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

SCHEDULE 14A
(Rule 14a-101)

SCHEDULE 14A INFORMATION

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

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

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

Agios Pharmaceuticals, Inc.
(Name of Registrant as Specified In Its Charter)

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

Payment of Filing Fee (Check the appropriate box):

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

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

(1) Amount Previously Paid:

(2) Form, Schedule or Registration Statement No.:

(3) Filing Party:

(4) Date Filed:



88 Sidney Street, Cambridge, Massachusetts 02139

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON THURSDAY, MAY 28, 2020**

Dear Stockholder:

You are cordially invited to our Annual Meeting of Stockholders. To support the health and well-being of our stockholders, employees and directors in light of the recent novel coronavirus (COVID-19) outbreak, the meeting will be a virtual meeting held via the internet on Thursday, May 28, 2020, beginning at 9:00 a.m., Eastern Time. The meeting will be held for the following purposes:

1. To elect each of the two Class I director nominees set forth in the Proxy Statement, each to serve for a three-year term expiring at the 2023 annual meeting of stockholders and until his respective successor is duly elected and qualified;
2. To vote, on an advisory basis, to approve the compensation paid to our named executive officers;
3. To ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020; and
4. To transact such other business as may be properly brought before the meeting or any adjournment or postponement thereof.

As noted above, due to the COVID-19 outbreak, our Annual Meeting will be a “virtual meeting” of stockholders, which will be conducted exclusively via the internet at a virtual web conference. There will not be a physical meeting location, and stockholders will not be able to attend the Annual Meeting in person. This means that you can attend the Annual Meeting online, vote your shares during the online meeting and submit questions for consideration at the online meeting. Stockholders of record as of the close of business on April 7, 2020 are entitled to vote at the meeting. In order to attend the meeting online, vote your shares electronically during the meeting and submit questions, you must register in advance at www.proxydocs.com/agio prior to the deadline of May 26, 2020 at 5:00 p.m., Eastern Time. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the meeting and will also permit you to submit questions and examine during the Annual Meeting the list of stockholders entitled to vote at the Annual Meeting. Please be sure to follow instructions found on your Notice, proxy card and/or voting instruction form and subsequent instructions that will be delivered to you via email. In light of the public health and safety concerns related to COVID-19, we believe that hosting a “virtual meeting” will enable greater stockholder attendance and participation from any location around the world. We intend to resume our historical practice of holding an in-person meeting next year.

At Agios we are keenly focused on the contribution we can make to environmental sustainability. Instead of mailing a paper copy of our proxy materials to all of our stockholders, this year we are providing access to our proxy materials over the internet under the U.S. Securities and Exchange Commission’s “notice and access” rules. As a result, we are mailing to our stockholders a Notice of Internet Availability of Proxy Materials (the “Notice”) instead of a paper copy of this Proxy Statement and our Annual Report for the fiscal year ended December 31, 2019 (the “2019 Annual Report”). We are mailing the Notice on or about April 16, 2020, and it contains instructions on how to access our proxy materials over the internet. The Notice also contains instructions on how each of our stockholders can receive a paper copy of our proxy materials, including this Proxy Statement, our 2019 Annual Report, and a form of proxy card or voting instruction card. All stockholders who do not receive the Notice, including stockholders who have previously requested to receive paper copies of proxy materials, will receive a paper copy of the proxy materials by mail unless they have previously requested delivery of proxy materials electronically. We have chosen to employ this distribution process to conserve natural resources and reduce the costs of printing and distributing our proxy materials.

We encourage all stockholders to attend the Annual Meeting online. Whether or not you plan to attend the Annual Meeting online, we encourage you to read this Proxy Statement and submit your proxy or voting instructions as soon as possible by using the internet as described in the instructions included on your Notice, by calling the toll-free telephone number included on your Notice, or, if you received a paper copy of the proxy materials, by completing, signing, dating and returning your proxy card or voting instruction form. Further information about how to register to attend the Annual Meeting online, attend the Annual Meeting online, vote your shares and submit questions for consideration at the meeting is included in the accompanying proxy statement.

Thank you for your ongoing support and continued interest in Agios Pharmaceuticals, Inc.

