

MEDICINES CO /DE
Form DEF 14A
April 30, 2018

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.
- ☐ o Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

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o

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(3) Filing Party:

(4) Date Filed:

April 30, 2018

To our stockholders:

We are pleased to invite you to our 2018 annual meeting of stockholders. The meeting will take place on Thursday, May 31, 2018 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 2018 annual meeting of stockholders, which lists the matters to be considered at the meeting, and the proxy statement related to our 2018 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, 2017 as filed with the Securities and Exchange Commission, including our audited consolidated financial statements for 2017, 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,

Clive A. Meanwell, MD, PhD

Chief Executive Officer

THE MEDICINES COMPANY
8 Sylvan Way
Parsippany, New Jersey 07054
NOTICE OF 2018 ANNUAL MEETING OF STOCKHOLDERS

Time and Date	10:00 a.m., local time, on Thursday, May 31, 2018
Place	8 Sylvan Way, Parsippany, New Jersey 07054
Items of Business	<p>At the meeting, we will ask you and our other stockholders to:</p> <ol style="list-style-type: none">(1) elect seven directors for terms to expire at our 2019 annual meeting of stockholders;(2) approve an amendment to our 2013 stock incentive plan to increase the number of shares of common stock authorized for issuance under the plan by 5,000,000 shares;(3) approve, in an advisory vote, the compensation of our named executive officers as presented in our proxy statement;(4) ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2018; and(5) transact any other business as may properly come before the meeting or any postponement or adjournment of the meeting. <p>Our board of directors has no knowledge of any other business to be transacted at our 2018 annual meeting.</p>
Record Date	<p>You may vote if you were a stockholder of record at the close of business on April 13, 2018.</p> <p>It is important that your shares be represented and voted at the meeting. Whether or not you plan to 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.</p>
Proxy Voting	

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

April 30, 2018
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 31, 2018

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 2018 annual meeting of stockholders (the "annual meeting"). The annual meeting will be held on Thursday, May 31, 2018, 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 30, 2018. In this mailing, we are also including a copy of our annual report to stockholders for the year ended December 31, 2017.

Important Notice Regarding the Availability of Proxy Materials for
the Stockholder Meeting to be Held on May 31, 2018

This Proxy Statement and the Annual Report for the year ended December 31, 2017 are available at
www.proxyvote.com.

Our annual report on Form 10-K for the year ended December 31, 2017, 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 (800) 388-1183.

You may request a copy of the materials relating to our 2018 annual meeting of stockholders, including the proxy statement and form of proxy for our 2018 annual meeting and the annual report to stockholders for the year ended December 31, 2017, at the website listed above, by sending an email to us at investor.relations@themedco.com, or by calling (800) 388-1183.

INFORMATION ABOUT THE ANNUAL MEETING

Who may vote?

Holders of record of our common stock at the close of business on April 13, 2018, 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 13, 2018, 73,588,798 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 21, 2018 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 (800) 388-1183.

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 4) 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), the approval of an amendment to our 2013 stock incentive plan, as amended (proposal 2) and the advisory vote to approve the compensation of our named executive officers (proposal 3) 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 4, 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 M. 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 13, 2018, 73,588,798 shares of our common stock were outstanding. As a result, a quorum for the annual meeting consists of at least 36,794,400 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—Approval of an Amendment our 2013 Stock Incentive Plan

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 an amendment our 2013 stock incentive plan, as amended.

Proposal Three—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 Four—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, 2018.

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, proposal 3 and proposal 4.

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 an amendment to our 2013 stock incentive plan;

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

FOR proposal four—to ratify the appointment of Ernst & Young LLP as our independent registered public accounting firm for the year ending December 31, 2018.

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 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 2019 annual meeting?

If you are interested in submitting a proposal for inclusion in the proxy statement and proxy card for our 2019 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, 2018.

If you wish to propose a nominee for election to our board or present a proposal at our 2019 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, 2019 and no later than March 2, 2019. However, if the date of our 2019 annual meeting is prior to May 1, 2019 or after July 30, 2019, we must receive your notice no earlier than the 120th day prior to our 2019 annual meeting and no later than the close of business on the later of (1) the 90th day prior to our 2019 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 2019 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: (800) 388-1183, 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, (800) 388-1183, 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 twelve class I directors - William W. Crouse, Alexander J. Denner, Fredric N. Eshelman, Geno J. Germano, John C. Kelly, Armin M. Kessler, Clive A. Meanwell, Paris Panayiotopoulos, Sarah J. Schlesinger, Hiroaki Shigeta, Melvin K. Spigelman, and Elizabeth H.S. Wyatt.

In 2016, we began a phased transition to a declassified board structure, such declassification to be completed upon the election of directors at our 2018 annual meeting of stockholders. Commencing immediately following the election of directors at our 2018 annual meeting of stockholders, the board will cease to be classified. As a result, the nominees elected pursuant to this proposal will serve as directors for terms ending at our 2019 annual meeting of stockholders and until their respective successors are elected and qualified.

Following the loss of Angiomax patent exclusivity in July 2015, on November 3, 2015, we announced that we were evaluating our operations with the goal of unlocking and maximizing shareholder value. In particular, we stated our intention to explore strategies for optimizing our capital structure and liquidity position and to narrow our operational focus by strategically separating non-core businesses and products in order to generate non-dilutive cash and reduce associated cash burn and capital requirements. Subsequent to that announcement, we successfully completed a number of divestiture transactions and took further actions that resulted in narrowing our operational focus primarily onto inclisiran, a potentially first-in-class lipid-lowering drug to reduce LDL-cholesterol ("LDL-C"), which is commonly referred to as "bad" cholesterol, in patients with atherosclerotic cardiovascular disease ("ASCVD"), or cardiovascular risk-equivalents. As a result of the rapid and significant evolution our business and the narrowing of our operational focus onto inclisiran, our board determined to restructure the board, adding directors with relevant expertise and experience and reducing the board's overall size from twelve to seven members, providing a more agile and efficient structure. Accordingly, our board has nominated Alexander J. Denner, Fredric N. Eshelman, Geno J. Germano, John C. Kelly, Clive A. Meanwell, Paris Panayiotopoulos, and Sarah J. Schlesinger for election as directors at the 2018 annual meeting of stockholders.

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 2019 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, 2018, 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: 48

Alexander J. Denner, Ph.D. has been a director since February 2016. 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. 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.

FREDRIC N. ESHELMAN

Age: 69

Fredric N. Eshelman has been a director and non-executive chairman since August 2015. Dr. Eshelman has more than 35 years of strategic development, executive, operational and financial leadership experience in the pharmaceutical and healthcare industries. Dr. Eshelman was the founder of Pharmaceutical Product Development, Inc. (PPD) and founding chairman of Furiex Pharmaceuticals, Inc. In 2014, Dr. Eshelman founded Eshelman Ventures, LLC, an investment company focused on healthcare companies. From 2009 to 2014, Dr. Eshelman served as chairman of the Board of Furiex. From 2009 to 2011, he served as executive chairman of PPD. He also served as chief executive officer of PPD from 1990 to 2009 and as vice chairman of its Board of Directors from 1993 to 2009. Dr. Eshelman currently serves on the board of directors of Valeant Pharmaceuticals International, Inc. and G1 Therapeutics, Inc. Dr. Eshelman received a bachelor's degree in pharmacy from UNC Chapel Hill and a doctorate in pharmacy from the University of Cincinnati, and he completed an OPM program at Harvard University.

We believe Dr. Eshelman's experience in drug discovery and development of pharmaceutical products and in the operation of biopharmaceutical businesses is valuable to our board and the company. In addition, Dr. Eshelman's experience in strategic planning at a variety of biopharmaceutical companies is of considerable importance and enables him to serve a valuable role as our executive chairman.

GENO J. GERMANO

Age: 57

Geno J. Germano has been a director since November 2017. Mr. Germano was, most recently, President of Intrexon Corporation, a leader in synthetic biology, from June 1, 2016 to March 2017. 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 in several therapeutic areas, including cardiovascular, metabolic disease, neuroscience, inflammation, immunology, and rare diseases. 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, where he received his Bachelor of Science degree in Pharmacy. Mr. Germano was formerly a director of Zoetis Inc. and is currently a director of Bioverativ Inc. and Sage Therapeutics.

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: 75

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: 60

Clive Meanwell is a founder and has been a director since 1996. He has 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: 44

Paris Panayiotopoulos has been a director since March 2017. Mr. Panayiotopoulos is an operating partner and member of the investment team at Clarus and 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 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: 58

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.

Proposal Two: Approval of an Amendment to our 2013 Stock Incentive Plan

In April 2018, upon the recommendation of our compensation committee, our board of directors adopted, subject to stockholder approval, an amendment to our 2013 Stock Incentive Plan, as amended (the "2013 plan") to increase the number of shares of common stock authorized for issuance under our 2013 plan by 5,000,000 shares. We are submitting this amendment for your consideration and approval.

We believe that our future success depends, in large part, upon our ability to maintain a competitive position in attracting, retaining and motivating key personnel. Stock-based equity incentives are an important component of our compensation philosophy, intended to provide equity ownership opportunities and performance-based incentives to better align award recipient's interests with those of our stockholders. As of April 13, 2018, under our 2013 plan, options to purchase 5,742,070 shares of common stock and 274,494 shares of restricted stock were outstanding, and 4,083,384 shares were available for future grant plus the number of shares subject to outstanding awards granted under our Amended and Restated 2004 Stock Incentive Plan (the "2004 plan") that may become available for new grants under our 2013 plan if the award expires, terminates or is surrendered, canceled, forfeited or repurchased by us. Taking into account our 2018 grant of performance options and restricted stock on April 24, 2018, as described under "Information About our Executive Officer Compensation—Compensation Discussion and Analysis" in this proxy statement, there were 658,413 shares remaining available for future grant under our 2013 plan (in addition to the number of shares subject to outstanding awards granted under the 2004 plan that may become available for new grants under our 2013 plan if the award expires, terminates or is surrendered, canceled, forfeited or repurchased by us). Currently, we only grant equity incentive awards under our 2013 plan.

To further align award recipient's interests with those of our stockholders we have adopted both a share retention requirement for our named executive officers and executive stock ownership guidelines, in addition to our existing non-employee director stock ownership guidelines.

Our share retention policy requires that our named executive officers 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.

Our executive stock ownership guidelines 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.

Our non-employee director stock ownership guidelines require each of our directors to own shares of our common stock with a value equal to 3x the non-employee director annual retainer.

In light of our compensation philosophy and business strategy, we believe that the number of shares currently available for grants under our 2013 plan will be insufficient to satisfy our future equity compensation needs. In determining the proposed share increase, our compensation committee and our board of directors considered among other things, our stock price and volatility, our historical share usage (or burn rate), our current overhang under our equity incentive plans and how it compares with our industry peers, the existing terms of our outstanding awards, assumptions regarding stock option exercise activity and forfeiture rate, and our proposed fungible ratio. Although our share usage will depend upon and be influenced by a number of factors, such as the number of plan participants, the price per share of our common stock and the methodology used to establish the equity award mix, if this proposal is approved by stockholders, we expect to have sufficient shares for grants to be made over the next year and to return to stockholders to request approval of additional shares at our 2019 annual meeting of stockholders.

Our board of directors recommends a vote "FOR" this proposal to approve an amendment to our 2013 plan.

