

# REGULUS THERAPEUTICS INC.

## FORM DEF 14A (Proxy Statement (definitive))

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# SCHEDULE 14A INFORMATION

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

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Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

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

## Regulus Therapeutics Inc.

(Name of Registrant as Specified In Its Charter)

Payment of Filing Fee (Check the appropriate box)

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

1. Title of each class of securities to which transaction applies:

2. Aggregate number of securities to which transaction applies:

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

4. Proposed maximum aggregate value of transaction:

5. Total fee paid:

Fee paid previously with preliminary materials.

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6. Amount Previously Paid:

7. Form, Schedule or Registration Statement No.:

8. Filing Party:

9. Date Filed:

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**REGULUS THERAPEUTICS INC.**

3545 John Hopkins Court, Suite 210  
San Diego, California 92121

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**

**To Be Held On June 10, 2013**

Dear Stockholder:

You are cordially invited to attend the Annual Meeting of Stockholders of Regulus Therapeutics Inc., a Delaware corporation (the "Company"). The meeting will be held on Monday, June 10, 2013 at 2:00 p.m. local time at the offices of Cooley LLP at 4401 Eastgate Mall, San Diego, CA 92121 for the following purposes:

1. To elect the nine nominees for director named herein to serve until the next annual meeting and their successors are duly elected and qualified.
2. To ratify the selection by the Audit Committee of the Board of Directors of Ernst & Young LLP as the independent registered public accounting firm of the Company for its fiscal year ending 2013.
3. To conduct any other business properly brought before the meeting.

These items of business are more fully described in the Proxy Statement accompanying this Notice.

The record date for the Annual Meeting is April 11, 2013. Only stockholders of record at the close of business on that date may vote at the meeting or any adjournment thereof.

**Important Notice Regarding the Availability of Proxy Materials for the Stockholders' Meeting to Be Held on June 10, 2013 at 2:00 p.m. local time at the offices of Cooley LLP at 4401 Eastgate Mall, San Diego, CA 92121.**

**The proxy statement and annual report to stockholders are available at [www.regulusrx.com](http://www.regulusrx.com).**

By Order of the Board of Directors



Christopher Aker  
Secretary

San Diego, California  
April 30, 2013

**You are cordially invited to attend the meeting in person. Whether or not you expect to attend the meeting, please complete, date, sign and return the enclosed proxy as promptly as possible in order to ensure your representation at the meeting. Even if you have voted by proxy, you may still vote in person if you attend the meeting. Please note, however, that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.**

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**REGULUS THERAPEUTICS INC.**  
3545 John Hopkins Court, Suite 210  
San Diego, California 92121

**PROXY STATEMENT  
FOR THE 2013 ANNUAL MEETING OF STOCKHOLDERS  
To be held on June 10, 2013**

**QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING**

**Why am I receiving these materials?**

We have sent you these proxy materials because the Board of Directors (sometimes referred to as the “Board”) of Regulus Therapeutics Inc. (sometimes referred to as “we,” “us,” the “Company” or “Regulus”) is soliciting your proxy to vote at the 2013 Annual Meeting of Stockholders, including at any adjournments or postponements of the meeting. You are invited to attend the annual meeting to vote on the proposals described in this proxy statement. However, you do not need to attend the meeting to vote your shares. Instead, you may simply complete, sign and return the enclosed proxy card.

We intend to mail these proxy materials on or about May 6, 2013 to all stockholders of record entitled to vote at the annual meeting.

**How do I attend the annual meeting?**

The meeting will be held on Monday, June 10, 2013 at 2:00 p.m. local time at 4401 Eastgate Mall, San Diego, California 92121. Directions to the annual meeting may be found at [www.regulusrx.com](http://www.regulusrx.com). Information on how to vote in person at the annual meeting is discussed below.

**Who can vote at the annual meeting?**

Only stockholders of record at the close of business on April 11, 2013 will be entitled to vote at the annual meeting. On this record date, there were 35,982,358 shares of common stock outstanding and entitled to vote.

*Stockholder of Record: Shares Registered in Your Name*

If on April 11, 2013 your shares were registered directly in your name with the Company’s transfer agent, Computershare, then you are a stockholder of record. As a stockholder of record, you may vote in person at the meeting or vote by proxy. Whether or not you plan to attend the meeting, we urge you to fill out and return the enclosed proxy card to ensure your vote is counted.

*Beneficial Owner: Shares Registered in the Name of a Broker or Bank*

If on April 11, 2013 your shares were held, not in your name, but rather in an account at a brokerage firm, bank, dealer or other similar organization, then you are the beneficial owner of shares held in “street name” and these proxy materials are being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the annual meeting. As a beneficial owner, you have the right to direct your broker or other agent regarding how to vote the shares in your account. You are also invited to attend the annual meeting. However, since you are not the stockholder of record, you may not vote your shares in person at the meeting unless you request and obtain a valid proxy from your broker or other agent.

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## What am I voting on?

There are two matters scheduled for a vote:

- Election of nine directors; and
- Ratification of selection by the Audit Committee of the Board of Directors of Ernst & Young, LLP as independent registered public accounting firm of the Company for its fiscal year ending 2013.

## What if another matter is properly brought before the meeting?

The Board of Directors knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on those matters in accordance with their best judgment.

## How do I vote?

You may either vote “For” all the nominees to the Board of Directors or you may “Withhold” your vote for any nominee you specify. For Proposal 2, you may vote “For” or “Against” or abstain from voting.

The procedures for voting are fairly simple:

### *Stockholder of Record: Shares Registered in Your Name*

If you are a stockholder of record, you may vote in person at the annual meeting or, vote by proxy using the enclosed proxy card. Whether or not you plan to attend the meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the meeting and vote in person even if you have already voted by proxy.

- To vote in person, come to the annual meeting and we will give you a ballot when you arrive.
- To vote using the proxy card, simply complete, sign and date the enclosed proxy card and return it promptly in the envelope provided. If you return your signed proxy card to us before the annual meeting, we will vote your shares as you direct.
- To vote over the telephone, dial toll-free 1-800-690-6903 using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number from the enclosed proxy card. Your vote must be received by 11:59 p.m. Eastern Time on June 9, 2013 to be counted.
- To vote through the internet, go to [www.proxyvote.com](http://www.proxyvote.com) to complete an electronic proxy card. You will be asked to provide the company number and control number from the enclosed proxy card. Your vote must be received by 11:59 p.m. Eastern Time on June 9, 2013 to be counted.

### *Beneficial Owner: Shares Registered in the Name of Broker or Bank*

If you are a beneficial owner of shares registered in the name of your broker, bank, or other agent, you should have received a voting instruction form with these proxy materials from that organization rather than from Regulus. Simply complete and mail the voting instruction form to ensure that your vote is counted. To vote in person at the annual meeting, you must obtain a valid proxy from your broker, bank or other agent. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request a proxy form.

## How many votes do I have?

On each matter to be voted upon, you have one vote for each share of common stock you own as of April 11, 2013.

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**What happens if I do not vote?***Stockholder of Record: Shares Registered in Your Name*

If you are a stockholder of record and do not vote by completing your proxy card or in person at the annual meeting, your shares will not be voted.

*Beneficial Owner: Shares Registered in the Name of Broker or Bank*

If you are a beneficial owner and do not instruct your broker, bank, or other agent how to vote your shares, the question of whether your broker or nominee will still be able to vote your shares depends on whether the NASDAQ deems the particular proposal to be a “routine” matter. Brokers and nominees can use their discretion to vote “uninstructed” shares with respect to matters that are considered to be “routine,” but not with respect to “non-routine” matters. Under the rules and interpretations of the NASDAQ Stock Market Listing Rules, “non-routine” matters are matters that may substantially affect the rights or privileges of stockholders, such as mergers, stockholder proposals, elections of directors (even if not contested), executive compensation (including any advisory stockholder votes on executive compensation and on the frequency of stockholder votes on executive compensation), and certain corporate governance proposals, even if management-supported. Accordingly, your broker or nominee may not vote your shares on Proposal 1, without your instructions, but may vote your shares on Proposal 2.

**What if I return a proxy card or otherwise vote but do not make specific choices?**

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, “For” the election of all nine nominees for director, “For” ratification of selection by the Audit Committee of the Board of Directors of Ernst & Young, LLP as independent registered public accounting firm of the Company for its fiscal year ending 2013. If any other matter is properly presented at the meeting, your proxyholder (one of the individuals named on your proxy card) will vote your shares using his or her best judgment.

**Who is paying for this proxy solicitation?**

We will pay for the entire cost of soliciting proxies. In addition to these proxy materials, our directors and employees and Broadridge may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies, but Broadridge will be paid its customary fee of approximately \$3,000.00 plus out-of-pocket expenses if it solicits proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

**What does it mean if I receive more than one set of proxy materials?**

If you receive more than one set of proxy materials, your shares may be registered in more than one name or in different accounts. Please follow the voting instructions on the proxy cards in the proxy materials to ensure that all of your shares are voted.

**Can I change my vote after submitting my proxy?***Stockholder of Record: Shares Registered in Your Name*

Yes. You can revoke your proxy at any time before the final vote at the meeting. If you are the record holder of your shares, you may revoke your proxy in any one of the following ways:

- You may submit another properly completed proxy card with a later date.

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- You may send a timely written notice that you are revoking your proxy to Regulus Therapeutics Inc.'s Secretary at 3545 John Hopkins Court, Suite 210, San Diego, California 92121.
  - You may attend the annual meeting and vote in person. Simply attending the meeting will not, by itself, revoke your proxy.

Your most current proxy card is the one that is counted.

*Beneficial Owner: Shares Registered in the Name of Broker or Bank*

If your shares are held by your broker or bank as a nominee or agent, you should follow the instructions provided by your broker or bank.

**When are stockholder proposals and director nominations due for next year's annual meeting?**

To be considered for inclusion in next year's proxy materials, your proposal must be submitted in writing by January 6, 2014, to the attention of the Secretary of Regulus Therapeutics Inc. at 3545 John Hopkins Court, Suite 210, San Diego, California 92121. If you wish to submit a proposal (including a director nomination) at the meeting that is not to be included in next year's proxy materials, your written request must be received by the Secretary for Regulus Therapeutics between February 10, 2014 and March 12, 2014. You are also advised to review the Company's Bylaws, which contain additional requirements about advance notice of stockholder proposals and director nominations.

**How are votes counted?**

Votes will be counted by the inspector of election appointed for the meeting, who will separately count, for the proposal to elect directors, votes "For," "Withhold" and broker non-votes; and, with respect to other proposals, votes "For" and "Against," abstentions and, if applicable, broker non-votes. Abstentions will be counted towards the vote total for Proposal 2 and will have the same effect as "Against" votes. Broker non-votes have no effect and will not be counted towards the vote total for any proposal.

**What are "broker non-votes"?**

As discussed above, when a beneficial owner of shares held in "street name" does not give instructions to the broker or nominee holding the shares as to how to vote on matters deemed by NASDAQ to be "non-routine," the broker or nominee cannot vote the shares. These unvoted shares are counted as "broker non-votes."

**How many votes are needed to approve each proposal?**

- For the election of directors, the nine nominees receiving the most "For" votes from the holders of shares present in person or represented by proxy and entitled to vote on the election of directors will be elected. Only votes "For" or "Withheld" will affect the outcome.
- To be approved, Proposal 2 ratifying the selection by the Audit Committee of the Board of Directors of Ernst & Young LLP as the independent registered public accounting firm of the Company for its fiscal year ending 2013 must receive "For" votes from the holders of a majority of shares present and entitled to vote either in person or represented by proxy. If you mark your proxy to "Abstain" from voting, it will have the same effect as an "Against" vote.

**What is the quorum requirement?**

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding at least a majority of the outstanding shares entitled to vote are present at the meeting in person or represented by proxy. On the record date, there were 35,982,358 shares outstanding and entitled to vote. Thus, the holders of 17,991,180 shares must be present in person or represented by proxy at the meeting to have a quorum.

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Your shares will be counted towards the quorum only if you submit a valid proxy (or one is submitted on your behalf by your broker, bank or other nominee) or if you vote in person at the meeting. Abstentions and broker non-votes will be counted towards the quorum requirement. If there is no quorum, the holders of a majority of shares present at the meeting in person or represented by proxy may adjourn the meeting to another date.

### **How can I find out the results of the voting at the annual meeting?**

Preliminary voting results will be announced at the annual meeting. In addition, final voting results will be published in a current report on Form 8-K that we expect to file within four business days after the annual meeting. If final voting results are not available to us in time to file a Form 8-K within four business days after the meeting, we intend to file a Form 8-K to publish preliminary results and, within four business days after the final results are known to us, file an additional Form 8-K to publish the final results.

### **WHAT PROXY MATERIALS ARE AVAILABLE ON THE INTERNET ?**

The letter to stockholders, proxy statement, Form 10-K and annual report to stockholders are available at [www.regulusrx.com](http://www.regulusrx.com).

## **P R O P O S A L 1 E L E C T I O N O F D I R E C T O R S**

Regulus Therapeutics Inc.'s Board of Directors consists of nine directors. There are nine nominees for director this year. Each director to be elected and qualified will hold office until the next annual meeting of stockholders and until his or her successor is elected, or, if sooner, until the director's death, resignation or removal. Each of the nominees listed below is currently a director of the Company who was previously elected by the stockholders prior to our initial public offering, with the exception of Bruce L.A. Carter, Doug Williams, Mark Foletta and William Rastetter, who were appointed by our Board of Directors. It is the Company's policy to invite nominees for directors to attend the annual meeting. We did not hold an annual meeting of stockholders during 2012.

Directors are elected by a plurality of the votes of the holders of shares present in person or represented by proxy and entitled to vote on the election of directors. The nine nominees receiving the highest number of affirmative votes will be elected.

### **Nominees**

The following is a brief biography of each nominee for director and a discussion of the specific experience, qualifications, attributes or skills of each nominee that led the Nominating and Corporate Governance Committee to recommend that person as a nominee for director, as of the date of this proxy statement.

The Nominating and Corporate Governance Committee seeks to assemble a board that, as a whole, possesses the appropriate balance of professional and industry knowledge, financial expertise and high-level management experience necessary to oversee and direct the Company's business. To that end, the Committee has identified and evaluated nominees in the broader context of the board's overall composition, with the goal of recruiting members who complement and strengthen the skills of other members and who also exhibit integrity, collegiality, sound business judgment and other qualities that the Committee views as critical to effective functioning of the board. The brief biographies below include information, as of the date of this proxy statement, regarding the specific and particular experience, qualifications, attributes or skills of each director or nominee that led the Committee to recommend that person as a nominee. However, each of the members of the Committee

may have a variety of reasons why he or she believes a particular person would be an appropriate nominee for the board, and these views may differ from the views of other members.