By Order of the Board of Directors,

A handwritten signature in black ink, appearing to read "J. Fouse", written over a faint circular stamp or watermark.

Jacquelyn A. Fouse, Ph.D.
Chief Executive Officer

Cambridge, Massachusetts
April 16, 2020

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Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be Held on May 28, 2020: This Proxy Statement and our 2019 Annual Report to Stockholders are available at www.proxydocs.com/agio. These documents are also available to any stockholder who wishes to receive a paper copy by calling (866) 648-8133, visiting www.investorelections.com/agio or emailing paper@investorelections.com.

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PROXY STATEMENT FOR THE 2020 ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD ON THURSDAY, MAY 28, 2020

INFORMATION CONCERNING SOLICITATION AND VOTING

This Proxy Statement contains information about our 2020 annual meeting of stockholders, or the Annual Meeting. The Annual Meeting will be held on Thursday, May 28, 2020, beginning at 9:00 a.m. Eastern Time. To support the health and well-being of our stockholders, employees and directors in light of the recent novel coronavirus (“COVID-19”) outbreak, the meeting will be a virtual meeting held via the internet. In order to attend the Annual Meeting online, you must register in advance at www.proxydocs.com/agio prior to the deadline of May 26, 2020 at 5:00 p.m., Eastern Time. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the meeting. Please be sure to follow instructions found on your Notice, proxy card and/or voting instruction form and subsequent instructions that will be delivered to you via email. There will not be a physical meeting location, and stockholders will not be able to attend the Annual Meeting in person.

Except where the context otherwise requires, references to “AgiOS Pharmaceuticals,” “AgiOS,” “we,” “us,” “our” and similar terms refer to Agios Pharmaceuticals, Inc. and its consolidated subsidiaries. References to our website are inactive textual references only and the contents of our website are not incorporated by reference into this Proxy Statement.

This Proxy Statement and the enclosed proxy card are being furnished in connection with the solicitation of proxies by our board of directors for use at the Annual Meeting and at any adjournment of that meeting. All proxies will be voted in accordance with the instructions they contain. If you do not specify your voting instructions on your proxy, it will be voted in accordance with the recommendations of our board of directors. We are making this Proxy Statement, the related proxy card and our annual report to stockholders for the fiscal year ended December 31, 2019, or the 2019 Annual Report, available to stockholders for the first time on or about April 16, 2020.

GENERAL INFORMATION ABOUT THE ANNUAL MEETING AND VOTING

Why do I have access to these materials?

We have made these proxy materials available to you because our board of directors is soliciting your proxy to vote at the Annual Meeting to be held on May 28, 2020 at 9:00 a.m., Eastern Time, including at any adjournments or postponements of the meeting. As a holder of record of common stock as of the close of business on April 7, 2020, you are invited to attend the Annual Meeting online and are requested to vote on the items of business described in this Proxy Statement. This Proxy Statement includes information that we are required to provide to you under the rules adopted by the U.S. Securities and Exchange Commission, or the SEC, and that is designed to assist you in voting your shares.

Why did I receive a notice in the mail regarding the internet availability of proxy materials instead of a full set of proxy materials?

Because we care about the sustainability of our environment, and in accordance with SEC rules, we have elected to provide access to our proxy materials, including this Proxy Statement and our 2019 Annual Report,

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over the internet. Accordingly, we have sent a Notice Regarding the Availability of Proxy Materials, or the Notice, to our stockholders of record entitled to vote at the Annual Meeting with instructions for accessing the proxy materials and voting over the internet or by telephone. We mailed the Notice on or about April 16, 2020 to all stockholders entitled to vote at the Annual Meeting.

All stockholders entitled to vote at the Annual Meeting will have the ability to access the proxy materials by visiting the website referred to in the Notice, www.proxydocs.com/agio. This makes the proxy distribution process more efficient and less costly and helps conserve natural resources. The Notice also contains instructions to request to receive a printed set of the proxy materials. You may request the proxy materials over the internet at www.investorelections.com/agio, by emailing paper@investorelections.com, or by calling (866) 648-8133.