Highlights of our 2013 Plan

No Liberal Share Recycling	Plan prohibits the reuse of shares withheld or delivered to satisfy the exercise price of an award or to satisfy tax withholding requirements.
Double Trigger Equity Acceleration	Awards do not vest automatically upon a change in control. In connection with a change in control, vesting occurs if a participant has a qualifying termination within the one year following the change in control.
Performance Award Vesting in Connection with a Change in Control	Upon a change in control of the company, performance awards, as defined under the plan, granted under the plan may not vest in an amount in excess of the greater of target performance achievement on a prorated basis or actual performance achievement.
Multi-Year Vesting Practice	Equity awards granted to our chief executive officer, other executives and employees generally vest over a 4-year period.
Minimum Vesting Requirement	Full-value awards, including restricted stock awards and RSUs, granted under the plan are subject to a one-year minimum vesting period from the award's grant date, subject to an exception for up to 5% of the authorized share pool and the plan administrator's acceleration discretion.
Burn Rate	The 3-year average burn rate of the plan is 3.91% (see the table below for further details). Our "overhang" at December 31, 2017 was 12.7%. If the 5,000,000 additional shares proposed to be authorized for grant under the plan were included, our overhang on that date would have been 17.5%. "Overhang" is the sum of the total number of shares (1) underlying all equity awards outstanding and (2) available for future award grants, divided by: the sum of the total number of shares (a) underlying all equity awards outstanding, (b) available for future award grants and (c) outstanding at the time of calculation.
Overhang	All restricted stock, restricted stock units or other awards with a share or unit purchase price less than the fair market value of the underlying common stock on the date of grant is counted against the share limits of the plan as 1.92 shares of common stock.
Fungible Share Ratio	Plan prohibits the direct or indirect repricing of stock options or stock appreciation rights without stockholder approval.
No Repricing of Stock Options or Stock Appreciation Rights	All stock options and stock appreciation rights must have an exercise price or measurement price equal to or greater than the fair market value of the underlying common stock on the date of grant.
No Discounted Stock Options or Stock Appreciation Rights	Plan does not permit the automatic grant of an additional stock option upon the exercise of an outstanding stock option.
No Reloading of Stock Options	Plan does not include "evergreen" features with respect to which additional shares are automatically authorized for issuance each year without stockholder approval.
No Automatic Annual Increase	Stockholder approval is required prior to an amendment that would (1) materially increase the number of shares available, (2) expand the types of available awards or (3) materially expand the class of participants eligible to participate in the plan.
Stockholder Approval Requirements	Certain aspects of the plan, including the granting of options to executive officers, are administered by our Compensation Committee, which is made up entirely of independent directors.
Administered by an Independent Committee	

Set forth below is a table that reflects our burn rate for 2017, 2016 and 2015 as well as the average over those years.

Options Granted	Restricted Stock	Restricted Stock	Total Equity	Weighted Average # of	Burn Rate
2017	1,000,000	1,000,000	2,000,000	1,000,000	3.91%
2016	1,000,000	1,000,000	2,000,000	1,000,000	3.91%
2015	1,000,000	1,000,000	2,000,000	1,000,000	3.91%
Average	1,000,000	1,000,000	2,000,000	1,000,000	3.91%

	Granted	Multiplier	Awards	Shares	(3)	
		(1)	Granted	Outstanding		
				(2)		
2017	693,309	196,462	2.0	2,086,233	71,933,120	2.90 %
2016	052,506	241,941	2.0	3,536,388	69,909,052	5.06 %
2015	106,929	206,237	2.0	2,519,403	66,809,090	3.77 %
3-Year						
Average						3.91 %

(1) Restricted stock awards are subject to a volatility-based multiplier of 2.0X based on the company's current three-year historical volatility of 43.32%, which multiplier is consistent with the multiplier used by shareholder advisory firms.

(2) Weighted average number of common shares outstanding used to calculate basic earnings per share in the year.

(3) "Burn Rate" is the number of equity awards granted in the year divided by the total number of shares of common stock outstanding.

If our stockholders do not approve this amendment, we will continue to grant awards under the plan until the number of shares authorized and available for issuance under our 2013 plan has been exhausted. In the event that we reach the current maximum number of shares authorized under our 2013 plan, regardless of whether stockholders approve this amendment to our 2013 plan, our board of directors will consider whether to adopt alternative arrangements based on its assessment of the needs of the company.

Description of our 2013 plan

The following is a brief summary of our 2013 plan as proposed to be amended. The full text of this proposed amendment is set forth in Appendix I to this proxy statement. A copy of the plan is attached as Appendix I to our proxy statement for our 2013 annual meeting of stockholders and the previous amendments thereto are attached as Appendix I to our proxy statement for our 2014 annual meeting of stockholders, Appendix II to our proxy statement for our 2015 annual meeting of stockholders and Appendix I to our proxy statement for our 2016 annual meeting of stockholders. This summary is subject to the text of the amendment and the plan in all respects. Our stockholders adopted our 2013 plan on May 30, 2013 at our 2013 annual meeting of stockholders, and approved plan amendments on May 29, 2014, May 28, 2015, and May 26, 2016 at our 2014, 2015 and 2016 annual meeting of stockholders, respectively.

Number of Shares Available for Award. Under our 2013 plan we are currently authorized to issue awards with respect to a total number of shares not to exceed 21,142,134 shares of our common stock (subject to adjustment in the event of stock splits and other similar changes in capitalization or events), which includes the number of shares of our common stock subject to awards granted under our 2004 plan that were outstanding at the time of approval of our 2013 plan and subject to expiration, termination or surrender, cancellation, forfeiture or repurchase by us. If this amendment is approved by stockholders, we will be authorized to issue awards with respect to a total number of shares not to exceed 26,142,134 shares of our common stock. On a pro forma basis as of April 13, 2018, if this amendment is approved, we would have 9,083,384 shares available for new grants under our 2013 plan (which amount would be further reduced to 3,424,971 shares following our grant of performance options and restricted stock on April 24, 2018) plus the number of shares of our common stock subject to awards granted under our 2004 plan which may expire, terminate or be surrendered, canceled, forfeited or repurchased by us.

Our 2013 plan uses a “fungible share” concept under which the awards of options and stock appreciation rights, or SARs, cause one share per share subject to such award to be removed from the available share pool, while the award of restricted stock, restricted stock units, or other stock-based awards where the purchase price for the award is less than 100% of the fair market value of our common stock on the date of grant is currently counted against the pool as 1.92 shares for each share subject to such award. Shares subject to awards under the 2013 and 2004 plans that are forfeited, cancelled or otherwise expire without having been exercised or settled, or that are settled by cash or other non-share consideration, will become available for issuance pursuant to a new award under our 2013 plan and will be credited back to the pool at the same rates at which they left the plan. Shares are subtracted for exercises of SARs using the proportion of the total SAR that is exercised, rather than the number of shares actually issued. Shares (including shares subject to an award) used to satisfy an option exercise price or tax withholding applicable to an award will not be added back to the number of shares available for issuance under our 2013 plan.

Eligibility to Receive Awards; Individual Award Limits. Employees, officers, directors, consultants and advisors of the company and its subsidiaries and of other business ventures in which the company has a controlling interest are eligible to be granted awards under our 2013 plan. Under present law, however, incentive stock options may only be granted to employees of the company and its corporate subsidiaries. The maximum number of shares with respect to which awards may be granted to any participant under our 2013 plan may not exceed 500,000 shares per calendar year. For purposes of this limit, the combination of an option in tandem with a SAR is treated as a single award. Performance awards in the form of cash-based awards may provide for cash payments of up to \$4.0 million per calendar year per individual.

Types of Awards. Our 2013 plan provides for the grant of incentive stock options intended to qualify under Section 422 of the Internal Revenue Code of 1986, as amended, or the Code, nonstatutory stock options, stock appreciation rights, restricted stock, restricted stock units and other stock-based and cash-based awards as described below.

Incentive Stock Options and Nonstatutory Stock Options. Optionees receive the right to purchase a specified number of shares of common stock at a specified exercise price and subject to such other terms and conditions as are specified in connection with the option grant. Options must be granted at an exercise price equal to or greater than the fair market value of the common stock on the date of grant. Under our 2013 plan, options may not be granted for a term in excess of 10 years. Options may not provide for the automatic grant of additional options in connection with the exercise of an original option. Our 2013 plan permits the following forms of payment of the exercise price of options: (i) payment by cash, check or in connection with a “cashless exercise” through a broker, (ii) subject to certain conditions, surrender to the company of shares of common stock, (iii) to the extent provided for in a nonstatutory stock option agreement or as approved by our board in its sole discretion, “net exercise” in which a portion of the shares to be issued on exercise are withheld to pay the exercise price, (iv) subject to certain conditions, any other lawful means, or (v) any combination of these forms of payment.

Stock Appreciation Rights (SAR). A SAR, is an award entitling the holder, upon exercise, to receive an amount in common stock or cash or a combination thereof determined by reference to appreciation, from and after the date of grant, in the fair market value of a share of common stock over the SAR's measurement price. The measurement price must be equal to or greater than the fair market value of our common stock on the date the SAR is granted. SARs may be granted independently or in tandem with an option. SARs may not be granted for a term in excess of 10 years.

Restricted Stock Awards. Restricted stock awards entitle recipients to acquire shares of our common stock, subject to the right

of the company to repurchase (or to require forfeiture if issued at no cost) some or all of those shares from the recipient in the event that the conditions specified in the applicable award are not satisfied prior to the end of the applicable restriction period established for that award. The right to receive any dividends with respect to restricted stock is conditioned on the vesting of the award unless otherwise provided in an award agreement.

Restricted Stock Unit Awards (RSUs). RSUs, entitle the recipient to receive shares of our common stock (or, if provided in the applicable award, cash equal to the fair market value of such shares) to be delivered at the time such shares vest pursuant to the terms and conditions established by our board of directors. An RSU award may provide the participant with the right to receive an amount equal to any dividends or other distributions declared and paid on an equal number of outstanding shares of our common stock, which we refer to as the right to receive dividend equivalents. The right to receive dividend equivalents (which may be paid in cash and/or shares of our common stock) will be conditioned on the vesting of the RSU award with respect to which they were awarded.

Minimum Vesting Condition. Subject to the plan administrator's discretion to accelerate vesting under the plan, full-value awards, including restricted stock awards and RSUs, must have a minimum vesting period of one year from the date of grant. The foregoing notwithstanding, up to 5% of the total number of shares available for issuance under the plan and authorized in or after April 2016 may be granted without regard to this minimum vesting period.

Other Stock-Based and Cash-Based Awards. Under our 2013 plan, our board of directors has the right to grant other awards based upon our common stock having such terms and conditions as determined by our board, including the grant of shares of our common stock and the grant of awards that are valued in whole or in part by reference to, or otherwise based on, shares of our common stock. These awards may be paid in shares of our common stock or in cash and are available to our board of directors as a form of payment in settlement of other awards granted under our 2013 plan or as payment in lieu of compensation to which a participant is otherwise entitled. Our board may also grant awards denominated in cash rather than shares of our common stock. Dividend equivalents with respect to such awards may be paid in cash and/or shares of our common stock and will be conditioned on the vesting of the award with respect to which they were awarded.