<u>Name</u>	<u>Age</u>	<u>Position Held With the Company</u>
Dr. John M. Maraganore	50	Chairman of the Board of Directors
Dr. David Baltimore	75	Director
Dr. Bruce L.A. Carter	69	Director
Mr. Mark G. Foletta	52	Director
Dr. Stelios Papadopoulos	64	Director
Ms. B. Lynne Parshall	59	Director
Dr. William H. Rastetter	65	Director
Dr. Douglas Williams	55	Director
Dr. Kleanthis G. Xanthopoulos	55	Director, President and Chief Executive Officer

*John M. Maraganore, Ph.D.* has served as Chairman of our Board of Directors since our conversion to a corporation in January 2009, and prior to that was a director of Regulus Therapeutics LLC since November 2007. Dr. Maraganore joined our Board of Directors as a representative of Alnylam Pharmaceuticals, Inc., or Alnylam, in connection with its investment in us pursuant to our founding investor rights agreement. Since December 2002, Dr. Maraganore has served as the Chief Executive Officer and as a director of Alnylam. From December 2002 to December 2007, Dr. Maraganore served as President of Alnylam. From April 2000 to December 2002, Dr. Maraganore served as Senior Vice President, Strategic Product Development with Millennium Pharmaceuticals, Inc., or Millennium, a publicly-held biotechnology company. Dr. Maraganore holds an M.S. and Ph.D. in Biochemistry and Molecular Biology from the University of Chicago and a B.A. in Biological Sciences from the University of Chicago. Our Nominating and Corporate Governance Committee believes that Dr. Maraganore is qualified to serve on our Board of Directors due to his experience as the Chief Executive Officer of Alnylam and broad experience in leading-edge scientific research.

*David Baltimore, Ph.D.* has served on our Board of Directors and on our scientific advisory board since our conversion to a corporation in January 2009, and prior to that was a director of Regulus Therapeutics LLC since November 2007. Since 2006, Dr. Baltimore has served as President Emeritus and Robert Andrews Millikan Professor of Biology at the California Institute of Technology, and before that from 1997 to 2006, Dr. Baltimore served as President of the California Institute of Technology. From 1968 to 1972, Dr. Baltimore served as an associate professor at the Massachusetts Institute of Technology, and from 1972 to 1997 was a professor at the Massachusetts Institute of Technology. From 1990 to 1994, Dr. Baltimore served as professor at The Rockefeller University where he also served as the President from July 1990 to December 1991. Since 1997, Dr. Baltimore has served as a director of Amgen Inc., a publicly-held biotechnology company, and also serves as a director of Immune Design Corp., a privately-held biotechnology company, and as chairman of the board of directors of Calimmune, Inc., a privately-held biotechnology company. In 1975, Dr. Baltimore received the Nobel Prize in Medicine as a co-recipient. Dr. Baltimore holds a Ph.D. in Biology from The Rockefeller University and a B.A. with High Honors in Chemistry from Swarthmore College. Our Nominating and Corporate Governance Committee believes that Dr. Baltimore is qualified to serve on our Board of Directors due to the many years Dr. Baltimore has spent in scientific academia, which has provided him with a deep understanding of our industry and our activities.

*Bruce L.A. Carter, Ph.D.* has served on our Board of Directors since June 2012. Since November 2009, Dr. Carter has served as a director of Immune Design Corp., a privately-held biotechnology company. Since June 2008, Dr. Carter has served as a director of Dr. Reddy's Laboratories Limited, a publicly-held pharmaceutical company. From April 1998 to January 2009, Dr. Carter served as Chief Executive Officer with ZymoGenetics, Inc., a publicly-held biotechnology company (acquired by Bristol-Myers Squibb in October 2010). From 1994 to 1998, Dr. Carter was the Chief Scientific Officer of Novo Nordisk, a publicly-held pharmaceutical company. Dr. Carter holds a Ph.D. in Microbiology from Queen Elizabeth College, University of London and a B.Sc. with Honors in Botany from the University of Nottingham, England. Our Nominating and Corporate Governance

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Committee believes that Dr. Carter is qualified to serve on our Board of Directors due to his years of service in the biotechnology industry and his service on the boards of directors of other life sciences companies.

*Mark G. Foletta* has served on our Board of Directors since January 2013. He previously served as Senior Vice President, Finance and Chief Financial Officer of Amylin Pharmaceuticals, Inc. from March 2006 through Amylin's acquisition by Bristol Myers-Squibb Company in August 2012. Prior to joining Amylin in 2000, Mr. Foletta held a number of management positions with Intermark, Inc. and Triton Group Ltd. and served as an Audit Manager with Ernst & Young. Mr. Foletta served as a director of Anadys Pharmaceuticals, Inc., a publicly-held biopharmaceutical company, from September 2005 through November 2011 (acquired by F. Hoffmann-La Roche Inc., or Roche). He is currently a member of the Board of Directors and Audit Committee of AMN Healthcare Services, Inc. Mr. Foletta received a B.A. in Business Economics from the University of California, Santa Barbara. He is a Certified Public Accountant and a member of the Financial Executives Institute. Our Nominating and Corporate Governance Committee believes that Mr. Foletta's extensive financial and operational experience in the biotechnology industry qualifies him to serve on our Board of Directors.

*Stelios Papadopoulos, Ph.D.* has served on our Board of Directors since our conversion to a corporation in January 2009, and prior to that was a director of Regulus Therapeutics LLC since July 2008. Since 1994, Dr. Papadopoulos has served as a director and, since 1998, as Chairman of the Board for Exelixis, Inc., a publicly-held biotechnology company, which he co-founded. From 2000 to 2006, Dr. Papadopoulos served as Vice Chairman with Cowen and Co., LLC, an investment banking firm. From 1987 to 2000, Dr. Papadopoulos served in several positions with PaineWebber, Incorporated, most recently as Chairman of PaineWebber Development Corp., a PaineWebber subsidiary focusing on biotechnology. From 2000 to 2011, Dr. Papadopoulos served as a member of the board of directors of Anadys Pharmaceuticals, Inc. prior to its acquisition by Roche. Since 2003, Dr. Papadopoulos has served as a member of the board of directors of BG Medicine, Inc., a publicly-held life sciences company. Since July 2008, Dr. Papadopoulos has served as a member of the board of directors of Biogen Idec Inc., a publicly-held biopharmaceutical company. Dr. Papadopoulos holds an M.S. in Physics, a Ph.D. in Biophysics and an M.B.A. in Finance from New York University. Our Nominating and Corporate Governance Committee believes that Dr. Papadopoulos is qualified to serve on our Board of Directors due to his knowledge and expertise regarding the biotechnology and healthcare industries, his broad leadership experience on various boards and his experience with financial matters.

*B. Lynne Parshall* has served on our Board of Directors since our conversion to a corporation in January 2009, and prior to that was a director of Regulus Therapeutics LLC since November 2007. Ms. Parshall joined our Board of Directors as a representative of Isis Pharmaceuticals, Inc. in connection with its investment in us pursuant to our founding investor rights agreement. Ms. Parshall has served as the Chief Operating Officer of Isis since December 2007, as its Chief Financial Officer from June 1994 until December 2012, as its Secretary since November 1991 and as a director of Isis since September 2000. From 1986 to 1991, Ms. Parshall was a partner with Cooley LLP. From July 2005 to August 2009, Ms. Parshall currently serves as a director of Cytokinetics, Inc., a publicly-held biopharmaceutical company and previously served as a director of Cardiodynamics International Corporation, a publicly-held biopharmaceutical company (acquired by SonoSite, Inc. in August 2009). Ms. Parshall holds a J.D. from Stanford Law School and a B.A. in Government and Economics from Harvard University. Our Nominating and Corporate Governance Committee believes that Ms. Parshall is qualified to serve on our Board of Directors due to her extensive financial and legal expertise, and her extensive experience in the biotechnology industry and with us.

*William H. Rastetter, Ph.D.* has served on our Board of Directors since April 2013. From 2006 to February 2013, Dr. Rastetter served as a partner in the venture capital firm, Venrock. He served as Chief Executive Officer of IDEC Pharmaceuticals from December 1986 through November 2003, and as Chairman from May 1996 to November 2003. Upon the merger of IDEC Pharmaceuticals and Biogen in November 2003, Dr. Rastetter served as Executive Chairman of Biogen Idec until the end of 2005. Dr. Rastetter currently serves as the chairman of the board of directors of Fate Therapeutics, Inc., a privately-held biopharmaceutical company, Illumina, Inc., a publicly-held biotechnology company, Neurocrine Biosciences, Inc., a publicly-held biopharmaceutical

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company, and Receptos, Inc., a privately-held biopharmaceutical company. He is the author of numerous scientific papers and patent applications in the fields of organic and bioorganic chemistry, protein and enzyme engineering, and biotechnology. Dr. Rastetter holds an S.B. in Chemistry from the Massachusetts Institute of Technology and received his M.A. and Ph.D. in Chemistry from Harvard University. Our Nominating and Corporate Governance Committee believes that Dr. Rastetter's knowledge and expertise regarding the biotechnology industry and his leadership experience on various biotechnology company boards of directors qualifies him to serve on our Board of Directors.

*Douglas Williams, Ph.D.* has served on our Board of Directors since November 2012. He has served as Executive Vice President of Research and Development at Biogen Idec, a publicly-held biopharmaceutical company, since January 2011. Dr. Williams was the Chief Executive Officer and member of the Board of Directors of ZymoGenetics, Inc., a publicly-held biopharmaceutical company, from January 2009 until November 2010 (acquired by Bristol-Myers Squibb). He also served as President of ZymoGenetics, Inc. from 2007 to 2009 and as Chief Scientific Officer and Executive Vice President from 2004 to 2007. Previously, he was the Chief Scientific Officer and Executive Vice President of Research and Development at Seattle Genetics Inc., a publicly-held biotechnology company, Head of Health and Strategic Development at Genesis Research & Development Corp. Ltd, and Senior Vice President and Washington Site Leader at Amgen Inc., a publicly-held biopharmaceutical company. Dr. Williams also served in a series of scientific and senior leadership positions over a decade at Immunex Corp., a publicly-held biopharmaceutical company (acquired by Amgen, Inc.) including Executive Vice President and Chief Technology Officer, Senior Vice President of Discovery Research and Vice President of Research and Development. Before entering the biotechnology industry, Dr. Williams served on the faculty of the Indiana University School of Medicine and the Department of Laboratory Medicine at the Roswell Park Memorial Institute in Buffalo, New York. He holds a Ph.D. in Physiology from the State University of New York at Buffalo, Roswell Park Memorial Institute Division and a B.S. magna cum laude in Biological Sciences from the University of Massachusetts, Lowell. Our Nominating and Corporate Governance Committee believes that Dr. Williams is qualified to serve on our Board of Directors due to his extensive operational and leadership experience in the biotechnology industry.

*Kleanthis G. Xanthopoulos, Ph.D.* has served as our President and Chief Executive Officer and has served on our Board of Directors since our conversion to a corporation in January 2009 and prior to that was a director of Regulus Therapeutics LLC since 2007. From December 2007 to January 2009, Dr. Xanthopoulos served as the President and Chief Executive Officer of Regulus Therapeutics LLC. From March 2007 to December 2007, Dr. Xanthopoulos served as a managing director of Enterprise Partners Venture Capital, a venture capital firm. From 2000 to 2006, Dr. Xanthopoulos served as the President and Chief Executive Officer and, from 2000 to 2011, as a director of Anadys Pharmaceuticals, Inc., a publicly-held biopharmaceutical company that Dr. Xanthopoulos co-founded (acquired by F. Hoffmann-La Roche Inc., or Roche, in November 2011). From 1997 to 2000, Dr. Xanthopoulos served as Vice President of Aurora Biosciences Corporation, a publicly-held biotechnology company (acquired by Vertex Pharmaceuticals Incorporated). Dr. Xanthopoulos has served as a member of the board of directors of the Biotechnology Industry Organization, or BIO, since September 2011, Apricus Biosciences, a publicly-held biotechnology company, since December 2011, Sente, Inc., a privately-held aesthetics company, since August 2007, Zosano Pharma, Inc., a privately-held specialty pharmaceutical company, since April 2013, and a member of the board of BIOCOM, a life science industry association based in Southern California. Dr. Xanthopoulos holds an M.S. in Microbiology and a Ph.D. in Molecular Biology from the University of Stockholm, Sweden and a B.S. in Biology with Honors from Aristotle University of Thessaloniki, Greece. Our Nominating and Corporate Governance Committee believes that Dr. Xanthopoulos's expertise and extensive experience in biotechnology and service as our President and Chief Executive Officer qualify him to serve on our Board of Directors.

**T H E B O A R D O F D I R E C T O R S R E C O M M E N D S  
A V O T E I N F A V O R O F E A C H N A M E D N O M I N E E .**

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## INFORMATION REGARDING THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

### INDEPENDENCE OF THE BOARD OF DIRECTORS

As required under the NASDAQ Stock Market (“NASDAQ”) listing standards, a majority of the members of a listed company’s Board of Directors must qualify as “independent,” as affirmatively determined by the Board of Directors. The Board consults with the Company’s counsel to ensure that the Board’s determinations are consistent with relevant securities and other laws and regulations regarding the definition of “independent,” including those set forth in pertinent listing standards of NASDAQ, as in effect from time to time.

Consistent with these considerations, after review of all relevant identified transactions or relationships between each director, or any of his or her family members, and the Company, its senior management and its independent auditors, the Board has affirmatively determined that the following five directors are independent directors within the meaning of the applicable NASDAQ listing standards: Dr. Baltimore, Dr. Carter, Mr. Foletta, Dr. Papadopoulos and Dr. Rastetter. In making this determination, the Board found that none of these directors or nominees for director had a material or other disqualifying relationship with the Company.

### BOARD LEADERSHIP STRUCTURE

Our Board of Directors is currently chaired by John M. Maraganore, Ph.D. As a general policy, our Board of Directors believes that separation of the positions of Chairman and Chief Executive Officer reinforces the independence of the Board of Directors from management, creates an environment that encourages objective oversight of management’s performance and enhances the effectiveness of the Board of Directors as a whole. As such, Dr. Xanthopoulos serves as our President and Chief Executive Officer while Dr. Maraganore serves as our Chairman of the Board of Directors but is not an officer. We expect and intend the positions of Chairman of the Board of Directors and Chief Executive Officer to continue to be held by separate individuals in the future.

### ROLE OF THE BOARD IN RISK OVERSIGHT

One of the key functions of our Board of Directors is informed oversight of our risk management process. The Board of Directors does not have a standing risk management committee, but rather administers this oversight function directly through the Board of Directors as a whole, as well as through various standing committees of our Board of Directors that address risks inherent in their respective areas of oversight. In particular, our Board of Directors is responsible for monitoring and assessing strategic risk exposure, and our Audit Committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The Audit Committee also monitors compliance with legal and regulatory requirements. Our Nominating and Corporate Governance Committee monitors the effectiveness of our corporate governance practices, including whether they are successful in preventing illegal or improper liability-creating conduct. Our Compensation Committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

### MEETINGS OF THE BOARD OF DIRECTORS

The Board of Directors met five times during the last fiscal year, four times in executive session. All directors who served in 2012, except Douglas Williams, attended at least 75% of the aggregate number of meetings of the Board and of the committees on which they served, held during the portion of the last fiscal year for which they were directors or committee members, respectively. Dr. Williams was appointed to the Board in November 2012 and only one meeting occurred after his appointment, which he was unable to attend.