The Notice also identifies the date and time of the virtual Annual Meeting; instructions on how to attend the Annual Meeting online; the matters to be acted upon at the Annual Meeting and our board of directors' recommendation with regard to each matter; a toll-free telephone number, an e-mail address, and a website where stockholders can request to receive, free of charge, a paper or e-mail copy of the Proxy Statement, our Annual Report on Form 10-K for the year ended December 31, 2019, and a form of proxy relating to the Annual Meeting; and information on how to access and vote the form of proxy.

Can I vote my shares by filling out and returning the Notice?

No. The Notice identifies the items to be voted on at the Annual Meeting, but you cannot vote by marking the Notice and returning it. The Notice provides instructions on how to vote over the internet or by telephone, by requesting and returning a printed proxy card, or by voting online during the Annual Meeting.

What does it mean if I receive more than one Notice?

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

What is the purpose of the Annual Meeting?

At the Annual Meeting, stockholders will consider and vote on the following matters:

- (1) To elect each of the two Class I director nominees set forth in the Proxy Statement, each to serve for a three-year term expiring at the 2023 annual meeting of stockholders and until his respective successor is duly elected and qualified.
- (2) To vote, on an advisory basis, to approve the compensation paid to our named executive officers.
- (3) To ratify the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020.

Stockholders will also act on any other business that may properly come before the meeting, or any adjournment or postponement thereof.

Why is the 2020 Annual Meeting a virtual, online meeting?

To support the health and well-being of our stockholders, employees and directors in light of the recent novel COVID-19 outbreak, our 2020 Annual Meeting will be a virtual meeting of stockholders where stockholders will participate by accessing a website using the internet. There will not be a physical meeting

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location. In light of the public health and safety concerns related to the COVID-19 outbreak, we believe that hosting a virtual meeting will facilitate stockholder attendance and participation at our 2020 Annual Meeting by enabling stockholders to safely participate remotely from any location around the world. Our virtual meeting will be governed by our Rules of Conduct and Procedures which will be posted at proxydocs.com/agio in advance of the meeting. We have designed the virtual annual meeting to provide the same rights and opportunities to participate as stockholders have at an in-person meeting, including the right to vote and ask questions through the virtual meeting platform. We intend to return to holding an in person annual meeting for our 2021 annual meeting of stockholders.

How do I virtually attend the Annual Meeting?

We will host the Annual Meeting live online via webcast. In order to attend the Annual Meeting online, you must register in advance at www.proxydocs.com/agio prior to the deadline of May 26, 2020 at 5:00 p.m., Eastern Time. Upon completing your registration, you will receive further instructions via email, including your unique links that will allow you access to the meeting. Please be sure to follow instructions found on your Notice, proxy card and/or voting instruction form and subsequent instructions that will be delivered to you via email.

Online registration for the Annual Meeting will begin on or around April 16, 2020, and you should allow ample time for the online registration.

The webcast of the Annual Meeting will start at 9:00 a.m., Eastern Time, on May 28, 2020. Instructions on how to attend and participate in the meeting online will be sent to you via email, upon completing your registration.

We will have technicians standing by and ready to assist you with any technical difficulties you may have accessing the virtual meeting at 9:00 a.m., Eastern Time on May 28, 2020. If you encounter any difficulties accessing the virtual meeting during registration or at the time of the virtual meeting, please contact technical support by following the instructions provided to you upon registration for the Annual Meeting.

Who can vote?

Only stockholders of record at the close of business on April 7, 2020, the record date for the Annual Meeting, are entitled to vote at the Annual Meeting. On this record date, there were 68,797,051 shares of our common stock outstanding. Common stock is our only class of stock outstanding.

How many votes do I have?

Each share of our common stock that you own as of the record date, April 7, 2020, entitles you to one vote on each matter that is voted on.

Is my vote important?

Your vote is important no matter how many shares you own. Please take the time to vote. Take a moment to read the instructions, choose the way to vote that is the easiest and most convenient for you and cast your vote as soon as possible.

How do I vote?