Performance Conditions. The compensation committee may determine, at the time of grant, that a restricted stock award, RSU award, other stock-based award or cash-based award granted to an officer will vest solely upon the achievement of specified performance criteria designed to qualify for deduction under Section 162(m) of the Code. The performance criteria for each such award will be determined by the compensation committee, and will be based on one or more performance measures, which shall be based on the relative or absolute attainment of specified levels of one or any combination of the following: (a) the entry into an arrangement or agreement with a third party for the development, commercialization, marketing or distribution of products, services or technologies, or for conducting a research program to discover and develop a product, service or technology, and/or the achievement of milestones under such arrangement or agreement, including events that trigger an obligation or payment right; (b) achievement of domestic and international regulatory milestones, including the submission of filings required to advance products, services and technologies in clinical development and the achievement of approvals by regulatory authorities relating to the commercialization of products, services and technologies; (c) the achievement of discovery, preclinical and clinical stage scientific objectives, discoveries or inventions for products, services and technologies under research and development; (d) the entry into or completion of a phase of clinical development for any product, service or technology, such as the entry into or completion of phase 1, 2 and/or 3 clinical trials; (e) the consummation of debt or equity financing transactions, or acquisitions of business, technologies and assets; (f) new product or service releases; (g) the achievement of qualitative or quantitative performance measures set forth in operating plans approved by our board of directors from time to time; (h) specified levels of product sales, net income, earnings before or after discontinued operations, interest, taxes, depreciation and/or amortization, operating profit before or after discontinued operations and/or taxes, sales, sales growth, earnings growth, cash flow or cash position, gross margins, stock price, market share, return on sales, assets, equity or investment; (i) improvement of financial ratings; (j) achievement of

balance sheet or income statement objectives; (k) total stockholder return and/or (l) other comparable measures of financial and operational performance. These performance measures may reflect absolute entity or business unit performance or a relative comparison to the performance of a peer group of entities or other external measure of the selected performance criteria and may be absolute in their terms or measured against or in relationship to other companies comparably, similarly or otherwise situated. Such performance measures may be adjusted to exclude any one or more of (i) gains or losses on the dispositions of discontinued operations, (ii) the cumulative effects of changes in accounting principles, (iii) the writedown of any asset, (iv) fluctuation in foreign currency exchange rates, and (v) charges for restructuring and rationalization programs. Such performance goals may vary by participant and may be different for different awards, may be particular to a participant or the department, branch, line of business, subsidiary or other unit in which the participant works and may cover such period as may be specified by the compensation committee, and will be set by the compensation committee within the time period prescribed by, and will otherwise comply with the requirements of, Section 162(m) of the Code. Awards that are not intended to qualify for deduction under Section 162(m) of the Code may be based on these or such other performance measures as our board may determine. With respect to any performance-based award that is intended to comply with the requirements of Section 162(m) of the Code, the compensation committee may adjust downwards, but not upwards, the cash or number of shares of our common stock payable pursuant to such award, and the compensation committee may not waive the achievement of the applicable performance measures except in the case of death or disability of the participant or upon a change in control of the company. As part of the Tax Cuts and Jobs Act of 2017 (“TCJA”), Section 162(m) of the Code was substantially amended, and a result of these changes, we do not expect to be able to grant awards that qualify as performance-based compensation under Section 162(m) of the Code in the future.

Vesting of Performance Awards in Connection with a Change in Control Event. To the extent the vesting of a performance award is accelerated upon the occurrence of a change in control event, as defined under our 2013 plan, such performance award will not vest in amount in excess of the greater of (i) as if target performance had been achieved and paid on a prorated basis or (ii) actual performance achievement through the date of the change in control event (or the closest date to the change in control event as of which such performance may reasonably be determined).

Substitute Awards. In connection with a merger or consolidation of an entity with us or the acquisition by us of property or stock of an entity, our board may grant awards in substitution for any options or other stock or stock-based awards granted by such entity or an affiliate thereof. Substitute awards may be granted on such terms as our board deems appropriate in the circumstances, notwithstanding any limitations on awards contained in our 2013 plan. Substitute awards will not count against our 2013 plan's overall share limit or any sublimits contained in our 2013 plan, except as may be required by the Code.

Transferability of Awards. In general, awards may not be sold, assigned, transferred, pledged or otherwise encumbered by the person to whom they are granted, either voluntarily or by operation of law, except by will or the laws of descent and distribution or, other than in the case of an incentive stock option, pursuant to a qualified domestic relations order. During the life of the participant, awards are exercisable only by the participant. Subject to certain conditions, our board of directors may permit or provide in an award agreement that a participant can transfer an award without payment to an immediate family member, family trust, or certain other related entities to the extent the rules under Form S-8 would cover the transferee.

Plan Benefits. As of April 13, 2018, approximately 119 individuals, including our employees, five executive officers and 10 non-employee directors, would have been eligible to receive awards under our 2013 plan. However, we only anticipate making awards under the 2013 plan to employees and directors that will be with the company when our announced restructuring is completed and following the election of directors at the 2018 annual meeting, which would initially consist of 63 employees and directors. Awards under our 2013 plan are discretionary and are not subject to set benefits or amounts, and we have not approved any awards that are conditioned on stockholder approval of this amendment. Accordingly, we cannot currently determine the benefits or number of shares subject to awards that may be granted in the future to our employees, including to our executive officers and non-employee directors, under our 2013 plan. As discussed in further detail under the heading "Information About Corporate Governance-Compensation of Directors," pursuant to our non-employee director compensation program, on the date of each of our annual stockholder meetings our non-employee directors will automatically receive an equity award valued at \$255,000, split equally between stock options and restricted stock, and a non-executive chairman or lead director will automatically receive an additional stock option to purchase 5,000 shares of our common stock.

Administration. Our 2013 plan is administered by our board of directors, which has the authority to adopt, amend and repeal the administrative rules, guidelines and practices relating to the plan and to interpret the provisions of the plan and any award agreements thereunder. Pursuant to the terms of our 2013 plan and to the extent permitted by applicable law, our board of directors may delegate authority under the plan to one or more committees or subcommittees of our board. Our board of directors has authorized the compensation committee to administer certain aspects of the plan, including the granting of awards to executive officers.

Subject to any applicable limitations contained in our 2013 plan, our board of directors, the compensation committee, or any other committee to whom our board of directors delegates authority, as the case may be, selects the recipients of awards and determines (i) the number of shares of our common stock covered by options and SARs and the dates upon which such options and SARs become exercisable, (ii) the exercise price of options and the measurement price of each SAR (which, in each case, may not be less than 100% of fair market value of the common stock), (iii) the duration of options and each SAR (which, in each case, may not exceed 10 years), and (iv) the number of shares of common stock subject to any restricted stock award, RSU award or other stock-based awards and the terms and

conditions of such awards, including conditions for repurchase issue price and repurchase price.

Adjustments. Our board of directors is required to make appropriate and equitable adjustments in connection with our 2013 plan and any outstanding awards to reflect stock splits, stock dividends, recapitalizations, spin-offs and other similar changes in capitalization. Our 2013 plan also contains provisions addressing the consequences of any reorganization event, which is defined as (a) any merger or consolidation of us with or into another entity as a result of which all of our common stock is converted into or exchanged for the right to receive cash, securities or other property, (b) any exchange of all of our common stock for cash, securities or other property pursuant to a share exchange transaction, or (c) our liquidation or dissolution. Upon the occurrence of a reorganization event, all outstanding options will be assumed, or substituted for, by the acquiring or succeeding corporation. However, if the acquiring or succeeding corporation does not agree to assume, or substitute for, outstanding options or in the event of our liquidation or dissolution then our board must accelerate the options to make them fully exercisable prior to the consummation of the reorganization event. In the event of a reorganization event under which our stockholders will receive a cash payment for their shares of our common stock, then our board of directors must either accelerate the options to make them fully exercisable prior to consummation of the reorganization event or provide for a cash-out of the value of any outstanding options. Upon the occurrence of a reorganization event, our repurchase and other rights under each outstanding restricted stock award will inure to the benefit of the acquiring or succeeding corporation. Our board of directors will specify the effect of a reorganization event on any SAR, RSU award or other stock-based award at the time the award is granted.

Accelerated Vesting. If, on or prior to the first anniversary of the date of a change in control event, as defined in our 2013 plan, a termination event, as defined in our 2013 plan, occurs, each option will become immediately exercisable in full and each restricted stock award will become free of all conditions and restrictions except to the extent specifically provided to the contrary in the instrument evidencing the option or restricted stock award or any other agreement between the equity holder and us, including our severance agreements with certain of our officers. See “Information About our Executive Officer Compensation—Potential Payments Upon Termination or Change of Control” below. A termination event would occur, among other circumstances, if a plan participant's employment is terminated without cause or as a result of the participant's death or disability or is terminated by the participant due to a change of more than 30 miles in the participant's principal business location, a material reduction in the participant's salary, a material reduction in the participant's responsibilities without cause, or a significant diminution in the scope of the participant's responsibilities without his agreement.

Our board of directors or the compensation committee may at any time provide that any award will become immediately exercisable in whole or in part, free of some or all restrictions or conditions, or otherwise realizable in whole or in part, as the case may be.

Restrictions on Repricing. Unless our stockholders approve such action (or it is appropriate and permitted by our 2013 plan in connection with a change in capitalization, a reorganization event, or a change in control event), our 2013 plan provides that we may not: (i) amend any outstanding stock option or SAR granted under the plan to provide an exercise or measurement price per share that is lower than the then-current exercise or measurement price per share of such outstanding award; (ii) cancel any outstanding option or SAR (whether or not granted under our 2013 plan) and grant in substitution therefor new awards under our 2013 plan (other than as substitute awards as described above) covering the same or a different number of shares of common stock and having an exercise or measurement price per share lower than the then-current exercise or measurement price per share of the canceled award; (iii) cancel in exchange for cash any outstanding stock options or SARs that then have exercise or measurement prices per share below the then-current fair market value of our common stock; or (iv) take any other action that constitutes a “repricing” within the meaning of the NASDAQ rules.

Provisions for Foreign Participants. Our board of directors or the compensation committee may establish subplans under our 2013 plan to recognize differences in laws, rules, regulations or customs of such foreign jurisdictions with respect to tax, securities, currency, employee benefit or other matters.

Amendment or Termination. No award may be made under our 2013 plan after May 29, 2023, which is the date that is 10 years after the date our stockholders approved the adoption of the plan, but awards previously granted may extend beyond that date. Subject to limitations on repricing and actions requiring stockholder approval, our board may at any time amend, modify or terminate any outstanding award, including but not limited to, substituting therefor another award of the same or a different type, changing the date of exercise or realization, and converting an incentive stock option to a nonstatutory stock option. The participant's consent to such action is required unless our board determines that the action does not materially and adversely affect the participant's rights under the plan or the change is otherwise permitted under our 2013 plan. Our board of directors may amend, suspend or terminate our 2013 plan or any portion of our 2013 plan; provided that, to the extent required by Section 162(m) of the Code, no award granted to a participant that is intended to comply with Section 162(m) of the Code, after the date of such amendment will become exercisable, realizable, or vested unless and until the amendment is approved by our stockholders if required by Section 162(m) of the Code. In addition, no amendment that would require stockholder approval under the rules of The NASDAQ Stock Market, or the NASDAQ rules, may be effective unless and until such amendment has been approved by our stockholders. If The NASDAQ Stock Market amends its corporate governance rules so that the rules no longer require stockholder approval of “material amendments” to equity compensation plans, then, from the effective date of such amendment, no amendment to our 2013 plan which materially increases the number of shares authorized under our 2013 plan (other than pursuant to the adjustment provisions contained in our 2013 plan), expands the types

of awards that may be granted under our 2013 plan, or materially expands the class of participants eligible to participate in our 2013 plan shall be effective unless stockholder approval is obtained. If stockholder approval is required under Section 422 of the Code, our board may not effect such modification or amendment without stockholder approval. Unless otherwise specified in the amendment, any amendment to our 2013 plan will apply to, and be binding on the holders of, all awards outstanding under our 2013 plan at the time the amendment is adopted, provided our board determines that such amendment, taking into account any related action, does not materially and adversely affect the rights of participants under the plan.

Federal Income Tax Consequences

The following is a summary of the United States federal income tax consequences that generally will arise with respect to awards granted under our 2013 plan. This summary assumes that all awards are exempt from, or comply with, the rules under Section 409A of the Code regarding nonqualified deferred compensation. This summary is based on the federal tax laws in effect as of the date of this proxy statement. Changes to these laws could alter the tax consequences described below.