## INFORMATION REGARDING COMMITTEES OF THE BOARD OF DIRECTORS

The Board has three committees: an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. The following table provides membership and meeting information for fiscal 2012 for each of the Board committees:

Name	Audit	Compensation	Nominating and
			Corporate Governance
Dr. David Baltimore			X
Dr. Bruce L.A. Carter	X	X	
Dr. John M. Maraganore		X*	
Dr. Stelios Papadopoulos	X		X*
Ms. B. Lynne Parshall	X*		
Total meetings in fiscal 2012	5	2	2

\* Committee Chairperson

Below is a description of each committee of the Board of Directors. Each of the committees has authority to engage legal counsel or other experts or consultants, as it deems appropriate to carry out its responsibilities. The Board of Directors has determined that, except as specifically described below, each member of each committee meets the applicable NASDAQ rules and regulations regarding “independence” and that each member is free of any relationship that would impair his or her individual exercise of independent judgment with regard to the Company.

### Audit Committee

The Audit Committee of the Board of Directors was established by the Board in accordance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), to oversee the Company’s corporate accounting and financial reporting processes and audits of its financial statements. For this purpose, the Audit Committee performs several functions. The Audit Committee evaluates the performance of and assesses the qualifications of the independent auditors; determines and approves the engagement of the independent auditors; determines whether to retain or terminate the existing independent auditors or to appoint and engage new independent auditors; reviews and approves the retention of the independent auditors to perform any proposed permissible non-audit services; monitors the rotation of partners of the independent auditors on the Company’s audit engagement team as required by law; review and approves or rejects transactions between the company and any related persons; confers with management and the independent auditors regarding the effectiveness of internal controls over financial reporting; establishes procedures, as required under applicable law, for the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters and the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters; and meets to review the Company’s annual audited financial statements and quarterly financial statements with management and the independent auditor, including a review of the Company’s disclosures under “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

The Audit Committee is currently composed of four directors: Ms. Parshall, Dr. Carter, Dr. Papadopoulos and Mr. Foletta. Mr. Foletta became a member of the Audit Committee concurrently with his appointment to the Board in January 2013. The Audit Committee met five times during the fiscal year 2012. The Audit Committee has adopted a written charter that is available to stockholders on the Company’s website at [www.regulusrx.com](http://www.regulusrx.com).

The Board of Directors reviews the NASDAQ listing standards definition of independence for Audit Committee members on an annual basis and has determined that all members of the Company’s Audit Committee except for Ms. Parshall are independent (as independence is currently defined in Rule 5605(c)(2)(A)(i) and (ii) of the NASDAQ listing standards). Our Board of Directors has determined that each

member of the Audit Committee meets the requirements for independence under the NASDAQ listing standards with the exception of Ms. Parshall. The Board has determined that Ms. Parshall does not meet the independence requirements under the NASDAQ listing rules due to her position as an executive officer of Isis Pharmaceuticals, Inc., which company is a significant stockholder of Regulus. Notwithstanding Ms. Parshall's affiliation with Isis, our Board of Directors believes it is in the best interest of the Company and our stockholders for Ms. Parshall to serve on the Audit Committee due to her extensive financial expertise and her extensive experience with Regulus. We qualify as an emerging growth company under the Jumpstart Our Business Startups Act of 2012. Accordingly, under Rule 10A-3 under the Exchange Act, we are permitted to phase in our compliance with the independent audit committee requirements set forth in NASDAQ Marketplace Rule 5605(c) and Rule 10A-3 under the Exchange Act as follows: (1) at least one member of the Audit Committee must be independent at the time of listing, (2) a majority of members must be independent within 90 days of listing and (3) all members must be independent within one year of listing. Within one year of our listing on The NASDAQ Global Market, we expect that Ms. Parshall will have resigned from our Audit Committee and at that time the Audit Committee will be fully independent under the NASDAQ listing standards and Rule 10A-3 of the Exchange Act.

The Board of Directors has determined that each of Ms. Parshall and Mr. Foletta qualify as an "audit committee financial expert," as defined in applicable SEC rules. The Board made a qualitative assessment of Ms. Parshall's level of knowledge and experience based on a number of factors, including her formal education and experience as a chief financial officer for a public company. The Board also made a qualitative assessment of Mr. Foletta's level of knowledge and experience based on a number of factors, including his formal education, his experience as a chief financial officer for a public company and his service as an Audit Manager with Ernst & Young. In addition to the Company's Audit Committee, Mr. Foletta also serves on the Audit Committee of AMN Healthcare Services. The Board of Directors has determined that this simultaneous service does not impair Mr. Foletta's ability to effectively serve on the Company's Audit Committee.

#### **Report of the Audit Committee of the Board of Directors\***

The Audit Committee has reviewed and discussed the audited financial statements for the fiscal year ended December 31, 2012 with management of the Company. The Audit Committee has discussed with the independent registered public accounting firm the matters required to be discussed by Statement on Auditing Standards No. 61, as amended (AICPA, *Professional Standards*, Vol. 1. AU section 380), as adopted by the Public Company Accounting Oversight Board ("PCAOB") in Rule 3200T. The Audit Committee has also received the written disclosures and the letter from the independent registered public accounting firm required by applicable requirements of the PCAOB regarding the independent accountants' communications with the Audit Committee concerning independence, and has discussed with the independent registered public accounting firm the accounting firm's independence. Based on the foregoing, the Audit Committee has recommended to the Board of Directors that the audited financial statements be included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2012.

Ms. B. Lynne Parshall  
Dr. Bruce L.A. Carter  
Mr. Mark G. Foletta  
Dr. Stelios Papadopoulos

\*The material in this report is not "soliciting material," is not deemed "filed" with the Commission and is not to be incorporated by reference in any filing of the Company under the Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

#### **Compensation Committee**

The Compensation Committee is composed of three directors: Dr. Maraganore, Dr. Carter and Dr. Papadopoulos. Under NASDAQ Marketplace Rule 5615(b)(1), we are permitted to phase in our compliance

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with the independent compensation committee requirements set forth in NASDAQ Marketplace Rule 5605(d) as follows: (1) one member must be independent at the time of listing, (2) a majority of members must be independent within 90 days of listing and (3) all members must be independent within one year of listing. Our Board of Directors has determined that Dr. Carter is an independent director under NASDAQ Marketplace Rules. Dr. Papadopoulos, who is also an independent director, was appointed to the Compensation Committee in January 2013. Within one year of our listing on The NASDAQ Global Market, we expect that Dr. Maraganore will have resigned from our Compensation Committee. The Compensation Committee met two times during the fiscal year. The Compensation Committee has adopted a written charter that is available to stockholders on the Company's website at [www.regulusrx.com](http://www.regulusrx.com).

The Compensation Committee of the Board of Directors acts on behalf of the Board to review, adopt and/or recommend for adoption and oversee the Company's compensation strategy, policies, plans and programs, including:

- establishment of corporate and individual performance objectives relevant to the compensation of the Company's executive officers, directors and other senior management and evaluation of performance in light of these stated objectives;
- review and recommendation to the Board for approval of the compensation and other terms of employment or service, including severance and change-in-control arrangements of the Company's Chief Executive Officer and the other executive officers and directors; and
- administration of the Company's equity compensation plans, pension and profit-sharing plans, deferred compensation plans and other similar plan and programs.

#### *Compensation Committee Processes and Procedures*

Typically, the Compensation Committee meets at least twice times annually and with greater frequency if necessary. The agenda for each meeting is usually developed by the Chair of the Compensation Committee, in consultation with the Chief Executive Officer. The Compensation Committee meets regularly in executive session. However, from time to time, various members of management and other employees as well as outside advisors or consultants may be invited by the Compensation Committee to make presentations, to provide financial or other background information or advice or to otherwise participate in Compensation Committee meetings. The Chief Executive Officer may not participate in, or be present during, any deliberations or determinations of the Compensation Committee regarding his compensation. The charter of the Compensation Committee grants the Compensation Committee full access to all books, records, facilities and personnel of the Company, as well as authority to obtain, at the expense of the Company, advice and assistance from internal and external legal, accounting or other advisors and consultants and other external resources that the Compensation Committee considers necessary or appropriate in the performance of its duties. In particular, the Compensation Committee has the sole authority to retain compensation consultants to assist in its evaluation of executive and director compensation, including the authority to approve the consultant's reasonable fees and other retention terms.

During the past fiscal year, the Compensation Committee did not engage any outside consultant as a compensation consultant.

Under its charter, the Compensation Committee may form, and delegate authority to, subcommittees as appropriate. In 2012, the Compensation Committee formed a Non-Management Stock Option Committee, currently composed of Dr. Xanthopoulos, to which it delegated authority to grant, without any further action required by the Compensation Committee, stock options to employees who are not officers of the Company. The purpose of this delegation of authority is to enhance the flexibility of option administration within the Company and to facilitate the timely grant of options to non-management employees, particularly new employees, within specified limits approved by the Compensation Committee. In particular, the subcommittee may not grant options only within pre-approved guidelines and not to any employee who will have a vice president title or

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higher. Typically, as part of its oversight function, the Committee will review on a regular basis the list of grants made by the subcommittee. During fiscal year 2012, the subcommittee exercised its authority to grant options to purchase an aggregate of 899,951 shares of the Company's common stock to non-officer employees.

Historically, the Compensation Committee has made most of the significant adjustments to annual compensation, determined bonus and equity awards and established new performance objectives at one or more meetings held during the last quarter of the year. However, the Compensation Committee also considers matters related to individual compensation, such as compensation for new executive hires, as well as high-level strategic issues, such as the efficacy of the Company's compensation strategy, potential modifications to that strategy and new trends, plans or approaches to compensation, at various meetings throughout the year. Generally, the Compensation Committee's process comprises two related elements: the determination of compensation levels and the establishment of performance objectives for the current year. For executives other than the Chief Executive Officer, the Compensation Committee solicits and considers evaluations and recommendations submitted to the Committee by the Chief Executive Officer. In the case of the Chief Executive Officer, the evaluation of his performance is conducted by the Compensation Committee, which determines any adjustments to his compensation as well as awards to be granted. For all executives and directors as part of its deliberations, the Compensation Committee may review and consider, as appropriate, materials such as financial reports and projections, operational data, tax and accounting information, tally sheets that set forth the total compensation that may become payable to executives in various hypothetical scenarios, executive and director stock ownership information, company stock performance data, analyses of historical executive compensation levels and current Company-wide compensation levels and recommendations of the Senior Vice President, Human Capital, including analyses of executive and director compensation paid at other companies identified by the Senior Vice President, Human Capital.

### **Nominating and Corporate Governance Committee**

The Nominating and Corporate Governance Committee of the Board of Directors is responsible for identifying, reviewing and evaluating candidates to serve as directors of the Company (consistent with criteria approved by the Board), reviewing and evaluating incumbent directors, recommending to the Board for selection candidates for election to the Board of Directors, making recommendations to the Board regarding the membership of the committees of the Board, assessing the performance of the Board, and monitoring the Company's adherence to its Code of Business Conduct and Ethics.

The Nominating and Corporate Governance Committee is composed of two directors: Dr. Baltimore and Dr. Papadopoulos. All members of the Nominating and Corporate Governance Committee are independent (as independence is currently defined in Rule 5605(a)(2) of the NASDAQ listing standards). The Nominating and Corporate Governance Committee met two times during the fiscal year. The Nominating and Corporate Governance Committee has adopted a written charter that is available to stockholders on the Company's website and [www.regulusrx.com](http://www.regulusrx.com).

The Nominating and Corporate Governance Committee believes that candidates for director, both individually and collectively, can and do provide the integrity, experience, judgment, commitment (including having sufficient time to devote to the Company and level of participation), skills, diversity and expertise appropriate for the Company. In assessing the directors, both individually and collectively, the Nominating and Corporate Governance Committee may consider the current needs of the Board and the Company to maintain a balance of knowledge, experience and capability in various areas. However, the Nominating and Corporate Governance Committee retains the right to modify these qualifications from time to time. Candidates for director nominees are reviewed in the context of the current composition of the Board, the operating requirements of the Company and the long-term interests of stockholders. In conducting this assessment, the Nominating and Corporate Governance Committee typically considers diversity, age, skills and such other factors as it deems appropriate given the current needs of the Board and the Company, to maintain a balance of knowledge, experience and capability. In the case of incumbent directors whose terms of office are set to expire, the

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Nominating and Corporate Governance Committee reviews these directors' overall service to the Company during their terms, including the number of meetings attended, level of participation, quality of performance and any other relationships and transactions that might impair the directors' independence. In the case of new director candidates, the Nominating and Corporate Governance Committee also determines whether the nominee is independent for NASDAQ purposes, which determination is based upon applicable NASDAQ listing standards, applicable SEC rules and regulations and the advice of counsel, if necessary. The Nominating and Corporate Governance Committee then uses its network of contacts to compile a list of potential candidates, but may also engage, if it deems appropriate, a professional search firm. The Nominating and Corporate Governance Committee conducts any appropriate and necessary inquiries into the backgrounds and qualifications of possible candidates after considering the function and needs of the Board. The Nominating and Corporate Governance Committee meets to discuss and consider the candidates' qualifications and then selects a nominee for recommendation to the Board by majority vote.

The Nominating and Corporate Governance Committee will consider director candidates recommended by stockholders. The Nominating and Corporate Governance Committee does not intend to alter the manner in which it evaluates candidates, including the minimum criteria set forth above, based on whether or not the candidate was recommended by a stockholder. Stockholders who wish to recommend individuals for consideration by the Nominating and Corporate Governance Committee to become nominees for election to the Board may do so by delivering a written recommendation to the Nominating and Corporate Governance Committee at the following address: 3545 John Hopkins Court, Suite 210, San Diego, CA 92121, Attn: Secretary, no later than the 90<sup>th</sup> day and no earlier than the 120th day prior to the one year anniversary of the preceding year's annual meeting. Submissions must include (1) the name and address of the Company stockholder on whose behalf the submission is made; (2) number of Company shares that are owned beneficially by such stockholder as of the date of the submission; (3) the full name of the proposed candidate; (4) description of the proposed candidate's business experience for at least the previous five years; (5) complete biographical information for the proposed candidate; (6) a description of the proposed candidate's qualifications as a director and (7) any other information required by the Company Bylaws. The Company may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the Company or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such proposed nominee.

#### **S TOCKHOLDER C OMMUNICATIONS W ITH T HE B OARD O F D IRECTORS**

The Company's Board has adopted a formal process by which stockholders may communicate with the Board or any of its directors. Stockholders who wish to communicate with the Board may do so by sending written communications addressed to the Secretary of Regulus Therapeutics Inc. at 3545 John Hopkins Court, Suite 210, San Diego, CA 92121. Each communication must set forth: the name and address of the Company stockholder on whose behalf the communication is sent; and, the number of Company shares that are owned beneficially by such stockholder as of the date of the communication. Each communication will be reviewed by the Company's Secretary to determine whether it is appropriate for presentation to the Board or such director. Communications determined by the Company's Secretary to be appropriate for presentation to the Board or such director will be submitted to the Board or such director on a periodic basis.