If you are the “record holder” of your shares, meaning that you own your shares in your own name and not through a bank, brokerage firm or other nominee, you may vote:

- (1) **Over the Internet prior to the Annual Meeting:** To vote over the internet prior to the Annual Meeting, please go to the following website: www.proxypush.com/agio, and follow the instructions at that site for submitting your proxy electronically. If you vote over the internet prior to the Annual Meeting, you do not need to complete and mail your proxy card or vote your proxy by telephone. Your vote must be received by 8:59 a.m., Eastern Time, on May 28, 2020 to be counted.
- (2) **By Telephone prior to the Annual Meeting:** To vote by telephone, please call (866) 509-2148, and follow the instructions provided on the proxy card. If you vote by telephone, you do not need to complete and mail your proxy card or vote your proxy over the internet. Your vote must be received by 8:59 a.m., Eastern Time, on May 28, 2020 to be counted.
- (3) **By Mail prior to the Annual Meeting:** To vote using the printed proxy card that may be delivered to you upon request, simply complete, sign and date the proxy card that may be delivered and return it promptly in the postage prepaid envelope provided to Proxy Tabulator for Agios Pharmaceuticals, Inc., c/o Mediant Communications, P.O. Box 8016, Cary, NC 27512-9903. If you vote by mail, you do not need to vote over the internet or by telephone. If we receive the proxy card no later than May 27, 2020, we will vote your shares as you direct.
- (4) **Online during the Annual Meeting:** In order to attend the Annual Meeting online and vote online during the Annual Meeting, you must register in advance at www.proxydocs.com/agio prior to the deadline of May 26, 2020 at 5:00 p.m., Eastern Time. You may vote your shares online while virtually attending the Annual Meeting by following instructions found on your Notice, proxy card and/or voting instruction form and subsequent instructions that will be delivered to you via email. If you vote by proxy prior to the Annual Meeting and choose to attend the Annual Meeting online, there is no need to vote again during the Annual Meeting unless you wish to change your vote.

If your shares are held in “street name,” meaning they are held for your account by a bank, brokerage firm, or other nominee, you may vote:

- (1) **Over the Internet or by Telephone prior to the Annual Meeting:** You will receive instructions from your bank, brokerage firm, or other nominee if they permit internet or telephone voting. You should follow those instructions.
- (2) **By Mail prior to the Annual Meeting:** You will receive instructions from your bank, brokerage firm, or other nominee explaining how you can vote your shares by mail. You should follow those instructions.
- (3) **Online during the Annual Meeting:** You will receive instructions from your bank, brokerage firm, or other nominee explaining how you can register to attend the Annual Meeting online and vote your shares online during the Annual Meeting.

Can I change my vote?

If your shares are registered directly in your name, you may revoke your proxy and change your vote by following one of the below procedures:

- (1) Vote over the internet or by telephone as instructed above under “Over the Internet prior to the Annual Meeting” and “By Telephone prior to the Annual Meeting”. Only your latest internet or telephone vote submitted prior to the Annual Meeting is counted. You may not change your vote prior to Annual Meeting over the internet or by telephone after 8:59 a.m., Eastern Time, on May 28, 2020.
- (2) Sign, date and complete a new proxy card and send it by mail to Proxy Tabulator for Agios Pharmaceuticals, Inc., c/o Mediant Communications, P.O. Box 8016, Cary, NC 27512-9903. Mediant must receive the proxy card no later than May 27, 2020. Only your latest dated and timely received proxy will be counted.
- (3) Virtually attend the Annual Meeting and vote online as instructed above under “Online during the Annual Meeting”. Virtually attending the Annual Meeting alone, without voting online during the Annual Meeting, will not revoke your internet vote, telephone vote or proxy submitted by mail, as the case may be.

If your shares are held in “street name,” you may submit new voting instructions with a later date by contacting your bank, brokerage firm, or other nominee. You may also vote online during the Annual Meeting, which will have the effect of revoking any previously submitted voting instructions; see “How do I vote?” above.

Will my shares be voted if I do not return my proxy?

If your shares are registered directly in your name, your shares will not be voted if you do not vote over the internet, by telephone, or by mail prior to the Annual Meeting or online while virtually attending the Annual Meeting.