Incentive Stock Options. A participant will not have income upon the grant of an incentive stock option. Also, except as described below, a participant will not have income upon exercise of an incentive stock option if the participant has been employed by the company or its corporate parent or 50% or more-owned corporate subsidiary at all times beginning with the option grant date and ending three months before the date the participant exercises the option. If the participant has not been so employed during that

time, then the participant will be taxed as described below under “-Nonstatutory Stock Options.” The exercise of an incentive stock option may subject the participant to the alternative minimum tax. A participant will have income upon the sale of the stock acquired under an incentive stock option at a profit (if sales proceeds exceed the exercise price). The type of income will depend on when the participant sells the stock. If a participant sells the stock more than two years after the option was granted and more than one year after the option was exercised, then all of the profit will be long-term capital gain. If a participant sells the stock prior to satisfying these waiting periods, then the participant will have engaged in a disqualifying disposition and a portion of the profit will be ordinary income and a portion may be capital gain. This capital gain will be long-term if the participant has held the stock for more than one year and otherwise will be short-term. If a participant sells the stock at a loss (sales proceeds are less than the exercise price), then the loss will be a capital loss. This capital loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Nonstatutory Stock Options. A participant will not have income upon the grant of a nonstatutory stock option. A participant will have compensation income upon the exercise of a nonstatutory stock option equal to the value of the stock on the day the participant exercised the option less the exercise price. Upon sale of the stock, the participant will have capital gain or loss equal to the difference between the sales proceeds and the value of the stock on the day the option was exercised. This capital gain or loss will be long-term if the participant has held the stock for more than one year and otherwise will be short-term.

Stock Appreciation Rights. A participant will not have income upon the grant of a stock appreciation right. A participant generally will recognize compensation income upon the exercise of an SAR equal to the amount of the cash and the fair market value of any stock received. Upon the sale of the stock, the participant will have capital gain or loss equal to the difference between the sales proceeds and the value of the stock on the day the SAR was exercised. This capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Restricted Stock. A participant will not have income upon the grant of restricted stock unless an election under Section 83(b) of the Code is made within 30 days of the date of grant, which we refer to as an 83(b) election. If a timely 83(b) election is made, then a participant will have compensation income equal to the value of the stock less the purchase price. When the stock is sold, the participant will have capital gain or loss equal to the difference between the sales proceeds and the value of the stock on the date of grant. If the participant does not make an 83(b) election, then when the stock vests the participant will have compensation income equal to the value of the stock on the vesting date less the purchase price. When the stock is sold, the participant will have capital gain or loss equal to the sales proceeds less the value of the stock on the vesting date. Any capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Restricted Stock Units. A participant will not have income upon the grant of a restricted stock unit. A participant is not permitted to make an 83(b) election with respect to a restricted stock unit award. When the restricted stock unit vests and settles, the participant will have income on the settlement date in an amount equal to the fair market value of the stock on the settlement date less the purchase price, if any. When the stock is sold, the participant will have capital gain or loss equal to the sales proceeds less the value of the stock on the settlement date. Any capital gain or loss will be long-term if the participant held the stock for more than one year and otherwise will be short-term.

Other Stock-Based Awards and Cash-Based Awards. The tax consequences associated with any other stock-based award or any cash-based award granted under our 2013 plan will vary depending on the specific terms of such award. Among the relevant factors are whether or not the award has a readily ascertainable fair market value, whether or not the award is subject to forfeiture provisions or restrictions on transfer, the nature of the property to be received by the participant under the award and the participant's holding period and tax basis for the award or underlying common stock.

Tax Consequences to the Company. There will generally be no tax consequences to us except that we will be entitled to a deduction when a participant has compensation income. Any such deduction will be subject to the limitations of Section 162(m) of the Code.

Proposal Three: 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 2017

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, 2017.

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, as well as individual performance. 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 and if achieved, we believe will maximize shareholder value. The compensation committee anticipates that these performance option grants will replace a significant portion of future annual grants through 2020. 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. We use a mix of stock options and restricted stock. Historically, 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. 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. 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 2017 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 Four: 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, 2018, 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, 2018.

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, 2017 and December 31, 2016 by Ernst & Young LLP:

Fee Category	2017	2016
Audit Fees ⁽¹⁾	\$2,483,034	\$2,112,093
All Other Fees ⁽²⁾	2,000	1,955
Total Fees	\$2,485,034	\$2,114,048

Audit fees consist of fees for the audit of our annual financial statements on Form 10-K, the review of the interim (1) financial statements included in our quarterly reports on Form 10-Q 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 2017 or 2016 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, 2017 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, 2017. 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 Statement on Auditing Standards No. 16 (Communication with Audit Committees), as adopted by the Public Company Accounting Oversight Board, 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, 2017.

By the Audit Committee of the Board of Directors

John C. Kelly (Chair)

Melvin K. Spigelman, M.D.

Elizabeth H.S. Wyatt

PRINCIPAL STOCKHOLDERS

The following table presents information that we are aware of regarding the beneficial ownership of our common stock as of April 1, 2018 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 13, 2018 or will become exercisable within 60 days of April 13, 2018 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 73,548,798 shares of common stock outstanding as of April 13, 2018.

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.

Beneficial Owner:	Number of Shares of Common Stock Beneficially Owned	Percentage of Common Stock Beneficially Owned	
Named Executive Officers			
Clive A. Meanwell ⁽¹⁾	1,754,275	2.38	%
William B. O'Connor ⁽²⁾	92,691	*	
Christopher T. Cox ⁽³⁾	421,572	*	
Jeffrey Frazier ⁽⁴⁾	168,191	*	
Stephen M. Rodin ⁽⁵⁾	151,757	*	
Directors (excluding Dr. Meanwell)			
William W. Crouse ⁽⁶⁾	142,999	*	
Alexander J. Denner ⁽⁷⁾	1,946,940	2.65	%
Fredric N. Eshelman ⁽⁸⁾	2,101,197	2.86	%
Geno J. Germano ⁽⁹⁾	—	*	
John C. Kelly ⁽¹⁰⁾	129,585	*	
Armin M. Kessler ⁽¹¹⁾	251,260	*	
Paris Panayiotopoulos ⁽¹²⁾	18,244	*	
Sarah J. Schlesinger ⁽¹³⁾	—	*	
Hiroaki Shigeta ⁽¹⁴⁾	83,852	*	
Melvin K. Spigelman ⁽¹⁵⁾	150,499	*	
Elizabeth H.S. Wyatt ⁽¹⁶⁾	160,499	*	
All directors and executive officers as a group (16 persons) ⁽¹⁷⁾	7,573,561	10.29	%
5% Stockholders			
BlackRock, Inc. ⁽¹⁸⁾	9,718,386	13.21	%
Boxer Capital, LLC ⁽¹⁹⁾	3,825,202	5.20	%
FMR LLC ⁽²⁰⁾	10,934,594	14.86	%
The Vanguard Group, Inc. ⁽²¹⁾	6,244,562	8.49	%
Vanguard Specialized Funds - Vanguard Health Care Fund ⁽²²⁾	5,564,220	7.56	%

Wellington Management Group, LLP⁽²³⁾

10,200,290 13.86 %

*Represents beneficial ownership of less than 1%.

- (1) Includes options to purchase 1,069,994 shares that are exercisable within 60 days of April 13, 2018.
- (2) Includes options to purchase 70,809 shares that are exercisable within 60 days of April 13, 2018.
- (3) Includes options to purchase 190,484 shares that are exercisable within 60 days of April 13, 2018.

- (4) Includes options to purchase 133,841 shares that are exercisable within 60 days of April 13, 2018.
- (5) Includes options to purchase 121,355 shares that are exercisable within 60 days of April 13, 2018.
- (6) Includes options to purchase 89,866 shares that are exercisable within 60 days of April 13, 2018.
Consists of options to purchase 18,277 shares that are exercisable within 60 days of April 13, 2018, 6,663 shares held directly by Dr. Denner and 1,922,000 shares held by funds managed by Sarissa Capital Management LP (such 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.
- (7) Includes 944,357 shares of common stock owned by Eshelman Ventures, LLC, an entity wholly owned by Dr. Eshelman, and options held by Dr. Eshelman to purchase 28,277 shares that are exercisable within 60 days of April 13, 2018.
- (8) Mr. Germano joined the board of directors on November 9, 2017 and does not beneficially own any shares of the company's common stock.
- (9) Includes options to purchase 104,866 shares that are exercisable within 60 days of April 13, 2018.
- (10) Includes 3,000 shares held by Mr. Kessler's wife and options held by Mr. Kessler to purchase 97,366 shares that are exercisable within 60 days of April 13, 2017.
- (11) Consists of options to purchase 8,577 shares that are exercisable within 60 days of April 13, 2018.
- (12) Dr. Schlesinger joined the board of directors on February 22, 2018 and does not beneficially own any shares of the company's common stock.
- (13) Includes options to purchase 49,568 shares that are exercisable within 60 days of April 13, 2018.
- (14) Includes options to purchase 89,866 shares that are exercisable within 60 days of April 13, 2018.
- (15) Includes options to purchase 99,866 shares that are exercisable within 60 days of April 13, 2018.
- (16) Includes options to purchase an aggregate of 2,165,512 shares that are exercisable within 60 days of April 13, 2018.
- (17) Includes shares held by BlackRock, Inc. and certain of its subsidiaries. BlackRock, Inc. has sole power to vote or direct the vote of 9,576,972 shares and the sole power to dispose or to direct the disposition of 9,718,386 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 8, 2018.
- (18) Boxer Asset Management Inc. ("Boxer Management") is the managing member and majority owner of Boxer Capital, LLC ("Boxer Capital"). Joe Lewis is the sole indirect owner and controls Boxer Management and Avid Group Ltd. ("Avid"). Boxer Management and Boxer Capital have shared power to vote or to direct the vote of the 750,000 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 and Joe Lewis has shared power to vote or to direct the vote of the 3,825,202 shares that he beneficially owns. Boxer Management and Boxer Capital have shared power to dispose or direct the disposition of the 750,000 shares that they beneficially, Avid has shared power to dispose or direct the disposition of the 3,075,202 shares that it beneficially owns and Joe Lewis has shared power to dispose or direct the disposition of the 3,825,202 shares that he beneficially owns. The address of Boxer Capital is 11682 El Camino Real, Suite 320, San Diego, CA 92130. The address of Boxer Management, Avid and Joe Lewis is Cay House, EP Taylor Drive N7776, Lyford Cay, New Providence, Bahamas. The information is based on a Schedule 13G/A filed with the SEC on February 14, 2018.
- (19)

FMR LLC has sole power to vote or direct the vote of 1,586,676 shares and the sole power to dispose of 10,934,594 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' (20) 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, 2018. The Vanguard Group has sole power to vote or direct to vote 130,153 of the shares, shared power to vote or to direct to vote of 9,238 of the shares, sole power to dispose or direct the disposition of 6,111,909 of the shares and shared power to dispose or to direct the disposition of 132,653 of the shares. Includes 123,415 shares beneficially owned by Vanguard Fiduciary Trust Company, a wholly owned subsidiary of The Vanguard Group, Inc. as a (21) 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 15,976 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 9, 2018.

(22) The Vanguard Specialized Funds - Vanguard Health Care Fund has sole power to vote or direct to vote 5,564,220 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 February 2, 2018.

(23) 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 2,949,801 of the shares and with shared power to dispose or to direct the disposition of 10,200,290 of the shares. Certain of these shares are owned by Vanguard Health Care Fund, and may be duplicative of shares described in footnote 23 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 8, 2018.