#### **C ODE OF E THICS**

The Company has adopted the Regulus Therapeutics Code of Business Conduct and Ethics that applies to all officers, directors and employees. The Code of Business Conduct and Ethics is available on the Company's website at [www.regulusrx.com](http://www.regulusrx.com). If the Company makes any substantive amendments to the Code of Business Conduct and Ethics or grants any waiver from a provision of the Code to any executive officer or director, the Company will promptly disclose the nature of the amendment or waiver on its website.

**P R O P O S A L 2**

**R A T I F I C A T I O N O F S E L E C T I O N O F I N D E P E N D E N T R E G I S T E R E D P U B L I C A C C O U N T I N G F I R M**

The Audit Committee has selected Ernst & Young, LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2013 and has further directed that management submit the selection of independent registered public accounting firm for ratification by the stockholders at the annual meeting. Ernst & Young has audited the Company's financial statements since its inception in 2007. Representatives of Ernst & Young are expected to be present at the Annual Meeting. They will have an opportunity to make a statement if they so desire and will be available to respond to appropriate questions.

Neither the Company's Bylaws nor other governing documents or law require stockholder ratification of the selection of Ernst & Young as the Company's independent registered public accounting firm. However, the Audit Committee is submitting the selection of Ernst & Young to the stockholders for ratification as a matter of good corporate practice. If the stockholders fail to ratify the selection, the Audit Committee will reconsider whether or not to retain that firm. Even if the selection is ratified, the Audit Committee in its discretion may direct the appointment of different independent auditors at any time during the year if they determine that such a change would be in the best interests of the Company and its stockholders.

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote at the annual meeting will be required to ratify the selection of Ernst & Young. Abstentions will be counted toward the tabulation of votes on proposals presented to the stockholders and will have the same effect as negative votes. Broker non-votes (if any) are counted towards a quorum, but are not counted for any purpose in determining whether this matter has been approved.

**T H E B O A R D O F D I R E C T O R S R E C O M M E N D S  
A V O T E I N F A V O R O F P R O P O S A L 2.**

**P R I N C I P A L A C C O U N T A N T F E E S A N D S E R V I C E S**

The following table represents aggregate fees billed to the Company for the fiscal years ended December 31, 2012 and December 31, 2011, by Ernst & Young, LLP, the Company's principal accountant. All fees described below were pre-approved by the Audit Committee.

	Fiscal Year Ended	
	2012	2011
	(in thousands)	
Audit Fees <sup>(1)</sup>	\$1,025	\$91
Audit-related Fees	—	—
Tax Fees	—	—
All Other Fees	—	—
Total Fees	\$1,025	\$91

<sup>(1)</sup> Audit fees consist of fees billed for professional services by Ernst & Young, LLP for audit and quarterly review of our financial statements and review of our registration statement on Form S-1, and related services that are normally provided in connection with statutory and regulatory filings or engagements.

In connection with the audit of the 2012 financial statements, the Company entered into an engagement agreement with Ernst & Young which sets forth the terms by which Ernst & Young will perform audit services for the Company. That agreement is subject to alternative dispute resolution procedures.

During the fiscal year ended December 31, 2012, none of the total hours expended on the Company's financial audit by Ernst & Young were provided by persons other than Ernst & Young full-time permanent employees.

#### **P R E -A P P R O V A L P O L I C I E S A N D P R O C E D U R E S .**

The Audit Committee has not adopted a policy and procedures for the pre-approval of audit and non-audit services rendered by the Company's independent registered public accounting firm, and consequently all audit and non-audit services are approved by the whole Audit Committee.

#### **E X E C U T I V E O F F I C E R S**

The following table sets forth certain information regarding our executive officers:

<u>Name</u>	<u>Age</u>	<u>Position(s)</u>
Kleanthis G. Xanthopoulos, Ph.D.	55	President, Chief Executive Officer and Director
Garry E. Menzel, Ph.D.	48	Chief Operating Officer and Executive Vice President, Finance
Neil W. Gibson, Ph.D.	57	Chief Scientific Officer

Dr. Xanthopoulos's biographical information is set forth above under Proposal 1.

*Garry E. Menzel, Ph.D.* has served as our Chief Operating Officer and Executive Vice President, Finance since our conversion to a corporation in January 2009 and, from August 2008 to January 2009, Dr. Menzel served as the Executive Vice President, Corporate Development and Finance of Regulus Therapeutics LLC. From November 2004 to April 2008, Dr. Menzel served as Managing Director and Global Head of Life Sciences with Credit Suisse Group AG, an investment banking firm. From 1994 to 2004, Dr. Menzel served as Managing Director and Global Head of Biotechnology with The Goldman Sachs Group, Inc., an investment banking firm. Dr. Menzel holds a Ph.D. in Molecular Biology from the University of Cambridge, England, an M.B.A. from the Stanford Graduate School of Business and a B.S. with Honors in Biochemistry from the Imperial College of Science & Technology in London, England.

*Neil W. Gibson, Ph.D.* has served as our Chief Scientific Officer since March 2011. From December 2007 to March 2011, Dr. Gibson served in several positions, most recently as Chief Scientific Officer of the Oncology Research Unit at Pfizer Inc., a publicly-held pharmaceutical company. From February 2001 to December 2007, Dr. Gibson served in several positions, most recently as Chief Scientific Officer, with OSI Pharmaceuticals, Inc., a publicly-held biotechnology company. From May 1997 to February 2001, Dr. Gibson served as director for cancer research in the Department of Cancer and Osteoporosis for Bayer AG, a publicly-held pharmaceutical company. Dr. Gibson holds a Ph.D. in Molecular Pharmacology from the University of Aston in Birmingham, England and a B.S. in Pharmacy from the University of Strathclyde.

**S E C U R I T Y O W N E R S H I P O F**

**C E R T A I N B E N E F I C I A L O W N E R S A N D M A N A G E M E N T**

The following table sets forth certain information regarding the ownership of the Company's common stock as of February 28, 2013 by: (i) each nominee for director; (ii) each of the executive officers named in the Summary Compensation Table; (iii) all executive officers and directors of the Company as a group; and (iv) all those known by the Company to be beneficial owners of more than five percent of its common stock.

<u>Beneficial Owner</u>	<u>Beneficial Ownership <sup>(1)</sup></u>	
	<u>Number of Shares</u>	<u>Percent of Total</u>
<b>Greater than 5% Stockholders</b>		
Isis Pharmaceuticals, Inc. <sup>(2)</sup>	7,074,500	19.7%
AstraZeneca AB	6,250,000	17.4%
Alnylam Pharmaceuticals, Inc.	6,150,500	17.1%
Sanofi	3,749,999	10.4%
GlaxoSmithKline plc <sup>(3)</sup>	3,328,750	8.9%
<b>Executive Officers and Directors</b>		
David Baltimore, Ph.D. <sup>(4)</sup>	192,705	*
Bruce L.A. Carter	0	*
Mark G. Foletta	0	*
John Maraganore, Ph.D. <sup>(5)</sup>	6,150,500	17.1%
Stelios Papadopoulos, Ph.D. <sup>(6)</sup>	179,894	*
B. Lynne Parshall <sup>(7)</sup>	7,074,500	19.7%
William H. Rastetter, Ph.D.	0	*
Douglas Williams, Ph.D.	0	*
Kleanthis G. Xanthopoulos, Ph.D. <sup>(8)</sup>	942,966	2.6%
Garry E. Menzel, Ph.D. <sup>(9)</sup>	460,155	1.3%
Neil W. Gibson, Ph.D. <sup>(10)</sup>	103,026	*
All executive officers and directors as a group (13 persons) <sup>(11)</sup>	15,167,027	40.3%

\* Less than one percent.

- (1) This table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G filed with the SEC. Unless otherwise indicated in the footnotes to this table and subject to community property laws where applicable, the Company believes that each of the stockholders named in this table has sole voting and investment power with respect to the shares indicated as beneficially owned. Applicable percentages are based on 35,891,558 shares outstanding on February 28, 2013, adjusted as required by rules promulgated by the SEC.
- (2) Includes 25,000 shares that Stanley T. Crooke, M.D., Ph.D. has the right to acquire from us within 60 days of February 28, 2013 pursuant to the exercise of stock options.
- (3) Includes 1,381,713 shares of our common stock issuable upon the conversion of \$5,426,952.05 of outstanding principal plus accrued interest underlying an amended and restated convertible note at a price of \$4.00 per share, based on interest accrued through April 29, 2013.
- (4) Includes 192,705 shares that Dr. Baltimore has the right to acquire from us within 60 days of February 28, 2013 pursuant to the exercise of stock options.
- (5) Represents 6,150,500 shares held by Alnylam. Dr. Maraganore is an officer and director of Alnylam and therefore may be deemed to have voting or investment power over the shares held by Alnylam. Dr. Maraganore disclaims beneficial ownership over the shares held by Alnylam, except to the extent of his proportionate pecuniary interests therein as a stockholder of Alnylam.
- (6) Includes 179,894 shares that Dr. Papadopoulos has the right to acquire from us within 60 days of February 28, 2013 pursuant to the exercise of stock options.

- (7) Represents 7,074,500 shares beneficially owned by Isis Pharmaceuticals, Inc. Ms. Parshall is an officer and director of Isis and therefore may be deemed to have voting or investment power over the shares beneficially owned by Isis. Ms. Parshall disclaims beneficial ownership over the shares beneficially owned by Isis, except to the extent of her proportionate pecuniary interests therein as a stockholder of Isis.
- (8) Includes 82,216 shares held by The Xanthopoulos Family Trust dated September 30, 2011, of which entity Dr. Xanthopoulos is the sole trustee. Also includes 860,750 shares that Dr. Xanthopoulos has the right to acquire from us within 60 days of February 28, 2013 pursuant to the exercise of stock options.
- (9) Includes 111,842 shares held by the Dr. Menzel and Mary E. Henshall Family Trust dated July 29, 2010, of which trust Dr. Menzel is a trustee. Also includes 348,313 shares that Dr. Menzel has the right to acquire from us within 60 days of February 28, 2013 pursuant to the exercise of stock options.
- (10) Includes 50,000 shares held by Dr. Gibson and 53,026 shares that Dr. Gibson has the right to acquire from us within 60 days of February 28, 2013 pursuant to the exercise of stock options.
- (11) Includes the shares described in notes (4) through (10) as well as 63,281 shares that executive officers of the Company who are not named in the Summary Compensation Table have the right to acquire from us within 60 days of February 28, 2013 pursuant to the exercise of stock options.

### **Section 16(a) Beneficial Ownership Reporting Compliance**

Section 16(a) of the Exchange Act requires the Company's directors and executive officers, and persons who own more than ten percent of a registered class of the Company's equity securities, to file with the SEC initial reports of ownership and reports of changes in ownership of common stock and other equity securities of the Company. Officers, directors and greater than ten percent stockholders are required by SEC regulation to furnish the Company with copies of all Section 16(a) forms they file.

To the Company's knowledge, based solely on a review of the copies of such reports furnished to the Company and written representations that no other reports were required, during the fiscal year ended December 31, 2012, all Section 16(a) filing requirements applicable to its officers, directors and greater than ten percent beneficial owners were complied with; except that one report, covering an aggregate of one transaction, was filed late by Dr. Carter.

### **E X E C U T I V E C O M P E N S A T I O N**

Our principal executive officer and the two other most highly compensated executive officers for the year ended December 31, 2012 (the "Named Executive Officers"), are:

- Kleanthis G. Xanthopoulos, Ph.D., our President and Chief Executive Officer;
- Garry E. Menzel, Ph.D., our Chief Operating Officer and Executive Vice President, Finance; and
- Neil W. Gibson, Ph.D., our Chief Scientific Officer.

## SUMMARY COMPENSATION TABLE

The following table shows for the fiscal years ended December 31, 2012 and December 31, 2011, compensation awarded to, paid to, or earned by, the Named Executive Officers.

### SUMMARY COMPENSATION TABLE FOR FISCAL 2012 AND 2011

Name and Principal Position	Year	Salary (\$)	Option Awards \$(1)	Non-Equity Incentive Plan	All Other Compensation	Total (\$)
				Compensation \$(2)	Compensation \$(3)	
Kleanthis G. Xanthopoulos, Ph.D., President and Chief Executive Officer	2012	515,500	648,387	348,748	4,368	1,517,003
	2011	500,000	85,622	112,500	5,192	703,314
Garry E. Menzel, Ph.D., Chief Operating Officer and Executive Vice President, Finance	2012	327,659	430,002	140,566	5,488	903,715
	2011	317,807	57,081	64,356	3,661	442,905
Neil W. Gibson, Ph.D., Chief Scientific Officer	2012	332,153	481,351	107,950	5,729	927,183
	2011	230,208	269,997	41,102	3,986	545,293

- (1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during 2012 and 2011, as applicable, computed in accordance with Financial Accounting Standard Board ASC Topic 718 for stock-based compensation transactions, or ASC 718. Assumptions used in the calculation of these amounts are included in Note 10 to the Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2012. These amounts do not reflect the actual economic value that will be realized by the Named Executive Officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.
- (2) Amounts shown represent performance bonuses earned for 2012 and 2011, which were each paid in a cash lump sum in the first quarter of 2013 and 2012, respectively.
- (3) Amounts shown represent term life insurance, long-term disability insurance paid by us on behalf of the Named Executive Officers and matching contributions we paid under the terms of our 401(k) plan. All of these benefits are provided to the Named Executive Officers on the same terms as provided to all of our regular full-time employees in the United States. For more information regarding these benefits, see below under "Perquisites, Health, Welfare and Retirement Benefits."

#### Annual Base Salary

The compensation of our Named Executive Officers is generally determined and approved by our Compensation Committee, who recommends their decisions to our Board of Directors. Our Board of Directors, without members of management present, ultimately ratifies and approves all compensation decisions. The Compensation Committee approved the following 2012 base salaries for our Named Executive Officers, which became effective on January 1, 2012.

Name	2012 base salary
Kleanthis G. Xanthopoulos, Ph.D.	\$515,500
Garry E. Menzel, Ph.D.	327,659
Neil W. Gibson, Ph.D.	332,153

#### Annual Performance-Based Bonus Opportunity

In addition to base salaries, our Named Executive Officers are eligible to receive annual performance-based cash bonuses, which are designed to provide appropriate incentives to our executives to achieve defined annual corporate goals and to reward our executives for individual achievement towards these goals.