If your shares are held in “street name,” your brokerage firm may under certain circumstances vote your shares if you do not return your voting instructions. Brokerage firms can vote customers’ unvoted shares on routine matters but they will not be allowed to vote your shares with respect to certain non-routine items. If you do not return voting instructions to your brokerage firm to vote your shares, your brokerage firm may, on routine matters, either vote your shares or leave your shares unvoted.

Your brokerage firm cannot vote your shares on any matter that is not considered routine. Proposal 1, the election of two Class I directors, and Proposal 2, an advisory vote on the compensation paid to our named executive officers, are not considered routine matters. If you do not instruct your brokerage firm how to vote with respect to these items, your brokerage firm may not vote with respect to these proposals and those votes will be counted as “broker non-votes.” “Broker non-votes” are shares that are held in “street name” by a bank or brokerage firm that indicates on its proxy that it does not have or did not exercise discretionary authority to vote on a particular matter. Proposal 3, the ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020, is considered a routine matter, and your brokerage firm will be able to vote on that item even if it does not receive instructions from you, so long as it holds your shares in its name. We encourage you to provide voting instructions to your brokerage firm or other nominee. This ensures that your shares will be voted at the Annual Meeting according to your instructions. You should receive directions from your brokerage firm or other nominee about how to submit your voting instructions.

How many shares must be represented to hold the Annual Meeting?

A majority of our shares of common stock outstanding at the record date must be present virtually or represented by proxy to hold the Annual Meeting. This is called a quorum. For purposes of determining whether a quorum exists, we count as present any shares that are voted over the internet, by telephone, by completing and submitting a proxy by mail, or that are represented virtually at the meeting. Further, for purposes of establishing a quorum, we will count as present shares that a stockholder holds even if the stockholder votes to abstain or only votes on one of the proposals. In addition, we will count as present shares held in “street name” by banks, brokerage firms or nominees who indicate on their proxies that they do not have authority to vote those shares on Proposals 1 or 2. If a quorum is not present, we expect to adjourn the Annual Meeting until we obtain a quorum.

The presence at the Annual Meeting, virtually or by proxy, of holders representing a majority of our outstanding common stock as of the record date, April 7, 2020, or approximately 34,398,526 shares, constitutes a quorum at the meeting and permits us to conduct the business of the meeting.

What vote is required to approve each matter and how are votes counted?

Proposal 1 — Election of Directors

The two nominees for director to receive the highest number of votes FOR election will be elected as directors. This is called a plurality. **Proposal 1 is not considered a routine matter.** Therefore, if your shares are held by your brokerage firm in “street name” and you do not provide voting instructions with respect to your shares, your brokerage firm cannot vote your shares on Proposal 1. Shares held in “street name” by banks, brokerage firms, or nominees who indicate on their proxies that they do not have authority to vote the shares on Proposal 1 will not be counted as votes FOR or WITHHELD from any nominee. As a result, such “broker non-votes” will have no effect on the voting on Proposal 1. You may:

- vote FOR all nominees;
- vote FOR a particular nominee or nominees and WITHHOLD your vote from the other nominees; or
- WITHHOLD your vote from all nominees.

Votes that are withheld will not be included in the vote tally for the election of directors and will not affect the results of the vote.

Proposal 2 — Advisory Vote on the Compensation Paid to Named Executive Officers

To approve Proposal 2, holders of a majority of the votes cast on the matter must vote FOR the proposal. **Proposal 2 is not considered a routine matter.** Shares which abstain and broker non-votes will not be counted as votes in favor of, or with respect to, these proposals and will also not be counted as votes cast. Accordingly, abstentions and broker non-votes will have no effect on the outcome of these proposals. Proposal 2 is non-binding. Because this vote is advisory and not binding on us or our board of directors in any way, our board may decide that it is in our and our stockholders’ best interests to compensate our named executive officers in an amount or manner that differs from that which is approved by our stockholders.

Proposal 3 — Ratification of Appointment of Independent Registered Public Accounting Firm

To approve Proposal 3, holders of a majority of the votes cast on the matter must vote FOR the proposal. **Proposal 3 is considered a routine matter.** If your shares are held by your brokerage firm in “street name” and

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you do not provide voting instructions with respect to your shares, your brokerage firm may vote your unvoted shares on Proposal 3. If you ABSTAIN from voting on Proposal 3, your shares will not be voted FOR or AGAINST the proposal and will also not be counted as votes cast or shares voting on the proposal. As a result, voting to ABSTAIN will have no effect on the outcome of Proposal 3.