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 26 times during 2017, including regular, special and telephonic meetings. Each director who served as a director during 2017 attended at least 75% of the aggregate of: (1) the total number of board meetings held during the period of 2017 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 2017 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 NASDAQ rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent and that audit committee members 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 Drs. Eshelman and Meanwell, representing 10 out of 12 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 Mr. Kelly, Dr. Spigelman and Ms. Wyatt (and while he was a member, Dr. Eshelman), who comprise our audit committee, Messrs. Denner, Kessler and Panayiotopoulos, who comprise our nominating and corporate governance committee, and Messrs. Crouse and Shigeta (and while he was a member, Mr. Hugin), who comprise our compensation committee, each satisfy the independence standards for such committees established by the SEC and the NASDAQ rules, as applicable.

Drs. Eshelman and 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; and
 • annual performance evaluations of the chief executive officer by the independent directors, led by the compensation committee of our board.

Until November 2017, Dr. Eshelman served as our non-executive chairman and currently serves as our executive chairman, while Dr. Meanwell is our chief executive officer and a director of the company. The board decided that the creation of a separate executive chairman role, distinct from the chief executive officer role, enables Dr. Meanwell to focus his full time and attention on execution of the company's strategy.

Dr. Eshelman 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:

Audit	Compensation	Nominating and Corporate Governance
John C. Kelly (Chair)	William W. Crouse (Chair)	Alexander J. Denner (Chair)
Melvin K. Spigelman	Geno J. Germano	Armin M. Kessler
Elizabeth H.S. Wyatt	Hiroaki Shigeta	Paris Panayiotopoulos

Mr. Panayiotopoulos joined the nominating and corporate governance committee in September 2017. Upon becoming our executive chair in November 2017, Dr. Eshelman stepped off the audit committee. Prior to his resignation in February 2018, Mr. Hugin was a member of the compensation committee. Mr. Germano joined the compensation committee in March 2018.

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 corporate governance section of "About" on 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 C. Kelly and Melvin K. Spigelman 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 eight times during 2017, 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 seven times during 2017, 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 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 2017, 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:

- identifying 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 corporate governance section of "About" on our website, www.themedicinescompany.com.

The nominating and corporate governance committee met five times in 2017, 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;
- demonstrated experience or skill set in particular management disciplines that complements, in the opinion of the members of the nominating and corporate governance committee, the existing members of the board of directors to provide a desirable balance; 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

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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 in 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 M. 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

2019 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 Regulation 14A 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; and
 - any material transaction occurring during the then immediately preceding 12-month period between such person and the company.
- 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 "About–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 2017 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 M. 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 then directors attended our 2017 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 2017, the 2017 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.

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 later of May 2011 or 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.

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 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 committee	\$1,500
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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 2017 for each non-employee director who served as a director during 2017. Dr. Schlesinger did not serve as a director in 2017. See the "2017 Summary Compensation Table" below for information on compensation paid to Dr. Meanwell. As noted above, our employee directors do not receive additional compensation for services as a director. Dr. Eshelman ceased being an independent director in November 2017 when he became our executive chairman and, as a result, he stopped receiving director compensation as of such date. In his capacity as executive chairman, Dr. Eshelman receives no additional compensation in excess of the compensation he received in his capacity as non-executive chairman of the Board. Dr. Schlesinger was not a director until February 2018 and therefore is not included in the table below.

2017 Director Compensation

Name	Fees Earned or Paid in Cash (\$)	Stock Awards (\$)(1)	Option Awards (\$)(2)	All Other Compensation (\$)	Total (\$)
William W. Crouse	\$108,000(3)	\$127,505	\$127,504	—	\$363,009
Alexander Denner	\$112,000(4)	\$127,505	\$127,504	—	\$367,009
Fredric N. Eshelman	\$88,813 (5)	\$127,505	\$201,833(14)	—	\$418,151
Geno J. Germano	\$7,944 (6)	—	\$320,010(15)	—	\$327,954
Robert J. Hugin	\$95,000 (7)	\$127,505	\$127,504	—	\$350,009
John C. Kelly	\$113,000(8)	\$127,505	\$127,504	—	\$368,009
Armin M. Kessler	\$107,500(9)	\$127,505	\$127,504	—	\$362,509
Paris Panayiotopoulos	\$65,986 (10)	\$127,505	\$447,507(16)	—	\$640,998
Hiroaki Shigeta	\$110,000(11)	\$127,505	\$127,504	—	\$365,009
Melvin K. Spigelman	\$109,500(12)	\$127,505	\$127,504	—	\$364,509
Elizabeth H.S. Wyatt	\$115,500(13)	\$127,505	\$127,504	—	\$370,509

These amounts represent the aggregate grant date fair value of restricted stock granted by us during 2017, determined in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic (1) 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 11 to our notes to our consolidated financial statements in our Annual Report on Form 10-K filed on March 1, 2018. The per share grant date fair value of the

award granted to each non-employee director on the date of our 2017 annual meeting of stockholders was \$39.39. At December 31, 2017 each of our non-employee directors, except Mr. Germano, held 3,237 shares of unvested restricted stock.

These amounts represent the grant date fair value of stock options granted by us during 2017, 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 11 to our notes to our consolidated financial statements in our Annual Report on Form 10-K filed on March 1, 2018. At December 31, 2017, the total number of shares subject to compensatory options held by each of our non-employee directors were: Mr. Crouse, 88,789; Mr. Denner 9,700; Dr. Eshelman, 14,700; Mr. Germano, 0; Mr. Hugin, 40,991; Mr. Kelly, 96,289; Mr. Kessler, 88,789; Mr. Panayiotopoulos, 0; Mr. Shigeta, 40,991; Dr. Spigelman, 88,789 and Ms. Wyatt, 98,789.

Mr. Crouse was the chair of the compensation committee in 2017. During 2017, Mr. Crouse received \$75,000 in board and compensation committee chair retainers and \$33,000 for board meetings attended in a year in excess of 10 meetings.

Dr. Denner was the chair of the nominating and corporate governance committee in 2017. During 2017, Dr. Denner received \$70,000 in board and nominating and corporate governance committee chair retainers and \$42,000 for board meetings attended in a year in excess of 10 meetings.

Dr. Eshelman was the non-executive chairman of the Board and a member of the audit committee until November 2017. During 2017, Dr. Eshelman received \$67,813 in board, non-executive chairman and audit committee retainers and \$21,000 for board meetings attended in a year in excess of 10 meetings.

Mr. Germano joined the Board in November 2017. During 2017, Mr. Germano received \$7,944 as a board retainer.

Mr. Hugin was a member of the compensation committee in 2017. During 2017, Mr. Hugin received \$65,000 in board and compensation committee retainers and \$30,000 for board meetings attended in a year in excess of 10 meetings.

Mr. Kelly was the chair of the audit committee in 2017. During 2017, Mr. Kelly received \$80,000 in board and audit committee chair retainers and \$33,000 for board meetings attended in a year in excess of 10 meetings.

Mr. Kessler was a member of the nominating and corporate governance committee in 2017. During 2017, Mr. Kessler received \$62,500 in board and nominating and corporate governance committee retainers and \$45,000 for board meetings attended in a year in excess of 10 meetings.

Mr. Panayiotopoulos was a member of the nominating and corporate governance committee commencing in August 2017. During 2017, Mr. Panayiotopoulos received \$44,986 in board and nominating and corporate governance committee retainers and \$21,000 for board meetings attended in a year in excess of 10 meetings.

Mr. Shigeta was a member of the compensation committee in 2017. During 2017, Mr. Shigeta received \$65,000 in board and compensation committee retainers and \$45,000 for board meetings attended in a year in excess of 10 meetings.

Dr. Spigelman was a member of the audit committee in 2017. During 2017, Dr. Spigelman received \$67,500 in board and audit committee retainers and \$42,000 for board meetings attended in a year in excess of 10 meetings.

Ms. Wyatt was a member of the audit committee in 2017. During 2017, Ms. Wyatt received \$67,500 in board and audit committee retainers and \$48,000 for board meetings attended in a year in excess of 10 meetings.

As the non-executive chairman until November 2017, Dr. Eshelman was awarded an annual additional stock option award of 5,000 shares of our common stock on the date of our 2017 annual meeting of stockholders. The grant date fair value of this award to Dr. Eshelman was \$74,329.

Mr. Germano joined the board of directors in November 2017 and was awarded an initial equity grant of \$320,000 at that time.

Mr. Panayiotopoulos joined the board of directors in March 2017 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. Mr. Cox remains employed with us and continues to lead certain company functions and initiatives, including corporate strategy, business development and investor relations. 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 have agreed on certain procedures to address potential conflicts that may arise out of Mr. Cox's dual roles.

Compensation Committee Interlocks and Insider Participation

Until Mr. Hugin's resignation from our board on February 5, 2018, our compensation committee consisted of William W. Crouse, Robert J. Hugin and Hiroaki Shigeta. Following Mr. Hugin's resignation, our compensation committee consisted of William W. Crouse and Hiroaki Shigeta. 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.

In November 2015, we announced that we were in the process of evaluating our operations with a goal of unlocking and maximizing stockholder value. In particular, we stated our intention was to explore strategies for optimizing our capital structure and liquidity position and to narrow our operational focus by strategically separating non-core businesses and products in order to generate non-dilutive cash and reduce associated cash burn and capital requirements. In connection with this announcement, with respect to compensation, 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 committee purposefully modified the compensation program to support the company's shift in business focus. 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. Changes to the compensation program were made for 2016 and were continued in 2017, including:

- ▲ freeze on executive officer base salary, other than promotions;
- ▲ Adjustments to the weighting and targets of our annual bonus plan performance metrics to shift focus from revenue targets to achievement of clinical trial milestones along with regulatory and development progression; and
- ▲ Increased use of equity awards (70% of which are options).

Our Performance

We believe the changes in our compensation approach commenced in 2016 and continued in 2017 supported the shift in strategic direction of our company, which were reflected in key performance achievements in 2016 and 2017. As a result of our decision to narrow our operational focus, we executed on strategic transactions, including the sale of our hemostasis portfolio (consisting of PreveLeak, Raplixa and Recothrom) and our non-core cardiovascular assets (consisting of Kengreal, Cleviprex and rights to Argatroban for Injection) and restructured \$400 million of our convertible debt to improve operating flexibility in 2016 and the sale of our infectious disease business (consisting of Vabomere, Orbactiv and Minocin® (minocycline) for injection), which we entered into in November 2017 and closed in January 2018, and the repayment of approximately \$55 million of convertible debt in 2017. Consistent with our intentions announced in November 2015, in January 2017 we announced that we were seeking opportunities to partner or divest Ionsys (fentanyl iontophoretic transdermal system). Although we continue to seek a partnership or divestiture transaction for Ionsys, in June 2017 we commenced a voluntary discontinuation and withdrawal of Ionsys from the market and ceased related commercialization activities, with the regulatory authorizations for Ionsys remaining open. In addition, in August 2017, we announced that we are discontinuing the clinical development program for MDCO-700, an investigational anesthetic agent.

Upon the completion of the divestiture of the infectious disease program, including related transition services, we expected to retain approximately 58 professionals of which 44 will focus on inclisiran and 14 will provide support functions such as finance, legal, human resources and information technology, which we refer to as the restructured company.

As a result of these transactions and restructurings, we are now focused on the development of inclisiran as a transformative treatment for ASCVD. In 2017, we continued to advance inclisiran, including:

• In January 2017, we initiated the ORION-2 and ORION-3 studies of inclisiran;

• In March 2017, we reported positive final results from the ORION-1 Phase 2 study of inclisiran; and

In the fourth quarter of 2017, we initiated the Phase 3 LDL-C lowering program for inclisiran. The Phase 3 program is comprised of four pivotal clinical trials in patients with ASCVD, ASCVD risk equivalents and familial hypercholesterolemia.