The annual performance-based bonus each Named Executive Officer is eligible to receive is based on (1) the individual's target bonus, as a percentage of base salary, (2) a company-based performance factor, or CPF, and (3) an individual performance factor, or IPF. The actual performance-based bonus paid, if any, is calculated by taking into consideration the executive's annual base salary, target bonus percentage, percentage attainment of the CPF and percentage attainment of the IPF. There is no designated proportion of the bonus attributed to the CPF and the IPO and there is no maximum bonus percentage or amount established for the Named Executive Officers and, as a result, the bonus amounts vary from year to year based on corporate and individual performance. At the end of the year, the Compensation Committee approves the extent to which we achieved the CPF. The extent to which each individual executive achieves his or her IPF is determined based on our Chief Executive Officer's, or CEO's, and management's review and recommendation to the Compensation Committee, except the CEO and our executives do not make recommendations with respect to their own achievement, and the Compensation Committee makes the final decisions with respect to each IPF. Additionally, the Compensation Committee has the discretion to determine the weighting of each of the goals that comprise the CPF and IPF. The Compensation Committee may award a bonus in an amount above or below the amount resulting from the calculation described above, based on other factors that the Compensation Committee determines, in its sole discretion, are material to our corporate performance and provide appropriate incentives to our executives, for example based on events or circumstances that arise after the original CPF and IPF goals are set. The Compensation Committee did not exercise this discretion in awarding the bonuses in 2012.

Pursuant to their employment agreements or offer letters, each Named Executive Officer has a target bonus represented as a percentage of base salary, or a target bonus percentage, each of which is set forth below:

Name	Target bonus (%)
Kleanthis G. Xanthopoulos, Ph.D.	40
Garry E. Menzel, Ph.D.	30
Neil W. Gibson, Ph.D.	25

The CPF and IPF goals are determined by the Compensation Committee and communicated to the Named Executive Officers each year, prior to or shortly following the beginning of the year to which they relate. The CPF is composed of several goals that relate to our annual corporate goals and various business accomplishments which vary from time to time depending on our overall strategic objectives, but relate generally to achievement of discovery, clinical, regulatory and manufacturing milestones for clinical development candidates, financial factors such as raising or preserving capital and performance against our operating budget and business development goals related to *micro* RNA therapeutics. The IPF is composed of factors that relate to each Named Executive Officer's ability to drive his or her own performance and the performance of his or her direct employee reports towards reaching our corporate goals. The proportional emphasis placed on each goal within the CPF and IPF may vary from time to time depending on our overall strategic objectives and the Compensation Committee's subjective determination of which goals have more impact on our performance.

For 2012, the CPF overall goals were the execution of a substantial financing, the selection of a clinical candidate and the completion of a new partnership. The IPF goals varied by individual and included maintaining a leading position in *micro* RNA research, accelerating efforts in *micro* RNA therapeutic development, supporting our growth with additional capital, licenses and brand recognition, fostering a culture of value creating and building good processes and policies. Our CEO's IPF goals are tied more closely with our CPF goals, as our CEO has a direct impact on our corporate performance.

During 2012, we achieved our CPF goals of completing our initial public offering and established a new collaboration with AstraZeneca AB and we did not meet our goal of selecting a clinical candidate. In December 2012, the Compensation Committee approved a CPF achievement of 130% which the Compensation Committee believed was appropriate because we substantially overachieved our objectives relating to our initial public offering and new collaboration. Based on our CEO's review and recommendation with respect to Dr. Menzel and

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Dr. Gibson, management's recommendations, and the Compensation Committee's deliberations with respect to each Named Executive Officer's individual performance against the IPF, the Compensation Committee approved performance-based bonus amounts of \$348,748 for Dr. Xanthopoulos, in recognition of his ability to lead and develop the organization towards the goal of completing our initial public offering, strengthen our partnerships through our new collaboration with AstraZeneca and expanded collaboration with Sanofi and continue to build our brand recognition and corporate culture and \$140,566 for Dr. Menzel, due to his management of our strategic committee, management of key relationships with our strategic alliance partners including the additional collaboration with AstraZeneca, positioning us for our initial public offering and maintaining corporate expenses within budget. The Compensation Committee approved a performance-based bonus for Dr. Gibson in the amount of \$107,950, which reflected his ability to position the company for a clinical program with the hiring of key pharmaceutical development employees, continuing efforts to achieve our collaborators' research goals, thereby strengthening these relationships and driving us toward our key strategic goal of nominating a clinical candidate.

#### *Long-Term Incentive Compensation*

Our long-term, equity-based incentive awards are designed to align the interests of our Named Executive Officers and our other employees, non-employee directors and consultants with the interests of our stockholders. Because vesting is based on continued service, our equity-based incentives also encourage the retention of our Named Executive Officers through the vesting period of the awards.

We use stock options as the primary incentive for long-term compensation to our Named Executive Officers because they are able to profit from stock options only if our stock price increases relative to the stock option's exercise price. We generally provide initial grants in connection with the commencement of employment of our Named Executive Officers and annual retention grants at or shortly following the end of each year.

Prior to 2012, we have granted all stock options pursuant to our 2009 Equity Incentive Plan (the "2009 Plan"), the terms of which are described below under "Equity Compensation Plans and Other Benefit Plans—2009 Equity Incentive Plan." All options granted under the 2009 Plan were granted at no less than the fair market value of our common stock on the date of grant of each award. Beginning in October 2012, all stock options are granted pursuant to our 2012 Equity Incentive Plan (the "2012 Plan"), the terms of which are described below under "Equity Compensation Plans and Other Benefits Plans—2012 Equity Incentive Plan." All options granted under the 2012 Plan are granted at the fair market value of our common stock on the date of grant.

All of our stock option grants typically vest over a four-year period and may be granted with an early exercise feature allowing the holder to exercise and receive unvested shares of our stock, so that the employee may exercise and have a greater opportunity for gains on the shares to be taxed at long-term capital gains rates rather than ordinary income rates. In addition, the Compensation Committee has approved certain grants of options to our Named Executive Officers containing accelerated vesting provisions upon an involuntary termination (both termination without cause and resignation for good reason) as well as upon certain material change in control transactions. The Compensation Committee believes these accelerated vesting provisions reflect current market practices, based on the collective knowledge and experiences of the Compensation Committee members (and without reference to specific peer group data), and allow us to attract and retain highly qualified executive officers. In addition, we believe these accelerated vesting provisions will allow our Named Executive Officers to focus on closing a transaction that may be in the best interest of our stockholders even though the transaction may otherwise result in a termination of their employment and, absent such accelerated vesting, a forfeiture of their unvested equity awards. Additional information regarding accelerated vesting provisions for our Named Executive Officers is discussed below under "Employment Agreements with Executive Officers."

In February 2012, the Compensation Committee made annual retention grants to Dr. Xanthopoulos, Dr. Menzel and Dr. Gibson in the form of an option to purchase 125,000, 52,500 and 37,275 shares of common

stock, respectively, each with an exercise price of \$2.66 per share. The options vest at the rate of 25% of the total number of shares subject to the option on January 1, 2013 and 1/48th of the total number of shares subject to the option on the first of each month thereafter, provided that the option holder continues to provide services to us through such dates.

On December 11, 2012, the Compensation Committee made annual retention grants to Dr. Xanthopoulos in the form of an option to purchase 150,000 shares of common stock and to Dr. Menzel in the form of an option to purchase 75,000 shares of common stock, and to Dr. Gibson in the form of an option to purchase 112,500 shares of common stock each of which has an exercise price of \$4.44 per share. The options vest at the rate of 25% of the total number of shares subject to the option on January 1, 2014 and 1/48th of the total number of shares subject to the option on the first of each month thereafter, provided that the option holder continues to provide services to us through such dates. Perquisites, Health, Welfare and Retirement Benefits.

#### *Health and Welfare Benefits*

Our Named Executive Officers are eligible to participate in all of our employee benefit plans, including our medical, dental, vision, group life and disability insurance plans, in each case on the same basis as other employees. We provide 401(k) matching contributions as discussed in the section below entitled “Equity Compensation Plans and Other Benefit Plans—401(k) Plan.”

We do not provide perquisites or personal benefits to our Named Executive Officers. We do, however, pay the premiums for term life insurance and long-term disability for all of our employees, including our Named Executive Officers. None of our Named Executive Officers participate in or have account balances in qualified or non-qualified defined benefit plans sponsored by us.

#### **Outstanding Equity Awards at Fiscal Year End.**

The following table shows for the fiscal year ended December 31, 2012, certain information regarding outstanding equity awards at fiscal year end for the Named Executive Officers.

#### **OUTSTANDING EQUITY AWARDS AT DECEMBER 31, 2012**

Name	Grant Date	Option Awards(1)(2)			
		Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date
Dr. Kleanthis G. Xanthopoulos	02/09/2009 <sup>(3)</sup>	750,000	0	\$ 0.38	02/09/2019
	01/01/2010 <sup>(4)</sup>	100,260	37,240	\$ 0.38	01/01/2020
	01/03/2011 <sup>(5)</sup>	35,937	39,063	\$ 1.74	01/03/2021
	02/09/2012 <sup>(7)</sup>	0	125,000	\$ 2.66	02/09/2022
	12/11/2012 <sup>(8)</sup>	0	150,000	\$ 4.44	12/11/2022
Dr. Garry E. Menzel	02/09/2009 <sup>(3)</sup>	375,000	0	\$ .038	02/09/2019
	01/01/2010 <sup>(4)</sup>	36,458	13,542	\$ 0.38	01/01/2020
	01/03/2011 <sup>(5)</sup>	23,958	26,042	\$ 1.74	01/03/2021
	02/09/2012 <sup>(7)</sup>	0	52,500	\$ 2.66	02/09/2022
	12/11/2012 <sup>(8)</sup>	0	75,000	\$ 4.44	12/11/2022
Dr. Neil W. Gibson	04/18/2011 <sup>(6)</sup>	79,801	157,699	\$ 1.74	04/18/2021
	02/09/2012 <sup>(7)</sup>	0	30,074	\$ 2.66	02/09/2022
	12/11/2012 <sup>(8)</sup>	0	112,500	\$ 4.44	12/11/2022

- (1) All of the options granted prior to October 4, 2012 were granted under the 2009 Plan and were granted with a per share exercise price equal to the fair market value of one share of our common stock on the date of

grant, as determined in good faith by our board of directors with the assistance of a third-party valuation expert. All of the options granted on or after October 4, 2012 were granted under the 2012 Plan and were granted with a per share exercise price equal to the fair market value of our common stock on the date of grant. The terms of the 2009 Plan and the 2012 Plan are described below under “Equity Compensation Plans and Other Benefit Plans.”

- (2) The vesting of the options accelerates upon a change in control or upon the termination of employment of the named executive officer by us without cause or by the officer for good reason, as described below under “Employment Agreements with Named Executive Officers”
- (3) The options are exercisable in full as of the grant date and vest at the rate of 25% of the total number of shares subject to the option on January 1, 2010 and 1/48th of the total number of shares subject to the option on the first of each month thereafter, provided that the option holder continues to provide services to us through such dates.
- (4) The options vest at the rate of 25% of the total number of shares subject to the option on January 1, 2011 and 1/48th of the total number of shares subject to the option on the first of each month thereafter, provided that the option holder continues to provide services to us through such dates.
- (5) The options vest at the rate of 25% of the total number of shares subject to the option on January 1, 2012 and 1/48th of the total number of shares subject to the option on the first of each month thereafter, provided that the option holder continues to provide services to us through such dates.
- (6) The options vest at the rate of 25% of the total number of shares subject to the option on April 18, 2012 and 1/48th of the total number of shares subject to the option on the 18th day of each month thereafter, provided that the option holder continues to provide services to us through such dates.
- (7) The options vest at the rate of 25% of the total number of shares subject to the option on January 1, 2013 and 1/48th of the total number of shares subject to the option on the 18th day of each month thereafter, provided that the option holder continues to provide services to us through such dates.
- (8) The options vest at the rate of 25% of the total number of shares subject to the option on January 1, 2014 and 1/48th of the total number of shares subject to the option on the 18th day of each month thereafter, provided that the option holder continues to provide services to us through such dates.

#### **Employment Agreements with Named Executive Officers**

All of our Named Executive Officers have employment agreements with us that provide that their employment is at will and may be terminated at any time by the executive or by us with or without cause and without notice. The employment agreements provide for certain base salary, target bonus and severance payments to our Named Executive Officers as follows:

*Employment agreement with Dr. Xanthopoulos.* We entered into an employment agreement with Dr. Xanthopoulos in December 2008 setting forth the terms of Dr. Xanthopoulos’ employment. Pursuant to the agreement, Dr. Xanthopoulos was initially paid an annual salary of \$420,000 and was eligible to receive a performance bonus based on a target amount of 40% of his base salary, certain stock options under our 2009 Equity Incentive Plan and certain severance benefits. In June 2012 we entered into an amended and restated employment agreement with Dr. Xanthopoulos, which replaced and superseded his previous employment agreement. Pursuant to his amended and restated employment agreement, Dr. Xanthopoulos is paid an annual base salary of \$515,500 and is eligible to receive an annual performance bonus based on a target amount of 40% of his annual base salary.

If we terminate Dr. Xanthopoulos’s employment without cause (other than due to his death or complete disability) or if Dr. Xanthopoulos resigns for good reason at any time other than during the one month prior to a change in control and the 12 months following a change in control, we are obligated to pay Dr. Xanthopoulos, subject to receiving an effective release and waiver of claims from him, (1) a severance payment equal to 18 months of base salary in effect at the time of termination (ignoring any decrease that forms the basis for a resignation for good reason), (2) continued health benefits at our cost for 18 months and (3) vesting acceleration of all outstanding options or other equity incentive awards, as of such termination. Half of the total amount of the

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severance payment described in (1) above will be paid in a lump sum payment upon termination and half of the total amount of the severance payment will be paid in equal installments over a 12-month period following Dr. Xanthopoulos's termination of employment.

If we terminate Dr. Xanthopoulos's employment without cause (other than due to his death or complete disability) or if Dr. Xanthopoulos resigns for good reason, in each case within one month prior to or within 12 months following a change in control, in lieu of the severance payments described above, we are obligated to pay Dr. Xanthopoulos, subject to receiving an effective release and waiver of claims from him, (1) a lump sum severance payment equal to 24 months of base salary in effect at the time of termination (ignoring any decrease that forms the basis for a resignation for good reason), (2) a lump sum payment equal to two times the target amount of Dr. Xanthopoulos's annual performance bonus payable for the year of termination, (3) continued health benefits at our cost for 18 months and (4) vesting acceleration of all outstanding options or other equity incentive awards, as of such termination.

*Employment agreement with Dr. Menzel.* We entered into an employment agreement with Dr. Menzel in December 2008 setting forth the terms of Dr. Menzel's employment. Pursuant to the agreement, Dr. Menzel was initially paid an annual salary of \$280,500 and was eligible to receive a performance bonus based on a target amount of 30% of his base salary, certain stock options under our 2009 Equity Incentive Plan and certain severance benefits. In June 2012 we entered into an amended and restated employment agreement with Dr. Menzel, which replaced and superseded his previous employment agreement. Pursuant to his amended and restated employment agreement, Dr. Menzel is paid an annual base salary of \$327,659 and is eligible to receive an annual performance bonus based on a target amount of 30% of his annual base salary. If we terminate Dr. Menzel's employment without cause (other than due to his death or complete disability) or if Dr. Menzel resigns for good reason at any time other than during the one month prior to a change in control and the 12 months following a change in control, we are obligated to pay Dr. Menzel, subject to receiving an effective release and waiver of claims from him, (1) a lump sum severance payment equal to 12 months of base salary in effect at the time of termination (ignoring any decrease that forms the basis for a resignation for good reason), (2) continued health benefits at our cost for 12 months and (3) vesting acceleration of all outstanding options or other equity incentive awards, as of such termination.