Although stockholder approval of our audit committee's appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020 is not required, we believe that it is advisable to give stockholders an opportunity to ratify this appointment. If this proposal is not approved at the Annual Meeting, our audit committee will reconsider its appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ended December 31, 2020.

How does the board of directors recommend that I vote on the proposals?

Our board of directors recommends that you vote:

- **FOR** the election of each of the two nominees to serve on our board of directors as Class I directors, each for a three-year term;
- **FOR** the approval, on an advisory (non-binding) basis, of the compensation of our named executive officers; and
- **FOR** the ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2020.

Are there other matters to be voted on at the Annual Meeting?

We do not know of any matters that may come before the Annual Meeting other than the election of our Class I directors, the approval, on an advisory basis, of the compensation of our named executive officers and the ratification of our independent registered public accounting firm. If any other matters are properly presented at the Annual Meeting, the persons named in the accompanying proxy intend to vote, or otherwise act, in accordance with their judgment on the matter.

Who will count the votes?

The votes will be counted, tabulated and certified by Mediant Communications Inc.

Will my vote be kept confidential?

Your vote will be kept confidential and we will not disclose your vote, unless (1) we are required to do so by law (including in connection with the pursuit or defense of a legal or administrative action or proceeding), or (2) there is a contested election for the board of directors. The inspector of election will forward any written comments that you make on the proxy card to management without providing your name, unless you expressly request disclosure on the proxy card.

How do I submit a question at the annual meeting?

If you wish to submit a question, on the day of the Annual Meeting, beginning at 8:00 a.m. Eastern Time on Thursday, May 28, 2020, you may log into the virtual meeting platform using the unique link provided to you via email following the completion of your registration at www.proxydocs.com/agio, and follow the instructions

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there. Our virtual meeting will be governed by our Rules of Conduct and Procedures will be posted at www.proxydocs.com/agio in advance of the meeting. The Rules of Conduct and Procedures will address the ability of stockholders to ask questions during the meeting, including rules on permissible topics, and rules for how questions and comments will be recognized and disclosed to meeting participants. All questions received from stockholders before or during the virtual annual meeting will be posted on our website at investor.agios.com as soon as practicable following the Annual Meeting.

How can I find out the results of the voting at the Annual Meeting?

Preliminary voting results will be announced at the Annual Meeting. Final voting results will be tallied by the inspector of election and published in a current report on Form 8-K to be filed with the SEC within four business days after the Annual Meeting.

How and when may I submit a stockholder proposal, including a stockholder nomination for director for the 2021 annual meeting?

Stockholders wishing to suggest a candidate for director should write to our corporate secretary. In order to give the nominating and corporate governance committee sufficient time to evaluate a recommended candidate and/or include the candidate in our proxy statement for the 2021 annual meeting, the recommendation should be received by our corporate secretary at our principal executive offices in accordance with our procedures detailed in the section below entitled “Stockholder Proposals.” Such submissions must state the nominee’s name, together with appropriate biographical information and background materials, and information with respect to the stockholder or group of stockholders making the recommendation, including the number of shares of common stock owned by such stockholder or group of stockholders, as well as other information required by our bylaws or SEC regulations. We may require any proposed nominee to furnish such other information as we may reasonably require in determining the eligibility of such proposed nominee to serve as an independent director or that could be material to a reasonable stockholder’s understanding of the independence, or lack thereof, of such proposed nominee.

Who is paying the costs of soliciting these proxies?

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

How do I obtain an Annual Report on Form 10-K?

If you would like a copy of our Annual Report on Form 10-K for the year ended December 31, 2019 that we filed with the SEC, we will send you one, without exhibits, free of charge. Please contact Holly Manning, Director, Investor Relations. She may be contacted at 88 Sidney Street, Cambridge, Massachusetts 02139; telephone: 617-649-8600; e-mail: Holly.Manning@agios.com.