Our Named Executive Officers

Our named executive officers for 2017 are Clive Meanwell, our chief executive officer, William O'Connor, our former chief financial officer, and our next three most highly compensated executive officers who were executive officers as of the end of 2017: Christopher Cox, our executive vice president and chief corporate development officer; Jeffrey Frazier, our former chief human strategy 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 2017, approximately 88% of our 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.

Annual Cash Compensation. Our annual cash bonus plan is tied to corporate strategic and financial goals, as well as individual performance. 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 and if achieved, we believe will maximize shareholder value. The compensation committee anticipates that these performance option grants will replace a significant portion of future annual grants through 2020.

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. We use a mix of stock options and restricted stock. Historically, 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.

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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. 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.

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 2017 Say-on-Pay Vote Results and Stockholder Engagement

In May 2017, our board reviewed the results of our 2017 "say-on-pay" vote in which approximately 99% 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. 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, such as clinical trial progress, achievement of regulatory approvals, unlocking shareholder value and our financial and operational performance as measured by metrics such as net revenue and cash position. 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

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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. As part of this process, during the compensation committee's review of executive compensation, Radford provides the compensation committee with tally sheets presenting each component of compensation received for reference in considering the total compensation package of each named executive officer. The compensation committee also consults with our chief executive officer in determining compensation packages of our other named executive officers. However, our chief executive officer is not present when committee decisions are made regarding the other named executive officer's individual compensation.

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 particular, the peer group selection criteria used in selecting the 2017 peer group consisted of companies that most closely met the following primary criteria:

- industry focus, with targeted companies operating in the biotech and pharmaceutical industry;
- stage of operations, with targeted companies having late clinical stage or commercial 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.

In addition, when selecting the 2017 peer group, the compensation committee considered revenue as a secondary peer group selection criterion, targeting biotechnology and pharmaceutical companies with revenue less than \$750 million.

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 survey data for each year as the market compensation data.

In October 2017, the compensation committee, working with Radford and our senior management, reviewed our peer group in the context of our anticipated evolution of the business, including planned divestiture of our infectious disease business and restructuring. As a result, the compensation committee adjusted the composition of the peer group by removing eight companies that no longer fit our peer group profile and adding eight companies, Acceleron Pharma, Inc., Agios Pharmaceuticals Inc., Amicus Therapeutics, Inc., Array BioPharma Inc., bluebird bio Inc., Esperion Therapeutics, Inc., Global Blood Therapeutics Inc., and Sage Therapeutics, which fit our peer group profile. Specifically, the compensation committee removed Acorda Therapeutics, Inc., Alkermes plc, Depomed, Inc., Emergent BioSolutions, Inc., Horizon Pharma plc, Insys Therapeutics, Inc. and Seattle Genetics, Inc. because they no longer matched the selection criteria for our peer group and removed Ariad Pharmaceuticals, Inc. because it was acquired by another company. We refer to the companies that remain in, or were added to, the 2017 peer group as the 2018 peer group. The 2017 and 2018 peer groups are listed below.

2017 Peer Group

- Acorda Therapeutics, Inc.
- Alkermes plc
- Alnylam Pharmaceuticals, Inc.
- Ariad Pharmaceuticals, Inc.

2018 Peer Group

- Acceleron Pharma, Inc.
- Agios Pharmaceuticals Inc.
- Alnylam Pharmaceuticals, Inc.
- Amicus Therapeutics, Inc.

- Depomed, Inc.
- Emergent BioSolutions, Inc.
- Horizon Pharma plc
- Insys Therapeutics, Inc.
- Intercept Pharmaceuticals, Inc.
- Ionis Pharmaceuticals, Inc.
- Ironwood Pharmaceuticals Inc.
- Juno Therapeutics, Inc.
- Nektar Therapeutics
- Pacira Pharmaceuticals, Inc.
- Seattle Genetics, Inc.
- Ultragenyx Pharmaceuticals 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.

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;
- 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.

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 for all employees. During the compensation committee's review of each named executive officer's salary, this baseline 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, including for Dr. Meanwell, his leadership related to the planning, oversight and direction of our competitive human and financial strategy. In addition, adjustments are considered 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 2017, the compensation committee established 2017 base salaries for our named executive officers. In establishing base salaries for 2017, the compensation committee considered the 2017 market compensation data of base salaries, the level of each executive's responsibility, each executive's past performance and experience and our shift in business focus. The compensation committee aimed to provide a base salary for each executive generally comparable to the base salary of executives in the 50th percentile of 2017 market compensation data. Following its consideration, the compensation committee determined not to change the base salaries for named executive officers other than Messrs. O'Connor and Rodin, who both fell below the 50th percentile of market compensation. In February 2018, with respect to 2018 base salaries, the compensation committee again 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 new 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.

The following table presents each named executive officer's 2016, 2017 and 2018 base salary and the percentage change in base salary between the periods:

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Named Executive Officer	2016 Salary	2017 Salary	Percent Change from 2016 to 2017	2018 Salary	Percent Change from 2017 to 2018
Clive A. Meanwell	\$896,447	\$896,447	— %	\$677,000	(24.5)%
William B. O'Connor(1)	\$465,000	\$476,625	2.5 %	\$476,625	— %
Christopher T. Cox	\$500,000	\$500,000	— %	\$500,000	— %
Jeffrey Frazier(2)	\$445,875	\$445,875	— %	—	—
Stephen M. Rodin	\$425,000	\$471,750	11.0 %	\$450,000	(4.6)%

In March 2018, Mr. O'Connor, our former chief financial officer, announced his retirement from the company. He (1) will remain with the company as a special advisor to the chief executive officer through 2018 and will be primarily focused on the close-out of the company's non-core businesses and products.

(2) In January 2018, Mr. Frazier, our former chief human strategy officer, was notified that his employment was terminated as part of our ongoing restructuring, effective March 19, 2018.

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 individual performance objectives, and to reward our named executive officers when their efforts result in success for the company. The compensation committee approves corporate goals for each year and determines potential total bonus amounts based on both achievement of these goals and of individual performance goals. For 2017 bonuses, the corporate goals comprise 70% of the total cash bonus and the individual goals comprise 30% of the total cash bonus for our executive officers, except for our chief executive officer, whose total bonus amount is based solely on the company's achievement of its corporate goals.

Bonus targets under the annual cash bonus plan are calculated as a percentage of the applicable named executive officer's base salary, with target percentiles corresponding to the position of the executive at the company. For 2017, Dr. Meanwell's bonus target percentage was 100% of his base salary, and Messrs. O'Connor, Cox, Frazier and Rodin's bonus target percentages were 60% of their respective base salaries. While Radford did not recommend compensation reductions for our executive officers, in light of new 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. The table below presents the effect of these bonus target reductions, together with base salary reductions discussed above, on Dr. Meanwell's and Mr. Rodin's total target cash compensation from 2017 to 2018:

Named Executive Officer	2017 Total Cash Compensation Target(1)	2018 Total Cash Compensation Target(2)	2017 Actual Bonus Payment Against Bonus Target (%)
Clive A. Meanwell	\$1,792,894	\$1,150,900	(35.8)%
Stephen M. Rodin	\$754,800	\$652,500	(13.6)%

(1) This column represents the annual base salary and bonus target amount for Dr. Meanwell and Mr. Rodin for 2017.

(2) This column represents the annual base salary and bonus target amount for Dr. Meanwell and Mr. Rodin for 2018.

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 relating to revenue, operating profit

and operating expenses, 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. In February 2017, our compensation committee recommended, and our board of directors approved, the corporate goals for 2017, including the weighting for each corporate goal. The corporate goals for 2017 were collectively allocated a corporate goal value of 100 points, with the corporate goal award value for "financial goals" (unlocking shareholder value and cash position) collectively representing 40 points, "competitive goals" (regulatory, late stage progression and commercial growth of products) collectively representing 50 points and "human goals" (employee alignment, capabilities and engagement) collectively representing 10 points. These goals, which differed from the prior year's annual bonus goals with respect to weighting and metrics chosen, were selected and weighted in light of the continued significant shift in the company's business focus from commercial pharmaceuticals to a biotech-focused company principally due to our loss of patent exclusivity for Angiomax.

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% of the 70% weighting toward the total bonus amount. For 2017, 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 the corporate objective portion of each named executive officer's cash bonus target.

Individual Objectives. Individual objectives are tied to the particular area of expertise of the named executive officer and his performance in attaining those objectives. Achievement of these objectives is measured relative to external forces, internal resources utilized and overall individual effort. Except with respect to our chief executive officer, individual objectives are based on a variety of factors, including the achievement of corporate goals. The individual performance objectives are determined by the executive officer to whom the named executive officer reports. In the case of our chief executive officer, our corporate goals serve as his individual objectives. To receive credit for the achievement of an individual objective, a named executive officer must accomplish at least 80% of such objective. The compensation committee reviews the individual objectives which the officer has been deemed to have achieved and the officer's performance beyond the objectives and, based on a subjective, qualitative analysis of the achieved objectives, the individual's efforts, the overall impact of such officer's performance on the performance of the company and such other relevant factors as the compensation committee may determine, the compensation committee determines an individual performance rating for the officer. Due to the announced restructuring commenced in 2017, we did not conduct formal annual performance reviews and, as a result, all employees, including our named executive officers, were determined to have a 100% individual performance rating. When calculating cash bonuses, the actually determined individual performance rating for the year is multiplied by each named executive officer's cash bonus target.

Bonus Determinations. In February 2018, the compensation committee evaluated our 2017 actual performance against our 2017 corporate goals. The following table sets out our 2017 corporate goals, the weighting for each goal set by the compensation committee, the achievement percentage as determined by the compensation committee in February 2018 and the resulting award value:

Corporate Goal	Weight	Result	Award Value
Financial	40	%	
Unlock Shareholder Value - divest, partner or shut down Ionsys, with 2017 operating loss not to exceed \$15 million	7.5	% Partially met (approx. 50%) - Ionsys commercial shutdown completed in June 2017, but regulatory approvals maintained as partnership discussions continue; 2017 operating loss approximately \$19 million (cash).	3.8
Unlock Shareholder Value - secure an ex-US partner for inclisiran with an upfront payment of at least \$150 million	15	% Not met (0%) - subsequent decision not to focus on securing an ex-US partner	0
Unlock Shareholder Value - secure 3rd party equity investment in infectious disease of at least \$100 million at a valuation of at least \$500 million	10	% Partially met (approx. 80%) - subsequent decision to focus on divestment of infectious disease business; transaction entered into in November 2017 with a net present value of \$464 million	8
Cash and Liquidity - maintain sufficient cash position through 2017 with year-end cash at or above a \$300 million target	7.5	% Partially met (approx. 80%) - cash position through 2017 sufficient to maintain operations with cash at December 31st of \$151 million (and \$165 million received January 5, 2018 from divestiture of infectious disease business entered into November 2017); subsequent decision to not refinance \$55 million of debt obligations due June 2017	6
Competitive	50	%	
Late Stage Progression - enroll first patient in Phase III inclisiran trial by December 31st	15	% Exceeded (110%) - the first patient enrolled in our Phase III program for inclisiran in November 2017	16.5
Regulatory - submit a marketing authorization application ("MAA") in Europe for Vabomere by June 30th	5	% Exceeded (110%) - the MAA for Vabomere was submitted via centralized procedure in April 2017	5.5
Regulatory - secure an approval for Vabomere in the United States by December 31st	15	% Exceeded (120%) - Vabomere was approved by the FDA in the United States in August 2017	18
Revenue - grow Orbactiv and Minocin revenue to at least \$30 million in the aggregate	5	% Exceeded (110%) - revenue for Orbactiv and Minocin was \$34 million in 2017	5.5
Late Stage Progression - complete steps for a Phase III go/no-go decision with respect to MDCO 700 at a cost not to exceed \$15 million	10	% Met (100%) - we discontinued the clinical development program for MDCO-700 in August 2017	10.0
Human	10	%	
Employee Survey - maintain ACE (alignment, capabilities, engagement) survey scores from previous year (A=81; C=80; E=66) despite restructuring activities	10	% Met (100%) - the ACE survey results for 2017 were: A=83; C=76; E=69	10.0
Total	100	%	83.3*

* Due to the amount of discretion used in determining points for the "partially met" goals, the compensation committee decided on a company bonus factor of 80%.