If we terminate Dr. Menzel's employment without cause (other than due to his death or complete disability) or if Dr. Menzel resigns for good reason, in each case within one month prior to or within 12 months following a change in control, in lieu of the severance payment described above, we are obligated to pay Dr. Menzel, subject to receiving an effective release and waiver of claims from him (1) a lump sum severance payment equal to 18 months of base salary in effect at the time of termination (ignoring any decrease that forms the basis for a resignation for good reason), (2) a lump sum payment equal to two times the target amount of Dr. Menzel's annual performance bonus payable for the year of termination, (3) continued health benefits at our cost for 12 months and (4) vesting acceleration of all outstanding options or other equity incentive awards, as of such termination.

*Employment agreement with Dr. Gibson.* We entered into an offer letter agreement with Dr. Gibson in March 2011 summarizing the terms of Dr. Gibson's employment. Pursuant to the offer letter, Dr. Gibson was initially paid an annual salary of \$325,000 and was eligible to receive a performance bonus of up to 25% of his base salary, certain stock options under our 2009 Equity Incentive Plan and certain severance benefits. In June 2012 we entered into an employment agreement with Dr. Gibson, which replaced and superseded his previous offer letter agreement. Pursuant to his employment agreement, Dr. Gibson is paid an annual base salary of \$332,153 and is eligible to receive an annual performance bonus based on a target amount of 25% of his annual base salary.

If we terminate Dr. Gibson's employment without cause (other than due to his death or complete disability) or if Dr. Gibson resigns for good reason at any time other than during the one month prior to a change in control and the 12 months following a change in control, we are obligated to pay Dr. Gibson, subject to receiving an

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effective release and waiver of claims from him, (1) a lump sum severance payment equal to 12 months of base salary in effect at the time of termination (ignoring any decrease that forms the basis for a resignation for good reason), (2) continued health benefits at our cost for 12 months and (3) vesting acceleration of all outstanding options or other equity incentive awards, as of such termination.

If we terminate Dr. Gibson's employment without cause (other than due to his death or complete disability) or if Dr. Gibson resigns for good reason, in each case within one month prior to or within 12 months following a change in control, in lieu of the severance payment described above, we are obligated to pay Dr. Gibson, subject to receiving an effective release and waiver of claims from him (1) a lump sum severance payment equal to 12 months of base salary in effect at the time of termination (ignoring any decrease that forms the basis for a resignation for good reason), (2) a lump sum payment equal to the target amount of Dr. Gibson's annual performance bonus payable for the year of termination, (3) continued health benefits at our cost for 12 months and (4) vesting acceleration of all outstanding options or other equity incentive awards, as of such termination.

None of the Named Executive Officers' employment agreements provide for the gross up of any excise taxes imposed by Section 4999 of the Internal Revenue Code of 1986, as amended (the "Code"). If any of the payments under the employment agreements would constitute a "parachute payment" within the meaning of Section 280G of the Code, subject to the excise tax imposed by Section 4999 of the Code, the employment agreements provide for a best-after tax analysis with respect to such payments, under which the executive will receive whichever of the following two alternative forms of payment would result in the executive's receipt, on an after-tax basis, of the greater amount of the transaction payment notwithstanding that all or some portion of the transaction payment may be subject to the excise tax: (i) payment in full of the entire amount of the transaction payment, or (ii) payment of only a part of the transaction payment so that the executive receives the largest payment possible without the imposition of the excise tax.

For purposes of the employment agreements, "cause" generally means an executive officer's (i) commission of any felony or crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (ii) attempted commission of, or participation in, a fraud or act of dishonesty against us; (iii) intentional, material violation of any contract or agreement between the executive officer and us or of any statutory duty owed to us; (iv) unauthorized use or disclosure of our confidential information or trade secrets; or (v) gross misconduct.

For purposes of the employment agreements, "good reason" means voluntary resignation of employment with us within 90 days of the occurrence of one or more of the following undertaken by us without such executive officer's consent, after we fail to remedy the condition within a 30-day cure period (i) our material breach of the employment agreement; (ii) a material reduction of the executive's base salary; (ii) a material reduction of the executive's authority, duties or responsibilities; or (iii) a relocation of the facility that is the executive's principal place of business to a location that requires an increase in the executive's one-way driving distance by more than 35 miles.

For purposes of the employment agreements, "change in control" generally means one or more of the following events (i) the acquisition of more than 50% of our combined voting power other than by Alnylam or Isis; (ii) a consummation of a merger, consolidation or similar transaction in which our stockholders cease to own outstanding voting securities representing more than 50% of the voting power of the parent or the surviving entity immediately following the merger; or (iii) a consummated sale, lease, exclusive license or other disposition of all or substantially all of our consolidated assets (other than to an entity of which more than 50% of the voting power is owned immediately following such disposition by our stockholders).

### **Compensation Recovery Policies**

The Board of Directors and the Compensation Committee have not determined whether they would attempt to recover bonuses from our executive officers if the performance objectives that led to the bonus determination were to be restated, or found not to have been met to the extent originally believed by the Board of Directors or

the Compensation Committee. However, as a public company subject to the provisions of Section 304 of the Sarbanes-Oxley Act of 2002, if we are required as a result of misconduct to restate our financial results due to our material noncompliance with any financial reporting requirements under the federal securities laws, our CEO and chief financial officer may be legally required to reimburse us for any bonus or other incentive-based or equity-based compensation they receive. In addition, we will comply with the requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act and will adopt a compensation recovery policy once final regulations on the subject have been adopted.

## **Equity Compensation Plans and Other Benefits Plans**

### *2012 Equity Incentive Plan*

Our Board of Directors and our stockholders adopted the 2012 Plan, which became effective October 2012 in connection with our initial public offering.

*Stock awards* . The 2012 Plan provides for the grant of incentive stock options, or ISOs, within the meaning of Section 422 of the Code, nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based stock awards, and other forms of equity compensation, or collectively, stock awards, all of which may be granted to employees, including officers, and to non-employee directors and consultants. Additionally, the 2012 Plan provides for the grant of performance cash awards. ISOs may be granted only to employees. All other awards may be granted to employees, including officers, and to non-employee directors and consultants.

*Share reserve* . Initially, the aggregate number of shares of our common stock that may be issued pursuant to stock awards under the 2012 Plan is the sum of (i) 1,500,000 shares, plus (ii) the 731,781 shares reserved for issuance under our 2009 Plan at the time our 2012 Plan became effective, plus (iii) any shares subject to stock options or other stock awards granted under our 2009 Plan that would have otherwise returned to our 2009 Plan (such as upon the expiration or termination of a stock award prior to vesting). Additionally, the number of shares of our common stock reserved for issuance under our 2012 Plan will automatically increase on January 1 of each year, beginning on January 1, 2013 (assuming the 2012 Plan becomes effective before such date) and continuing through and including January 1, 2022, by 4% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our Board of Directors. The maximum number of shares that may be issued upon the exercise of ISOs under our 2012 Plan is 3,000,000 shares.

No person may be granted stock awards covering more than 1,500,000 shares of our common stock under our 2012 Plan during any calendar year pursuant to stock options, stock appreciation rights and other stock awards whose value is determined by reference to an increase over an exercise or strike price of at least 100% of the fair market value on the date the stock award is granted. Additionally, no person may be granted in a calendar year a performance stock award covering more than 1,500,000 shares or a performance cash award having a maximum value in excess of \$1,500,000. Such limitations are designed to help assure that any deductions to which we would otherwise be entitled with respect to such awards will not be subject to the \$1.0 million limitation on the income tax deductibility of compensation paid to any covered executive officer imposed by Section 162(m) of the Code.

If a stock award granted under the 2012 Plan expires or otherwise terminates without being exercised in full, or is settled in cash, the shares of our common stock not acquired pursuant to the stock award again will become available for subsequent issuance under the 2012 Plan. In addition, the following types of shares under the 2012 Plan may become available for the grant of new stock awards under the 2012 Plan: (1) shares that are forfeited to or repurchased by us prior to becoming fully vested; (2) shares withheld to satisfy income or employment withholding taxes; or (3) shares used to pay the exercise price of an option. Shares issued under the 2012 Plan may be previously unissued shares or reacquired shares bought by us on the open market.

*Administration* . Our Board of Directors, or a duly authorized committee thereof, has the authority to administer the 2012 Plan. Our Board of Directors has delegated its authority to administer the 2012 Plan to our Compensation Committee under the terms of the Compensation Committee's charter. Our Board of Directors may also delegate to one or more of our officers the authority to (1) designate employees (other than other officers) to be recipients of certain stock awards, and (2) determine the number of shares of common stock to be subject to such stock awards. Subject to the terms of the 2012 Plan, our Board of Directors or the authorized committee, referred to herein as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award.

The plan administrator has the power to modify outstanding awards under our 2012 Plan. Subject to the terms of our 2012 Plan, the plan administrator has the authority to reduce the exercise, purchase or strike price of any outstanding stock award, cancel any outstanding stock award in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

*Stock options* . Incentive and nonstatutory stock options are granted pursuant to stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2012 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2012 Plan vest at the rate specified by the plan administrator.

The plan administrator determines the term of stock options granted under the 2012 Plan, up to a maximum of 10 years. Unless the terms of an optionee's stock option agreement provides otherwise, if an optionee's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionee may generally exercise any vested options for a period of three months following the cessation of service. The option term may be extended in the event that exercise of the option following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If an optionee's service relationship with us, or any of our affiliates, ceases due to disability or death, or an optionee dies within a certain period following cessation of service, the optionee or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual for cause. In no event may an option be exercised beyond the expiration of its term.

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

Unless the plan administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. An optionee may designate a beneficiary, however, who may exercise the option following the optionee's death.

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

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*Restricted stock awards* . Restricted stock awards are granted pursuant to restricted stock award agreements adopted by the plan administrator. Restricted stock awards may be granted in consideration for (1) cash, check, bank draft or money order, (2) services rendered to us or our affiliates, or (3) any other form of legal consideration. Common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in our favor in accordance with a vesting schedule to be determined by the plan administrator. Rights to acquire shares under a restricted stock award may be transferred only upon such terms and conditions as set by the plan administrator. As of the date hereof, no restricted stock awards have been made under the 2012 Plan.

*Restricted stock unit awards* . Restricted stock unit awards are granted pursuant to restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason. As of the date hereof, no restricted stock unit awards have been made under the 2012 Plan.

*Stock appreciation rights* . Stock appreciation rights are granted pursuant to stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the strike price for a stock appreciation unit, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Upon the exercise of a stock appreciation unit, we will pay the participant an amount equal to the product of (1) the excess of the per share fair market value of our common stock on the date of exercise over the strike price, multiplied by (2) the number of shares of common stock with respect to which the stock appreciation unit is exercised. A stock appreciation unit granted under the 2012 Plan vests at the rate specified in the stock appreciation grant agreement as determined by the plan administrator. As of the date hereof, no stock appreciation rights have been made under the 2012 Plan.

The plan administrator determines the term of stock appreciation rights granted under the 2012 Plan, up to a maximum of ten years. Unless the terms of a participant's stock appreciation grant agreement provides otherwise, if a participant's service relationship with us, or any of our affiliates, ceases for any reason other than cause, disability or death, the participant may generally exercise any vested stock appreciation unit for a period of three months following the cessation of service. The stock appreciation unit term may be further extended in the event that exercise of the stock appreciation unit following such a termination of service is prohibited by applicable securities laws. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation unit for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation unit be exercised beyond the expiration of its term.

*Performance awards* . The 2012 Plan permits the grant of performance-based stock and cash awards that may qualify as performance-based compensation that is not subject to the \$1,000,000 limitation on the income tax deductibility of compensation paid to a covered executive officer imposed by Section 162(m) of the Code. To help assure that the compensation attributable to performance-based awards will so qualify, our Compensation Committee can structure such awards so that stock or cash will be issued or paid pursuant to such award only after the achievement of certain pre-established performance goals during a designated performance period.

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

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*Changes to capital structure* . In the event that there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to (a) the class and maximum number of shares reserved for issuance under the 2012 Plan, (b) the class and maximum number of shares by which the share reserve may increase automatically each year, (c) the class and maximum number of shares that may be issued upon the exercise of ISOs, (d) the class and maximum number of shares subject to stock awards that can be granted in a calendar year (as established under the 2012 Plan pursuant to Section 162(m) of the Code) and (e) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

*Corporate transactions* . In the event of certain specified significant corporate transactions, the plan administrator has the discretion to take any of the following actions with respect to stock awards:

- arrange for the assumption, continuation or substitution of a stock award by a surviving or acquiring entity or parent company;
- arrange for the assignment of any reacquisition or repurchase rights held by us to the surviving or acquiring entity or parent company;
- accelerate the vesting of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse of any reacquisition or repurchase right held by us;
- cancel or arrange for the cancellation of the stock award in exchange for such cash consideration, if any, as our Board of Directors may deem appropriate; or
- make a payment equal to the excess of (a) the value of the property the participant would have received upon exercise of the stock award over (b) the exercise price otherwise payable in connection with the stock award.

Our plan administrator is not obligated to treat all stock awards, even those that are of the same type, in the same manner.

Under the 2012 Plan, a corporate transaction is generally the consummation of (i) a sale or other disposition of all or substantially all of our consolidated assets, (ii) a sale or other disposition of at least 90% of our outstanding securities, (iii) a merger, consolidation or similar transaction following which we are not the surviving corporation, or (iv) a merger, consolidation or similar transaction following which we are the surviving corporation but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction.

*Change in control* . The plan administrator may provide, in an individual award agreement or in any other written agreement between a participant and us, that the stock award will be subject to additional acceleration of vesting and exercisability in the event of a change in control. For example, a stock award may provide for accelerated vesting upon the participant's termination without cause or resignation for good reason in connection with a change in control. In the absence of such a provision, no such acceleration of the stock award will occur. Under the 2012 Plan, a change in control is generally (i) the acquisition by a person or entity of more than 50% of our combined voting power other than by merger, consolidation or similar transaction; (ii) a consummated merger, consolidation or similar transaction immediately after which our stockholders cease to own more than 50% of the combined voting power of the surviving entity; or (iii) a consummated sale, lease or exclusive license or other disposition of all or substantially of our consolidated assets.

*Amendment and termination* . Our Board of Directors has the authority to amend, suspend, or terminate our 2012 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. No ISOs may be granted after the tenth anniversary of the date our Board of Directors adopted our 2012 Plan.

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## 2009 Equity Incentive Plan

Our 2009 Plan was initially adopted by our Board of Directors and approved by our stockholders in January 2009. The 2009 Plan reserved 4,555,511 shares of common stock for issuance and provides that the shares reserved under the 2009 Plan may be increased as of each January 1, with the approval of the majority of our non-employee members of the Board of Directors, by the lesser of (i) 5% of the total shares of our common stock outstanding as of such January 1 or (ii) such lesser number of shares as determined by the majority of our non-employee members of the Board of Directors. Additionally, the 2009 Plan provides that no more than 12,500,000 shares may be issued under the plan pursuant to the exercise of ISOs.

