without Cause or Resignation for Good Reason Termination due to Death or Disability Within One Year After a Change	_ _	\$375,000 —	\$7,212 —	\$27,102 —		\$ 12,000 —	\$421,314 —
of Control: Termination without Cause or Resignation for Good Reason(3) Termination due to Death or Disability	\$ 225,000 —	\$562,500 —	\$7,212 —	\$ 142,210 \$ 142,210	_	\$ 18,000 —	\$954,922 \$142,210
Christopher Cox Termination on March 15, 2019	_	_	\$17,596	\$1,231,356	\$36,377	_	\$1,285,329
Clive Meanwell Prior to a Change of Control: Termination without Cause or Resignation for Good Reason Termination due to Death or Disability Within One Year After a Change of Control:	_	\$1,354,000 —	\$13,019 —	1,164,631	\$34,194 —	\$ 12,000 —	\$2,577,844 —
Termination without Cause or Resignation for Good Reason(3) Termination due to Death or Disability	\$ 947,800 —	\$1,354,000 —	\$13,019 —	1,544,234 1,544,234	\$68,388 —	\$ 24,000 —	\$3,951,441 \$1,544,234
William O'Connor							
Termination on December 31, 2018		\$714,938	\$2,933	\$550,676	\$38,990	_	\$1,307,537

Stephen Rodin Prior to a Change of Control:							
Termination without Cause or Resignation for Good Reason	_	\$450,000	\$8,654	\$101,346	\$34,158	\$ 12,000	\$606,158
Termination due to Death or Disability	_	_	_	_	_	_	_
Within One Year After a Change of Control:							
Termination without Cause or Resignation for Good Reason(3)	\$ 303,750	\$675,000	\$8,654	\$291,196	\$51,237	\$ 18,000	\$1,347,837
Termination due to Death or Disability	_	_	_	\$291,196	_	_	\$291,196

The value of accelerated restricted stock vesting is calculated by multiplying the number of shares subject to restricted stock awards for which vesting would be accelerated by \$19.14, the closing price per share of our common stock on The NASDAQ Global Select Market on December 31, 2018 (or, in the case of Mr. Cox, \$27.13, the closing price per share of Mr. Cox, \$27.13,

- the closing price on March 15, 2019, the date of Mr. Cox's termination of employment with us). No value is attributable in this column to any accelerated option vesting because all unvested stock options held by named executive officers were underwater on December 31, 2018 (or, in the case of Mr. Cox, on March 15, 2019). The amount in this column represents an estimate for outplacement services based on rates charged to senior
- (2) executives by our recommended outplacement vendor. Named executive officers are able to use the vendor of their choice, so actual amounts paid for outplacement services may vary.
 - As provided in each of the named executive officer's severance agreement, in the event any payments to the named executive officers are subject to the excise tax imposed under Section 4999 of the Code, the payments will be
- (3) subject to a contingent cutback whereby the payments will be automatically reduced so that no portion is subject to the excise tax, unless payment of the full amount taking into account all taxes would be greater than the reduced amount. The figures in the table above do not take account of any potential cutback.

Pay Ratio

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 402(u) of Regulation S-K, we are providing the following disclosure about the relationship of the median of the annual total compensation of our employees and the annual total compensation of Mr. Timney, our chief executive officer (our "CEO").

For 2018, the median of the annual total compensation of all of our employees (excluding Mr. Timney) was \$659,048 and the annualized total compensation of Mr. Timney was \$9,677,655. Based on this information, for 2018, the ratio of the annual total compensation of Mr. Timney, our CEO, to the median of the annual total compensation of all other employees was approximately 15 to 1.

To identify, and to determine the annual total compensation of, our median employee, we used the following methodology:

We determined our global employee population as of December 31, 2018, which consisted of approximately 67 employees in the U.S. and foreign jurisdictions, and examined, for all individuals, excluding Mr. Timney, who were employed by us or any of our

consolidated subsidiaries as of that date, the total compensation for each of those employees for the full year ending December 31, 2018.

For purposes of identifying the median employee from our employee population, we considered each employee's "compensation" to consist of the employee's base salary as of December 31, 2018, actual annual cash bonus paid in 2018 and grant date value of actual equity awards granted in 2018. We selected these compensation elements as our consistently applied compensation measure as they represent the principal forms of compensation paid to most of our employees.

We annualized the compensation of all permanent full-time and part-time employees who were hired in 2018, including Mr. Timney, but did not work for us for the entire fiscal year. We applied an exchange rate as of December 31, 2018, to convert all international currencies into U.S. dollars.

Using this methodology, we determined that our median employee was a full-time employee located in the United States. After identifying the median employee, we combined all of the elements of such employee's compensation for 2018 calculated in accordance with the requirements of Item 402(c)(2)(x) of Regulation S-K, resulting in annual total compensation of \$659,048.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information, as of December 31, 2018, about the securities authorized for issuance under our equity compensation plans pursuant to which awards are outstanding or new awards may be granted: (i) our 2004 plan; (ii) our 2010 employee stock purchase plan (the "2010 ESPP"); and (iii) our 2013 plan. The information below is categorized according to whether or not the equity plan was previously approved by stockholders:

			Number of	
			Securities	
Number of			Remaining	
			Available for	
			Future	
	,	Weighted-Average	Issuance	
		Exercise Price of	Under Equity	
•		Outstanding	Compensation	n
Outstanding Options (a)		Options (b)	Plans	
			(Excluding	
			Securities	
			Reflected in	
			Column (a))	
			(c)	
9,848,415	(1)(2))\$30.06	4,706,789	(2)
· —		_		
9,848,415		\$30.06	5,644,740	(3)
	Securities to be Issued upon Exercise of Outstanding Options (a) 9,848,415	Securities to be Issued upon Exercise of Outstanding Options (a) 9,848,415 (1)(2)	Securities to be Issued upon Exercise of Outstanding Options (a) 9,848,415 (1)(2)\$30.06	Number of Securities to be Issued upon Exercise of Outstanding Options (a) Weighted-Average Exercise Price of Outstanding Options (b) Plans (Excluding Securities Reflected in Column (a)) (c) 9,848,415 (1)(2)\$30.06 Securities Reflected Graph Securities Reflected Graph Available for Future Issuance Under Equity Compensation (Excluding Securities Reflected in Column (a)) (c)

- (1) Includes shares of common stock issuable under our 2004 plan and 2013 plan.
- (2) Excludes shares issuable at the end of the then-current offering period ending February 28, 2019 under our 2010 ESPP.
- (3) Includes shares available for issuance as of December 31, 2018 under our 2010 ESPP (which includes 8,623 shares that were subsequently issued on February 28, 2019 at the close of the then-current offering period).

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors, executive officers and holders of more than ten percent of our common stock to file with the SEC initial reports of ownership and reports of changes in ownership of common stock and other equity securities. Based solely on our review of copies of reports filed by the reporting persons

furnished to us, or written representations from reporting persons, we believe that from April 30, 2018 (the date of our 2018 proxy statement) to the date of this proxy statement, the reporting persons complied with all Section 16(a) filing requirements with the exception of a Form 4 filed on December 18, 2018 to report the initial grant of options to our then new chief executive office, Mark Timney.

Our board hopes that you will attend the meeting. Whether or not you plan to attend, you are urged to complete, date, sign and return the enclosed proxy in the accompanying envelope.

Prompt response will greatly facilitate arrangements for the meeting and your cooperation will be appreciated. Stockholders who attend the meeting may vote their stock personally.

By order of the Board of Directors, Stephen M. Rodin Secretary

April 29, 2019