While the compensation committee discussed individual achievements in 2017, due to the announced restructuring commenced in 2017, the compensation committee did not conduct formal annual performance reviews and, as a result, our named executive officers were determined to have a 100% individual performance rating. The 100% individual performance rating, together with the 80% company bonus factor, resulted in the following bonus payouts:

Named Executive Officer	2017 Salary	2017 Bonus Target (%)	2017 Bonus Target (\$)	2017 Actual Bonus Payment (1)	2017 Actual Bonus Payment Against Bonus Target (%)
Clive A. Meanwell	\$896,447	100 %	\$896,447	\$717,158	80%
William B. O'Connor	\$476,625	60 %	\$285,975	\$245,939	86%
Christopher T. Cox	\$500,000	60 %	\$300,000	\$258,000	86%
Jeffrey Frazier	\$445,875	60 %	\$267,525	\$230,072	86%
Stephen M. Rodin	\$471,750	60 %	\$283,050	\$243,423	86%

(1) This column represents the actual cash bonus payment made to our named executive officers. Such amount is based on the company bonus factor and the individual performance rating of the named executive officer by allocating 70% of the target bonus to corporate goal achievement and multiplying that amount by the company bonus factor and allocating 30% to individual performance and multiplying that amount by the individual performance rating. The two values are then added together to determine the actual payout. Dr. Meanwell's bonus is determined based entirely on corporate goal achievement.

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 are typically granted in conjunction with the annual review of their individual performance. This review typically occurs at the regularly scheduled meeting of the compensation committee held in the first quarter of each year. This allows the compensation committee to receive audited financial statements of the previous year prior to making award determinations. Therefore, annual cash bonuses and equity awards relating to performance during 2016 for all of our employees, including our named executive officers, were granted in February 2017, to be effective as of March 1, 2017 (March 1 of each year being our established grant date of our annual stock option and restricted stock grants to named executive officers). Our annual option grants to named executive officers generally vest in 48 equal monthly installments commencing one month after the date of the grant. Exercise rights generally cease 90 days after termination of employment except in the case of death, disability or in accordance with our associate retirement policy. Restricted shares vest in annual increments of 25% over a period of four years, commencing on the first anniversary of the date of grant.

In February 2017, based on discussions with Radford, the compensation committee decided to grant a mix of 70% options and 30% restricted stock to our named executive officers for their respective performances in 2016. In

determining these equity awards, the compensation committee analyzed this data comparing the value of the options granted by companies represented in the 2016 market compensation data and the size of the equity grants as a percentage of the overall ownership of those companies. In determining the equity awards for our named executive officers, the compensation committee also considered each named executive officer's individual performance.

In February 2017, the compensation committee approved the following equity awards to our named executive officers for 2016, to be effective as of March 1, 2017.

Named Executive Officer	Number of Shares Underlying Options	Number of Shares of Restricted Stock
Clive A. Meanwell	210,793	34,156
William B. O'Connor	49,185	7,970
Christopher T. Cox	70,265	11,386
Jeffrey Frazier	35,133	5,693
Stephen M. Rodin	42,159	6,832

In 2018, the compensation committee did not grant equity awards for the 2017 performance of employees, including our named executive officer. 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 will be with the company when our announced restructuring is 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. The compensation committee anticipates that this performance option award will replace a significant portion of future annual grants through 2020.

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.

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. Messrs. O'Connor and Frazier were not eligible for the grants made in 2018 since neither individual is expected to be an employee of the restructured company.

Named Executive Officer	Number of Shares Underlying Performance Options*	Number of Shares of Restricted Stock**
Clive A. Meanwell	585,000	22,589
Christopher T. Cox	150,000	15,000

Stephen M. Rodin 120,000 6,250

* Effective date of April 24, 2018

** Effective date of March 1, 2018 for Messrs. Cox and Rodin and April 24, 2018 for Dr. Meanwell

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 section "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 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. We believe 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 in the case of change-of-control benefits has been to structure these 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

Dr. Meanwell serves 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 for an annual base salary of \$896,447, subject to upward adjustment in the discretion of our board, and that Dr. Meanwell is eligible to receive an annual cash bonus targeted to be 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. The agreement provides for the payment of accrued rights upon a termination and the payment of bonus earned but not yet paid prior to the termination date in the event of certain qualifying terminations. 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. O'Connor, Cox 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. As part of ongoing restructuring at the company, Mr. Frazier's employment with the company terminated in March 2018.

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 our chief executive officer and certain other named executive officers (other than our chief

financial officer) in the year that the compensation is 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 TCJA, 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, 2017 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 is not intended to comply with the exemptions in Section 162(m) of the Code.

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

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

William W. Crouse (Chair)

Geno J. Germano

Hiroaki Shigeta

Our Current Executive Officers

Below is information about each of our executive officers other than Fredric Eshelman, our executive chairman, and Clive Meanwell, our chief executive 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, 2018, 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.

CHRISTOPHER T. COX

Age: 53

Chris Cox has been an executive vice president and our chief corporate development officer since February 2016. Mr. Cox has been a corporate attorney for over 20 years, most recently at Cadwalader, which he joined in January 2012. He was co-chair of Cadwalader’s corporate group and a member of its management committee until February 2016, was senior counsel of the firm from February 2016 until January 2018 and has been a partner of the firm since January 2018. Prior to January 2012, he was a partner at Cahill Gordon & Reindel. Mr. Cox has been a director of Datawatch Corporation since August 2012. He received a B.S. and a J.D. from the University of Missouri.

STEPHEN M. RODIN

Age: 42

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: 42

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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, 2017.

2017 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, 2017 and each of the previous two fiscal years to the extent the named executive officer was a named executive officer for such prior year.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)(1)	Stock Awards (\$)(2)	Option Awards (\$)(2)	Non-Equity Incentive Plan Compensation (\$)(3)	All Other Compensation (\$)(4)	Total (\$)
Clive A. Meanwell	2017	\$896,447	—	\$1,800,021	\$4,189,111	\$717,158	\$5,148	\$7,607,885
Chief Executive Officer	2016	\$896,447	—	\$1,500,016	\$3,450,640	\$853,418	\$2,935	\$6,703,456
William B. O'Connor	2015	\$896,447	—	\$1,124,993	\$2,632,467	\$537,868	\$3,354	\$5,195,129
Former Chief Financial Officer	2017	\$476,625	—	\$420,019	\$977,458	\$245,939	\$11,304	\$2,131,345
Christopher T. Cox	2016	\$465,000	\$100,000	\$240,003	\$552,100	\$287,203	\$11,164	\$1,655,470
Chief Corporate Development Officer	2015	\$409,500	—	\$142,498	\$333,450	\$158,169	\$11,304	\$1,054,921
Jeffrey Frazier	2017	\$500,000	—	\$600,042	\$1,396,383	\$258,000	\$9,744	\$2,764,169
Former Chief Human Strategy Officer	2016	\$422,436	\$100,000	—	\$3,500,009	\$266,993	\$9,445	\$4,298,883
Stephen M. Rodin	2017	\$445,875	—	\$300,021	\$698,201	\$230,072	\$11,164	\$1,685,334
General Counsel and Secretary	2016	\$445,875	\$75,000	\$240,003	\$552,100	\$263,352	\$9,520	\$1,585,849
	2015	\$445,875	—	\$142,498	\$333,450	\$192,618	\$9,744	\$1,124,185
	2017	\$471,750	—	\$300,021	\$837,830	\$243,423	\$8,730	\$1,921,779
	2016	\$425,000	\$100,000	\$240,003	\$552,100	\$264,792	\$8,632	\$1,590,527
	2015	\$368,000	—	\$23,994	\$56,159	\$154,560	\$8,725	\$611,438

(1) The amounts represent payment of special transaction bonuses for extraordinary efforts in 2016 in connection with transactions by the company.

(2) These amounts represent the grant date fair value of equity-based awards granted by us during the applicable year, 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 11 to our notes to our consolidated financial statements in our Annual Report on Form 10-K filed on March 1, 2018.

(3) These amounts represent the payouts under our annual cash bonus plan, which is described under the "—Compensation Discussion and Analysis" section of our 2017 proxy statement.

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

Grants of Plan-Based Awards

The following table summarizes information regarding restricted stock awards and options granted to each of our named executive officers during the year ended December 31, 2017.

Name	Approval Date	Grant Date	Estimated Possible Payouts Under Non-Equity Incentive Plan Awards		All Other Stock Awards: Number of Shares of Stock or Units (#)	All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards (\$/Sh)(1)	Grant Date Fair Value of Stock and Option Awards (\$)(2)
			Threshold (\$)	Maximum (\$)				
Clive A. Meanwell	2/24/2017	3/1/2017				210,793	(3) \$ 52.70	\$4,189,111
	2/24/2017	3/1/2017			34,156	(4)	—	\$1,800,021
	—	—	\$896,447	\$1,344,671				
William B. O'Connor	2/24/2017	3/1/2017				49,185	(3) \$ 52.70	\$977,458
	2/24/2017	3/1/2017			7,970	(4)	—	\$420,019
	—	—	\$285,975	\$428,963				
Christopher T. Cox	2/24/2017	3/1/2017				70,265	(3) \$ 52.70	\$1,396,383
	2/24/2017	3/1/2017			11,386	(4)		\$600,042
	—	—	\$300,000	\$450,000				
Jeffrey Frazier	2/24/2017	3/1/2017				35,133	\$ 52.70	\$698,201
	2/24/2017	3/1/2017			5,693	(4)		\$300,021
	—	—	\$267,525	\$401,288				
Stephen M. Rodin	2/24/2017	3/1/2017				42,159	(3) \$ 52.70	\$837,830
	2/24/2017	3/1/2017			6,832	(4)	—	\$360,046
	—	—	\$283,050	\$424,575				

(1) 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.

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

The options vest in 48 equal monthly installments commencing one month after their grant date. The options 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."

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 options awards and stock awards as of December 31, 2017 by our named executive officers. Each equity grant is shown separately for each named executive officer.