If a stock award granted under the 2009 Plan expires or otherwise terminates without being exercised in full, or is settled in cash, the shares of our common stock not acquired pursuant to the stock award again become available for subsequent issuance under the 2009 Plan. In addition, the following types of shares under the 2009 Plan may become available for the grant of new stock awards under the 2009 Plan: (a) shares that are forfeited to us because of a failure to meet a contingency or condition required to vest such shares; (b) shares withheld to satisfy income or employment withholding taxes; and (c) shares used to as consideration for the exercise of an option. The material terms of the 2009 Plan are summarized below.

*No further grants.* No additional awards will be granted under the 2009 Plan, and all awards granted under the 2009 Plan that are repurchased, forfeited, expire or are cancelled will become available for grant under the 2012 Plan in accordance with its terms.

*Administration.* Our Board of Directors, or a duly authorized committee thereof, has the authority to administer the 2009 Plan. Our Board of Directors has delegated its authority to administer the 2009 Plan to our Compensation Committee under the terms of the Compensation Committee's charter. Our Board of Directors may also delegate to one or more of our officers the authority to (1) designate employees to be recipients of certain stock awards, and (2) determine the number of shares of common stock to be subject to such stock awards. Subject to the terms of the 2009 Plan, our Board of Directors or the authorized committee, referred to herein as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award.

The plan administrator has the power to modify outstanding awards under our 2009 Plan. Subject to the terms of our 2009 Plan, the plan administrator has the authority to reduce the exercise price of any outstanding option, cancel any outstanding option in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

*Types of awards.* The 2009 Plan provides for the grant of ISOs, within the meaning of Section 422 of the Code, NSOs, stock appreciation rights, restricted stock awards, and restricted stock unit awards, or collectively, stock awards. Each award will be set forth in a separate agreement with the person receiving the award and will indicate the type, terms and conditions of the award. Only stock options were granted under the 2009 Plan.

*Eligibility.* ISOs may be granted only to employees, including employees of a parent company or subsidiary. All other stock awards may be granted to employees, including officers, and to non-employee directors and consultants.

*Stock options.* Stock options are granted pursuant to stock option agreements. Generally, the exercise price for an option cannot be less than 100% of the fair market value of the common stock subject to the option on the date of grant. Options granted under the 2009 Plan will vest at the rate specified in the option agreement. A stock option agreement may provide for early exercise, prior to vesting, rights of repurchase, and rights of first refusal. Unvested shares of our common stock issued in connection with an early exercise may be repurchased by us.

In general, the term of stock options granted under the 2009 Plan may not exceed 10 years. Unless the terms of an option holder's stock option agreement provide for earlier or later termination, if an option holder's service relationship with us, or any affiliate of ours, ceases due to disability or death, the option holder, or his or her beneficiary, may exercise any vested options for up to 12 months, or 18 months in the event of death, after the date the service relationship ends, unless the terms of the stock option agreement provide for earlier termination. If an option holder's service relationship with us, or any affiliate of ours, ceases without cause for any reason other than disability or death, the option holder may exercise any vested options for up to three months after the date the service relationship ends, unless the terms of the stock option agreement provide for a longer or shorter period to exercise the option. If an option holder's service relationship with us, or any affiliate of ours, ceases with cause, the option will terminate at the time the option holder's relationship with us ceases. In no event may an option be exercised after its expiration date.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionee, (4) a net exercise arrangement, (5) deferred payment arrangement and (6) other legal consideration approved by the plan administrator.

Generally, an option holder may not transfer a stock option other than by will or the laws of descent and distribution or a domestic relations order. An option holder may, however, designate a beneficiary who may exercise the option following the option holder's death. The plan administrator determines the term of stock options granted under the 2009 Plan, up to a maximum of 10 years. Unless the terms of an optionee's stock option agreement provides otherwise, if an optionee's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionee may generally exercise any vested options for a period of three months following the cessation of service. The option term may be extended in the event that exercise of the option following such a termination of service is prohibited by applicable securities laws. If an optionee's service relationship with us, or any of our affiliates, ceases due to disability or death, or an optionee dies within a certain period following cessation of service, the optionee or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally terminate immediately upon the termination of the individual for cause. In no event may an option be exercised beyond the expiration of its term.

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

*Corporate transactions.* In the event of a corporate transaction where the acquiring or surviving corporation does not assume, continue or substitute stock awards granted under the 2009 Plan, outstanding stock awards under the 2009 Plan and held by participants whose continuous service with us has not terminated prior to such transaction will be subject to accelerated vesting such that 100% of such award will become vested and exercisable or payable, as applicable, prior to the effective time of the corporate transaction and such outstanding stock awards under the 2009 Plan will be terminated if not exercised (if applicable) prior to the effective time of the corporate transaction. However, the plan administrator may provide that if a stock award will terminate if not exercised prior to a corporate transaction, the participant will receive a payment in lieu of exercise equal to the value of the excess, if any, of (i) the value of the property the participant would have received upon exercise of the stock award over (ii) any exercise price payable in connection with such exercise. Under the 2009 Plan, a corporate transaction has generally the same definition as under the 2012 Plan.

Under the 2009 Plan, a stock award may be subject to additional acceleration of vesting and exercisability upon or after a change in control transaction as may be provided in the stock award agreement or other written agreement with the participant, but in the absence of such provision, no such acceleration will occur.

*Amendment of awards under the 2009 Plan.* Our Board of Directors has the authority to amend awards that are outstanding under the 2009 Plan at any time. However, except as otherwise provided in the 2009 Plan, no such amendment may materially impair any rights under awards already granted to a participant unless agreed to by the affected participant.

#### *2012 Employee Stock Purchase Plan*

Additional long-term equity incentives are provided through the 2012 Employee Stock Purchase Plan (the “ESPP”), which became effective in connection with our initial public offering in October 2011. The ESPP is intended to qualify as an “employee stock purchase plan” within the meaning of section 423 of the Code. Our Board of Directors has delegated its authority to administer the ESPP to our Compensation Committee. Under the ESPP, all of our regular employees (including the Named Executive Officers) may participate and may contribute, normally through payroll deductions, up to 15% of their earnings for the purchase of our common stock. The ESPP is implemented through a series of offerings of purchase rights to eligible employees. Under the ESPP, we may specify offerings with a duration of not more than six months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which our common stock will be purchased for employees participating in the offering. Unless otherwise determined by the Compensation Committee, shares are purchased for accounts of employees participating in the ESPP at a price per share equal to the lower of (a) 85% of the fair market value of our common stock on the first date of an offering or (b) 85% of the fair market value of our common stock on the date of purchase.

#### *401(k) Plan*

All of our full-time employees in the United States, including our Named Executive Officers, are eligible to participate in our 401(k) plan, which is a retirement savings defined contribution plan established in accordance with Section 401(a) of the Code. Pursuant to our 401(k) plan, employees may elect to defer their eligible compensation into the plan on a pre-tax basis, up to the statutorily prescribed annual limit of \$17,000 in 2012 (additional salary deferrals not to exceed \$5,500 are available to those employees 50 years of age or older) and to have the amount of this reduction contributed to our 401(k) plan. We provide a \$0.25 match for every dollar our employees elect to defer up to 6% of their eligible compensation. In general, eligible compensation for purposes of the 401(k) plan includes an employee’s wages, salaries, fees for professional services and other amounts received for personal services actually rendered in the course of employment with us to the extent the amounts are includible in gross income, and subject to certain adjustments and exclusions required under the Code. The 401(k) plan currently does not offer the ability to invest in our securities.

#### **Potential Payments Upon Termination or Change in Control**

Each of our Named Executive Officers are eligible to receive severance and change in control benefits under the terms of their employment agreements described above under “—Employment Agreements with Named Executive Officers.” Additionally, stock options granted to our Named Executive Officers are subject to the change in control provisions set forth in the 2009 Plan and the 2012 Plan, as applicable and as further described above under “—Equity Compensation Plans and Other Benefit Plans.”

## D IRECTOR C OMPENSATION

The following table shows for the fiscal year ended December 31, 2012 certain information with respect to the compensation of all non-employee directors of the Company:

### D IRECTOR C OMPENSATION FOR F ISCAL 2012

Name <sup>(1)</sup>	Fees Earned		All Other Compensation (\$) <sup>(2)</sup>	Total (\$)
	or Paid in Cash (\$)	Option Awards (\$) <sup>(2)</sup>		
David Baltimore, Ph.D.	32,000	29,367 <sup>(3)</sup>	12,586 <sup>(9)</sup>	73,953
Bruce L.A. Carter, Ph.D. <sup>(10)</sup>	19,346	132,518 <sup>(4)</sup>		151,864
Stanley T. Croke, M.D., Ph.D. <sup>(11)</sup>	—	68,448 <sup>(5)</sup>		68,448
Barry E. Greene <sup>(11)</sup>	—	68,448 <sup>(6)</sup>		68,448
John Maraganore, Ph.D.	—	—	—	—
Stelios Papadopoulos, Ph.D.	32,000	29,367 <sup>(7)</sup>		61,367
B. Lynne Parshall	—	—	—	—
Douglas Williams, Ph.D. <sup>(12)</sup>	4,957	94,463 <sup>(8)</sup>		99,420

- (1) The table above does not reflect compensation for Mark. G. Foletta or William H. Rastetter, Ph.D., each of whom was appointed to our Board of Directors in 2013.
- (2) Amounts listed represent the aggregate grant date fair value amount computed as of the grant date of each option awarded during 2012 in accordance with ASC 718. Assumptions used in the calculation of these amounts are included in Note 10 to the Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2012. As required by SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. Our directors will only realize compensation to the extent the trading price of our common stock is greater than the exercise price of such stock options. As required by SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. Our directors will only realize compensation to the extent the trading price of our common stock is greater than the exercise price of such stock options.
- (3) Represents options to purchase 17,500 shares of our common stock granted to Dr. Baltimore for service as a member of our Board of Directors. The shares subject to this award vest at the rate of 25% of the original number of shares on the first anniversary of the January 1, 2012 vesting commencement date and 1/48th of the original number of shares on each monthly anniversary thereafter, provided that Dr. Baltimore continues to provide services to us through such dates. As of December 31, 2012, an aggregate of 225,000 shares were outstanding under all options to purchase our common stock held by Dr. Baltimore.
- (4) Represents options to purchase 45,000 shares of our common stock granted to Dr. Carter for service as a member of our Board of Directors, of which 30,000 shares represented his initial option grant and 15,000 represented an additional grant the Compensation Committee determined was appropriate in recognition of Dr. Carter's joining the Board of Directors in June, 2012. The shares subject to this award vest at the rate of one-third of the original number of shares on the first anniversary of the June 14, 2012 vesting commencement date and 1/36th of the original number of shares on each monthly anniversary thereafter, provided that Dr. Carter continues to provide services to us through such dates. As of December 31, 2012, an aggregate of 45,000 shares were outstanding under all options to purchase our common stock held by Dr. Baltimore.
- (5) Represents options to purchase 25,000 shares of our common stock granted to Dr. Croke upon his resignation from our Board of Directors in recognition of his service. The shares were granted fully vested and exercisable as of the November 5, 2012 grant date. As of December 31, 2012, an aggregate of 25,000 shares were outstanding under all options to purchase our common stock held by Dr. Croke.
- (6) Represents options to purchase 25,000 shares of our common stock granted to Mr. Greene upon his resignation from our Board of Directors in recognition of his service. The shares were granted fully vested and exercisable as of the November 5, 2012 grant date. As of December 31, 2012, an aggregate of 25,000 shares were outstanding under all options to purchase our common stock held by Mr. Greene.

- (7) Represents options to purchase 17,500 shares of our common stock granted to Dr. Papadopoulos for service as a member of our Board of Directors. The shares subject to this award vest at the rate of 25% of the original number of shares on the first anniversary of January 1, 2012 vesting commencement date and 1/48th of the original number of shares on each monthly anniversary thereafter, provided that Dr. Papadopoulos continues to provide services to us through such dates. As of December 31, 2012, an aggregate of 202,500 shares were outstanding under all options to purchase our common stock held by Dr. Papadopoulos.
- (8) Represents options to purchase 30,000 shares of our common stock granted to Dr. Williams for service as a member of our Board of Directors, which was his initial option grant under our director compensation policy. The shares subject to this award vest at the rate of one third of the original number of shares on the first anniversary of November 5, 2012 vesting commencement date and 1/36th of the original number of shares on each monthly anniversary thereafter, provided that Dr. Williams continues to provide services to us through such dates. As of December 31, 2012, an aggregate of 30,000 shares were outstanding under all options to purchase our common stock held by Dr. Williams.
- (9) Represents options to purchase 7,500 shares of our common stock granted to Dr. Baltimore for service as a member of our scientific advisory board, as computed in accordance with ASC 718. Options granted to non-employee directors for their work on our scientific advisory board, are subject to periodic revaluation over their vesting terms. The shares subject to this award vest at the rate of 25% of the original number of shares on the first anniversary of the January 1, 2012 vesting commencement date and 1/48th of the original number of shares on each monthly anniversary thereafter, provided that Dr. Baltimore continues to provide services to us through such dates.
- (10) Dr. Carter became a member of the Board of Directors in June 2012.
- (11) Dr. Crooke and Dr. Greene resigned from the Board of Directors effective November 5, 2012.
- (12) Dr. Williams became a member of the Board of Directors on November 5, 2012.

We compensate certain non-employee members of our Board of Directors for their services. During 2012 and prior to our initial public offering, we provided annual compensation to each of Dr. Papadopoulos and Dr. Baltimore in the form of a \$32,000 annual cash retainer paid in equal quarterly installments and an annual stock option grant under our 2009 Plan for 17,500 shares. In addition, on February 9, 2012, we granted Dr. Baltimore an option to purchase 7,500 shares of our common stock for his service as a member of our scientific advisory board. In recognition of Dr. Crooke's and Mr. Greene's services to our Board of Directors, we granted to each of Dr. Crooke and Mr. Greene stock options to purchase 25,00 shares of our common stock that were fully vested and exercisable on their November 5, 2012 resignation date. The options that were granted in 2012 prior to our initial public offering were granted under the terms of the 2009 Plan, the terms of which are described in more detail under "Equity Compensation Plans and Other Benefit Plans—2009 Equity Incentive Plan."

Directors who are also employees do not receive cash or equity compensation for service on our Board of Directors in addition to the compensation payable for their service as our employees. In addition, our non-employee directors who are affiliated with our founding stockholders, Alnylam and Isis, do not receive cash or equity compensation for service on our Board of Directors.

We have a non-employee director compensation policy, or our director compensation policy, that became effective following our initial public offering. Under our director compensation policy, our Compensation Committee determines individual non-employee members of our Board of Directors who will be eligible to receive compensation and who we refer to as our Eligible Directors. For 2012, the Compensation Committee determined that our Eligible Directors would be non-employee members of our Board of Directors who were not beneficial owners of five percent or more of our stock. Accordingly, during 2012, the Eligible Directors that received cash and/or equity compensation under the director compensation policy in 2012 were Dr. Baltimore, Dr. Papadopoulos, Dr. Carter and Dr. Williams.

Pursuant to our director compensation policy, we provide cash compensation in the form of an annual retainer of \$32,000 to each of our Eligible Directors. We also pay an additional annual retainer of \$10,000 to the Chairman of the Audit Committee, \$5,000 to other independent Eligible Directors who serve on the Audit

Committee, \$10,000 to the chair of the Compensation Committee, \$5,000 to other independent Eligible Directors who serve on the Compensation Committee, \$7,500 to the chair of the Nominating and Corporate Governance Committee and \$2,500 to other independent Eligible Directors who serve on the Nominating and Corporate Governance Committee. We have reimbursed and will continue to reimburse our non employee directors for travel, lodging and other reasonable expenses incurred in attending meetings of the Board of Directors and committees of the Board of Directors.

Each Eligible Director who is first elected to the Board of Directors is granted an option to purchase 30,000 shares of the Company's common stock on the date of his or her initial election to the Board of Directors. In addition, on the date of each annual meeting of the Company's stockholders, each Eligible Director is eligible to receive an option to purchase 17,500 shares of common stock. Such initial and annual options will have an exercise price per share equal to the fair market value of the common stock on the date of grant.

Each initial option and annual option granted to such Eligible Directors described above will vest and become exercisable with respect to one-third of the shares subject to the option on the one year anniversary of the date of grant and the balance of the shares will vest and become exercisable in a series of 24 equal monthly installments thereafter, such that the option is fully vested on the third anniversary of the date of grant, subject to the Eligible Director continuing to provide services to us through such dates. The term of each option granted to an Eligible Director is 10 years. The options are granted under our 2012 Plan, the terms of which are described in more detail under "Equity Compensation Plans and Other Benefit Plans—2012 Equity Incentive Plan."

## **T R A N S A C T I O N S   W I T H   R E L A T E D   P E R S O N S**

Pursuant to SEC rules, a "transaction" with a related person includes any transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which the Company was or is a participant in which the related person had or will have a direct or indirect material interest where the amount involved exceeds the lesser of \$120,000 or one percent of the average of the Company's total assets at year end for the last two completed fiscal years. Since January 1, 2011, the Company has engaged in the following transactions with related persons:

### **Alliance and Collaboration Agreements**

#### *Biogen Idec/Douglas Williams, Ph.D.*

In August 2012, we entered into a collaboration and license agreement with Biogen Idec MA Inc., of which company Doug Williams, Ph.D., is the Executive Vice President of Research and Development. Dr. Williams was appointed to our Board of Directors in November 2012. Pursuant to the terms of the collaboration agreement, we received an upfront payment of \$750,000 from Biogen, and are eligible to receive research milestone payments of up to an aggregate of approximately \$1.3 million. Concurrently with entering the collaboration agreement with Biogen, we issued Biogen a convertible promissory note in the principal amount of \$5.0 million. The entire principal amount of such note and approximately \$25,000 of accrued interest thereunder converted into shares of our common stock on October 10, 2012 concurrently with the closing of our initial public offering at a conversion price of \$4.00 per share. Dr. Williams has an indirect interest in these transactions as a result of his stock ownership in Biogen. Dr. Williams' beneficial stock ownership in Biogen is disclosed from time to time in Biogen's public filings with the SEC.

#### *Sanofi*

In July 2012, we amended and restated our 2010 license and collaboration agreement with Sanofi, a greater than 5% stockholder of the Company. Under the terms of the agreement, we have agreed to collaborate with Sanofi to develop and commercialize licensed compounds targeting four *micro* RNA alliance targets initially

focused in the field of fibrosis and have granted Sanofi an exclusive license to develop and commercialize products under the alliance. Under the terms of the agreement, we have agreed to use commercially reasonable efforts to provide Sanofi with validated *micro* RNA targets and are responsible for conducting all research and compound manufacturing activities until acceptance of an Investigation New Drug application (“IND”). After acceptance of the IND, Sanofi will assume all costs, responsibilities and obligations for further development and commercialization. We received an upfront payment of \$25.0 million which was allocated to the research programs. We are also entitled to receive preclinical, clinical, regulatory and commercialization milestone payments of up to \$640.0 million in the aggregate for all alliance product candidates. We are also entitled to receive royalties based on a percentage of net sales which will range from the mid-single digits to the low end of the 10 to 20% range, depending upon the target and the volume of sales. In the event a program or the agreement is terminated by Sanofi, the rights to develop and commercialize product candidates in the terminated programs (including the right to sublicense these rights to a third party) returns to us. If we sublicense the rights to a third party, we will be required to pay a percentage of sublicense revenues to Sanofi in the low end of the 10 to 20% range, and if we commercialize a product on our own, we will be required to pay royalties in the low single digits to Sanofi as a percentage of net sales.

*Isis Pharmaceuticals, Inc. and Alnylam Pharmaceuticals, Inc.*

In October 2011, we amended our amended our amended and restated license and collaboration agreement with Alnylam Pharmaceuticals, Inc. and Isis Pharmaceuticals, Inc., which are each greater than 5% stockholders of the Company. Under the agreement, we acquired an exclusive, royalty-bearing, worldwide license, with rights to sublicense, to patent rights owned or licensed by Alnylam and Isis to develop, manufacture and commercialize products covered by the licensed patent rights for use in *micro* RNA compounds which are *micro* RNA antagonists and *micro* RNA therapeutics containing these compounds. In addition, we have certain rights to miR-mimics. Under the agreement, we granted to both Alnylam and Isis a license to practice our intellectual property developed by us to the extent that it is useful specifically to Alnylam’s RNAi programs or Isis’s single-stranded oligonucleotide programs, but not including *micro* RNA compounds or therapeutics that are the subject of our exclusive licenses from Alnylam and Isis. If an election is made by either Alnylam or Isis (but not both) to opt-in, such party will pay us a one-time fixed payment, the amount of which will depend on whether the first or the second opt-in option was exercised, with a higher amount due if the first opt-in option was exercised. Clinical and regulatory milestones are also payable to us in the event the opt-in election is exercised. Such milestones total \$64.0 million in the aggregate if the election is made during the first opt-in period or \$15.7 million in the aggregate if the election is made at the second opt-in period. Tiered royalties are payable to us as a percentage of net sales on all products commercialized by the opt-in party. These royalties range from the low to middle single digits depending upon the volume of sales. The opt-in party is also entitled to sublicense the development program to a third party. In such a case, we are also entitled to receive a percentage of the sublicense income received by the opt-in party. The percentage payable depends upon the point at which the opt-in party sublicenses the program and ranges from the low end of the 10 to 20% range to the high end of the 40 to 50% range. The opt-in party is only required to pay the higher of the clinical and regulatory milestones or the sublicense income received in any calendar quarter. The opt-in party is also responsible for all third party payments due under other agreements as a result of the development. In the event both Alnylam and Isis elect to opt-in during either opt-in period, the parties have agreed to work together to amend the development plan to continue development of the project, including funding of such project and assignment of roles and responsibilities. In the event we or one of our strategic alliance partners continues with the development of a program, each of Alnylam and Isis are entitled to royalties as a percentage of net sales. For products that we independently commercialize, these royalties will be in the low single digits. For products commercialized by a third-party collaborator, the royalties will be either the same percentage of net sales as described above or, if the sublicense does not provide a specified level of royalties to us or upon our election, a percentage of the sublicense income received by us from the strategic alliance partner and a modified royalty. The modified royalty would be based upon the lower of the single digit percentage discussed above or one third of the royalty received by us after payments made by us to third parties for development, manufacture and commercialization activities under other agreements. In addition, if we sublicense rights to a collaborator, we will be required to pay to each of Alnylam and Isis a percentage of our

sublicense income in the mid-single digits. We are also responsible for payments due to third parties under other agreements as a result of our development activities, including payments owed by Alnylam and/or Isis under their agreements. Under the October 2011 amendment, Alnylam and Isis granted us the right to research *micro* RNA mimics under the licensed intellectual property of Alnylam and Isis. In the event we develop a miR-mimic, we must first obtain approval from Alnylam and/or Isis, as applicable, and such approval is subject to the consent of applicable third parties, if any. No additional consideration will be owed by us to Alnylam or Isis for granting approval. We have the right to sublicense our research rights. We granted to both Alnylam and Isis a fully paid up, worldwide and exclusive license to any intellectual property developed by us and useful to their research programs and which are not *micro* RNA antagonists or approved miR-mimics.

#### *AstraZeneca*

In August 2012, we entered into a collaboration and license agreement with AstraZeneca AB, which became a greater than 5% stockholder of our Company following the agreement date. Under the terms of the agreement, we agreed to collaborate with AstraZeneca to identify, research and develop licensed compounds targeting three *micro* RNA alliance targets in the fields of cardiovascular diseases, metabolic diseases and oncology and granted to AstraZeneca an exclusive, worldwide license to thereafter develop, manufacture and commercialize lead compounds designated by AstraZeneca in the course of the collaboration activities against the *micro* RNA alliance targets for all human therapeutic uses. We are responsible for discovery, optimization and development of anti-miR product candidates in each program until the acceptance of an IND or the end of the research term, which extends until the fourth anniversary of the date of the agreement, and may be extended upon mutual written agreement. Following the earlier to occur of the acceptance of an IND in a major market or the end of the research term, AstraZeneca will assume all costs, responsibilities and obligations for further development, manufacture and commercialization of alliance product candidates. We received an upfront payment of \$3.0 million and are also entitled to receive preclinical, clinical and commercialization milestone payments of up to \$509.0 million in the aggregate for all alliance product candidates. In addition, we are entitled to receive royalties based on a percentage of net sales which will range from the mid-single digits to the low end of the 10 to 20% range, depending upon the product and the volume of sales, which royalties may be reduced in certain limited circumstances.

#### **Indemnification Agreements**

We have entered into separate indemnification agreements with our directors and executive officers, in addition to the indemnification provided for in our amended and restated bylaws. These agreements, among other things, require us to indemnify our directors and executive officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of his or her services as one of our directors or executive officers or any other company or enterprise to which the person provides services at our request. We believe that these indemnification agreements, together with the provisions in our bylaws, are necessary to attract and retain qualified persons as directors and officers.

#### **H OUSEHOLDING OF P ROXY M ATERIALS**

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for Annual Meeting materials with respect to two or more stockholders sharing the same address by delivering a single set of Annual Meeting materials to those stockholders. This process, which is commonly referred to as "householding," potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are Regulus Therapeutics Inc. stockholders will be "householding" the Company's proxy materials. A single set of Annual Meeting materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected

stockholders. Once you have received notice from your broker that they will be “householding” communications to your address, “householding” will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in “householding” and would prefer to receive a separate set of Annual Meeting materials, please notify your broker or Regulus Therapeutics Inc.. Direct your written request to Regulus Therapeutics Inc., Attn: Director of Investor Relations, 3545 John Hopkins Court, Suite 210, San Diego, CA 92121 or contact Amy Conrad at (858) 202-6321. Stockholders who currently receive multiple copies of the Annual Meeting materials at their addresses and would like to request “householding” of their communications should contact their brokers.

#### **O T H E R M A T T E R S**

The Board of Directors knows of no other matters that will be presented for consideration at the Annual Meeting. If any other matters are properly brought before the meeting, it is the intention of the persons named in the accompanying proxy to vote on such matters in accordance with their best judgment.

By Order of the Board of Directors



Christopher Aker  
Secretary

April 30, 2013

**A copy of the Company’s Annual Report to the Securities and Exchange Commission on Form 10-K for the fiscal year ended December 31, 2012 is available without charge upon written request to: Corporate Secretary, Regulus Therapeutics Inc., 3545 John Hopkins Court, Suite 210, San Diego, CA 92121.**

**REGULUS THERAPEUTICS INC.**  
**3545 JOHN HOPKINS CT.**  
**SUITE 210**  
**SAN DIEGO, CA 92121**

**VOTE BY INTERNET - [www.proxyvote.com](http://www.proxyvote.com)**

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

**ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS**

If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

**VOTE BY PHONE - 1-800-690-6903**

Use any touch-tone telephone to transmit your voting instructions up until 11:59 P.M. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then follow the instructions.

**VOTE BY MAIL**

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

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

M60333-P38028

KEEP THIS PORTION FOR YOUR RECORDS

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**THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.**

DETACH AND RETURN THIS PORTION ONLY

<b>REGULUS THERAPEUTICS INC.</b>		<b>For All</b>	<b>Withhold All</b>	<b>For All Except</b>	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.
<b>The Board of Directors recommends you vote FOR all nominees for director listed below:</b>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
1. Election of Directors		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
<b>Nominees:</b>					
01) David Baltimore, Ph.D.	06) B. Lynne Parshall, Esq.				
02) Bruce Carter, Ph.D.	07) William Rastetter, Ph.D.				
03) Mark Foletta	08) Douglas Williams, Ph.D.				
04) John Maraganore, Ph.D.	09) Kleonthis Xanthopoulos, Ph.D.				
05) Stelios Papadopoulos, Ph.D.					
 <b>The Board of Directors recommends you vote FOR the following proposal:</b>					
2. Ratification of the selection of Ernst & Young, LLP as the independent registered public accounting firm of the company for the year ending December 31, 2013.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>For    Against    Abstain</b>
<b>NOTE:</b> Such other business as may properly come before the meeting or any adjournment thereof.					
Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.					
<div style="border: 1px solid black; height: 20px; width: 100%;"></div>		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>		<div style="border: 1px solid black; height: 20px; width: 100%;"></div>	
Signature [PLEASE SIGN WITHIN BOX]		Date		Signature (Joint Owners)	Date

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**Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:**  
The Proxy Statement, 2012 Annual Report to Stockholders and Form 10-K are available at [www.proxyvote.com](http://www.proxyvote.com).

M60334-P38028

**REGULUS THERAPEUTICS INC.  
Annual Meeting of Stockholders  
June 10, 2013 2:00 PM PDT  
This proxy is solicited by the Board of Directors**

The undersigned hereby appoint(s) Kleanthis G. Xanthopoulos, Ph.D. and Garry E. Menzel, Ph.D. and each of them, with power to act without the other and with power of substitution, as proxies and attorneys-in-fact and hereby authorizes them to represent and vote, as provided on the other side, all the shares of Regulus Therapeutics Inc. Common Stock which the undersigned is entitled to vote and, in their discretion, to vote upon such other business as may properly come before the Annual Meeting of Stockholders of Regulus Therapeutics Inc. to be held June 10, 2013 at the offices of Cooley LLP located at 4401 Eastgate Mall, San Diego, CA 92121, with all powers which the undersigned would possess if present at the Meeting.

**This proxy, when properly executed, will be voted in the manner directed herein. If no direction is made but the card is signed, this proxy card will be voted FOR the election of all nominees under Proposal 1, FOR Proposal 2, and in the discretion of the proxies with respect to such other business as may properly come before the meeting.**

Continued and to be signed on reverse side