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Exercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock that Have Not Vested (\$)(1)
Clive A. Meanwell	60,000	—	\$ 7.31	2/19/2020		
	15,620	—	\$ 13.54	12/7/2020		

240,000	—		\$17.45	2/18/2021	
150,000	—		\$22.04	2/24/2022	
64,568	—		\$31.49	2/28/2023	
123,265	8,218	(2)	\$30.55	2/29/2024	
161,133	73,242	(3)	\$28.77	2/28/2025	
130,277	167,499	(4)	\$33.04	2/28/2026	
39,524	171,269	(5)	\$52.70	2/28/2027	
					15,020(9)\$410,647
					19,551(10)\$534,524
					34,050(11)\$930,927
					34,156(12)\$933,825

William B. O'Connor	448	—		\$31.49	2/28/2023	
	5,268	1,437	(2)	\$30.55	2/29/2024	
	20,411	9,277	(3)	\$28.77	2/28/2025	
	20,844	26,800	(4)	\$33.04	2/28/2026	
	9,222	39,963	(5)	\$52.70	2/28/2027	
						2,626 (9)\$71,795
						2,476 (10)\$67,694
						5,448 (11)\$148,948
						7,970 (12)\$217,900

Christopher T. Cox	138,510	163,695	(6)	\$32.49	2/24/2026	
	13,175	57,090	(5)	\$52.70	2/28/2027	
						11,386(12)\$311,293

Jeffrey Frazier	44,497	6,356	(7)	\$28.06	6/1/2024	
	20,411	9,277	(3)	\$28.77	2/28/2025	
	20,844	26,800	(4)	\$33.04	2/28/2026	
	6,587	28,546	(5)	\$52.70	2/28/2027	
						5,791 (9)\$158,326
						2,476 (10)\$67,694
						5,448 (11)\$148,948
						5,693 (12)\$155,647

Stephen M. 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	
	3,358	224	(2)	\$30.55	2/29/2024	
	37,500	2,500	(8)	\$30.07	3/2/2024	
	3,438	1,562	(3)	\$28.77	2/28/2025	
	20,844	26,800	(4)	\$33.04	2/28/2026	
	7,905	34,254	(5)	\$52.70	2/28/2027	
						409 (9)\$11,182
						416 (10)\$11,373
						5,448 (11)\$148,948

6,832 (12) \$186,787

- (1) Calculated by multiplying the number of unvested shares by \$27.34, the closing price per share of our common stock on The NASDAQ Global Select Market on December 31, 2017.
- (2) These options become exercisable in 48 equal monthly installments, commencing one month after March 1, 2014. Three installments remain unvested as of December 31, 2017.
- (3) These options become exercisable in 48 equal monthly installments, commencing one month after March 1, 2015. 15 installments remain unvested as of December 31, 2017.

- (4) These options become exercisable in 48 equal monthly installments, commencing one month after March 1, 2016. 27 installments remain unvested as of December 31, 2017.
- (5) These options become exercisable in 48 equal monthly installments, commencing one month after March 1, 2017. 39 installments remain unvested as of December 31, 2017.
- (6) 25% of these options became exercisable on February 25, 2017 and the remaining become exercisable in 36 equal monthly installments commencing one month thereafter.
- (7) 25% of these options became exercisable on June 2, 2015 and the remaining become exercisable in 36 equal monthly installments commencing one month thereafter.
- (8) These options become exercisable in 48 equal monthly installments, commencing one month after March 3, 2014. 3 installments remain unvested as of December 31, 2017.
- (9) These shares of restricted stock vest on March 1, 2018.
- (10) These shares of restricted stock vest in two equal installments on March 1, 2018 and on March 1, 2019.
- (11) These shares of restricted stock vest in three equal installments on March 1, 2018, March 1, 2019 and March 1, 2020.
- (12) These shares of restricted stock vest in four equal installments on March 1, 2018, March 1, 2019, March 1, 2020 and March 1, 2021.

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, 2017. 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.

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise (#)	Value Realized on Exercise (\$)(1)	Number of Shares Acquired on Vesting (#)	Value Realized on Vesting (\$)
Clive A. Meanwell	200,920(2)	\$ 1,595,305	52,484	\$2,765,907
William B. O'Connor	83,335	\$ 1,985,024	8,403	\$442,838
Christopher T. Cox	—	—	—	—
Jeffrey Frazier	—	—	7,030	\$259,778
Stephen M. Rodin	—	—	2,989	\$157,520

(1)

The value realized is equal to the difference between market price at exercise and exercise price of the underlying option, with the market price calculated as the closing price of our common stock on the day of exercise.

Dr. Meanwell exercised options with a near term expiry and sold a portion to cover the exercise price and taxes. As a result of the option exercise and purchase of a portion of the underlying shares, Dr. Meanwell holds an additional 64,670 shares of common stock following the transaction.

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 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 the officer 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 Dr. Meanwell, under these circumstances, he would 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 officer under the severance agreements, if we terminate the employment of the officer for any reason, the 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 January 18, 2018, Jeffrey Frazier, our former chief human strategy officer, was notified that his employment was terminated as part of our ongoing restructuring, effective March 19, 2018. Under Mr. Frazier's severance agreement, he received or is entitled to receive the following severance benefits:

- a lump sum payment equal to \$445,875, less all applicable statutory tax withholdings and deductions;

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

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

Mr. Frazier 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 applicable plan) to the restricted stockholder during the one-year period following a change in control event (as defined in the applicable plan). Our 2013 plan provides that all options granted thereunder become immediately exercisable upon the occurrence of a termination event (as defined in the applicable plan) to the optionholder during the one-year period following a change in control event (as defined in the applicable 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 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, 2017, 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 29, 2017 was \$27.34.

The table below also reflects the payments and benefits to which Mr. Frazier is entitled under the severance agreement with him as of March 19, 2018, the date his employment with us terminated. The closing price per share of our common stock on the NASDAQ Global Select Market on March 19, 2018 was \$32.40.

Name	Bonus for Year of Termination	Cash Severance	Vacation Payout	Value of Accelerated Equity(1)	Health and Welfare	Outplacement Services(2)	Total
Clive A. Meanwell							
Prior to a Change of Control:							
Termination without Cause or Resignation for Good Reason	—	\$1,792,894	\$17,239	\$1,722,393	\$34,194	\$25,000	\$3,591,720
Termination due to Death or Disability	—	—	—	\$—	—	—	\$—
Within One Year After a Change of Control:							
Termination without Cause or Resignation for Good Reason(3)	\$1,792,894	\$1,792,894	\$17,239	\$2,809,923	\$68,388	\$25,000	\$6,506,338
Termination due to Death or Disability	—	—	—	\$2,809,923	—	—	\$2,809,923
William B. O'Connor							
Prior to a Change of Control:							
Termination without Cause or Resignation for Good Reason	—	\$476,625	\$5,573	\$217,396	\$31,489	\$25,000	\$756,083
Termination due to Death or Disability	—	—	—	\$—	—	—	\$—
Within One Year After a Change of Control:							
Termination without Cause or Resignation for Good Reason(3)	\$428,963	\$714,938	\$5,573	\$513,953	\$47,233	\$25,000	\$1,735,660
Termination due to Death or Disability	—	—	—	\$513,953	—	—	\$513,953
Christopher T. Cox							
Prior to a Change of Control:							
Termination without Cause or Resignation for Good Reason	—	\$500,000	\$9,615	\$77,837	\$31,922	\$25,000	\$644,374
Termination due to Death or Disability	—	—	—	\$—	—	—	\$—
Within One Year After a Change of Control:							
Termination without Cause or Resignation for Good Reason(3)	\$450,000	\$750,000	\$9,615	\$233,456	\$47,883	\$25,000	\$1,515,954
Termination due to Death or Disability	—	—	—	\$233,456	—	—	\$233,456
Jeffrey Frazier							
Prior to a Change of Control:							
Termination without Cause	—	\$445,875	\$15,588	\$325,319	\$31,489	\$25,000	\$843,271
Stephen M. Rodin							

Prior to a Change of Control:

Termination without Cause or Resignation for Good Reason	—	\$471,750	\$9,072	\$81,719	\$34,158	\$25,000	\$621,699
Termination due to Death or Disability	—	—	—	\$—	—	—	\$—

Within One Year After a Change of Control:

Termination without Cause or Resignation for Good Reason(3)	\$424,575	\$707,625	\$9,072	\$253,223	\$51,237	\$25,000	\$1,470,732
Termination due to Death or Disability	—	—	—	\$253,223	—	—	\$253,223

The value of accelerated equity is calculated by multiplying the number of shares subject to options for which vesting would be accelerated by the difference between \$27.34, the closing price per share of our common stock on

(1) The NASDAQ Global Select Market on December 29, 2017, and the per share exercise prices for such options.

Options with a strike price above \$27.34 are not considered to have any acceleration value for the purposes of this table.

The amount in this column represents an estimate for a full year of outplacement services based on rates charged to

(2) senior 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.

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 Dr. Meanwell, our chief executive officer (our "CEO").

For 2017, the median of the annual total compensation of all of our employees (excluding Dr. Meanwell) was \$230,461 and the annual total compensation of Dr. Meanwell was \$7,607,885. Based on this information, for 2017, the ratio of the annual total compensation of Dr. Meanwell, our CEO, to the median of the annual total compensation of all other employees was 33 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, 2017, which consisted of approximately 335 employees in the U.S. and foreign jurisdictions, and examined, for all individuals, excluding Dr. Meanwell, 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, 2017.

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, 2017, actual cash bonus paid in 2017 and grant date value of actual equity awards granted in 2017. 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 2017, but did not work for us for the entire fiscal year. We applied an exchange rate as of December 31, 2017, 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 2017 calculated in accordance with the requirements of Item 402(c)(2)(x) of Regulation S-K, resulting in annual total compensation of \$230,461. With respect to the annual total compensation of Dr. Meanwell, we used the amount reported in the "Total" column of the 2017 Summary Compensation Table.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information, as of December 31, 2017, 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 2007 plan; (iii) our 2009 plan; (iv) our 2010 ESPP; and (v) our 2013 plan. The information below is categorized according to whether or not the equity plan was previously approved by stockholders:

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options (a)	Weighted-Average Exercise Price of Outstanding Options (b)	Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a)) (c)	
Equity compensation plans approved by security holders	7,039,036	(1)(2)\$33.41	3,202,401	(2)
Equity compensation plans not approved by security holders	4,454	(3) \$16.40	—	
Total	7,043,490	\$33.40	4,175,360	(4)

(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, 2018 under our 2010 ESPP.

(3) Consists of shares of common stock issuable under our 2007 plan and 2009 plan.

(4) Includes shares available for issuance as of December 31, 2017 under our 2010 ESPP (which includes 25,828 shares that were subsequently issued on February 28, 2018 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 January 1, 2017 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 March 31, 2017 to report the initial grant of options to our then new director, Paris Panayiotopoulos, a Form 4 filed on November 20, 2017 to report the initial grant of options to our then new director, Geno J. Germano, and a Form 4 filed on April 18, 2018 to report a sale of shares under a 10b5-1 plan by Armin Kessler.

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 30, 2018

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Appendix I

AMENDMENT NO. 4
TO
THE MEDICINES COMPANY
2013 STOCK INCENTIVE PLAN

Pursuant to Section 11(d) of The Medicines Company 2013 Stock Incentive Plan (the “Plan”), the Plan be, and hereby is, amended as set forth below.

1. Section 4(a)(1) of the Plan is hereby deleted in its entirety and replaced with the following:

“(1) Authorized Number of Shares. Subject to adjustment under Section 9, Awards may be made under the Plan for up to such number of shares of common stock, \$0.01 par value per share, of the Company (the “Common Stock”) (up to 26,142,134 shares) as is equal to the sum of (x) 16,100,000, (y) the remaining number of shares of Common Stock available for issuance under the Company's Amended and Restated 2004 Stock Incentive Plan (the "2004 Plan") as of the Effective Date (as defined in Section 11 (c)) and (z) the number of shares of Common Stock subject to awards granted under the 2004 Plan which awards expire, terminate or are otherwise surrendered, canceled, forfeited or repurchased by the Company at their original issue price pursuant to a contractual repurchase right (subject, in the case of Incentive Stock Options (as defined in Section 5(b)) to any limitations under the Code). Any or all of which Awards may be in the form of Incentive Stock Options (as defined in Section 5(b)). Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.”

2. Except as set forth above, all other terms and provisions of the Plan shall remain in full force and effect.

Adopted by the Board of Directors on April 24, 2018.