All of our SEC filings are also available free of charge in the “Investors—Financials—SEC Filings” section of our website at www.agios.com.

Whom should I contact if I have any questions?

If you have any questions about the Annual Meeting or your ownership of our common stock, please contact Holly Manning, Director, Investor Relations. She may be contacted at 88 Sidney Street, Cambridge, Massachusetts 02139; telephone: 617-649-8600; e-mail: Holly.Manning@agios.com.

STOCKHOLDERS SHARING THE SAME ADDRESS

The SEC has adopted rules that permit companies and intermediaries (e.g., brokers) to satisfy the delivery requirements for Notices and, if applicable, our annual report and other proxy materials, with respect to two or more stockholders sharing the same address by delivering a single Notice and, if applicable, a single set of our annual report and proxy materials, addressed to those stockholders. This practice, 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 our stockholders will be “householding” our proxy materials. A single Notice and, if applicable, a single copy of our annual report and our proxy 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 Notice and, if applicable, a separate set of proxy materials in the future, please notify your broker or contact us. If you wish to receive a separate set of proxy materials for this year’s Annual Meeting, we will deliver them promptly upon written or oral request. Stockholders who currently receive multiple copies of the Notice, and, if applicable, our annual report and other proxy materials at their addresses and would like to request “householding” of their communications should contact their brokers or us. To contact us, direct your written request to: Agios Pharmaceuticals, Inc., 88 Sidney Street, Cambridge, MA 02139, Attention: Assistant Corporate Secretary, 617-649-8600 or contact Investor and Public Relations at 617-649-8600.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information relating to the beneficial ownership of our common stock as of March 31, 2020, by:

- each person known by us to beneficially own more than 5% of our outstanding shares of common stock;
- each of our directors and nominees for director;
- our principal executive officer, our principal financial officer and our other executive officers named in the Summary Compensation Table below, whom we collectively refer to as our named executive officers; and
- all directors and executive officers as a group.

The percentage of shares beneficially owned is computed on the basis of 68,789,526 shares of our common stock outstanding as of March 31, 2020. The number of shares beneficially owned by each stockholder is determined under rules of the SEC. Under these rules, beneficial ownership includes any shares as to which the individual or entity has sole or shared voting power or investment power. In computing the number of shares beneficially owned by an individual or entity and the percentage ownership of that person, shares of common stock subject to options or other rights held by such person that are currently exercisable or will become exercisable within 60 days of March 31, 2020 are considered outstanding, although these shares are not considered outstanding for purposes of computing the percentage ownership of any other person. Unless otherwise indicated, the address of all listed stockholders is c/o Agios Pharmaceuticals, Inc., 88 Sidney Street, Cambridge, MA 02139. Each of the stockholders listed has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

| <u>Name of Beneficial Owner</u> | <u>Shares of Common Stock Owned</u> | + | <u>Common Stock Underlying Options and Other Rights Acquirable Within 60 Days</u> | = | <u>Total Beneficial Ownership</u> | |
|--|---|---|---|---|-----------------------------------|-------------------|
| | | | | | <u>Number</u> | <u>Percentage</u> |
| 5% Stockholders | | | | | | |
| Entities affiliated with Fidelity Management & Research Company(1) | 8,828,462 | | — | | 8,828,462 | 12.83% |
| Wellington Management Group LLP(2) | 7,975,823 | | — | | 7,975,823 | 11.59% |
| Entities affiliated with Celgene Corporation(3) | 7,121,658 | | — | | 7,121,658 | 10.35% |
| The Vanguard Group(4) | 5,606,855 | | — | | 5,606,855 | 8.15% |
| Capital International Investors(5) | 4,649,474 | | — | | 4,649,474 | 6.76% |
| BB Biotech AG(6) | 3,896,954 | | — | | 3,896,954 | 5.67% |
| BlackRock, Inc.(7) | 3,893,394 | | — | | 3,893,394 | 5.66% |
| Named Executive Officers and Directors | | | | | | |
| Jonathan Biller | — | | — | | — | — |
| Scott Biller, Ph.D.(8) | 90,922 | | 188,728 | | 188,728 | * |
| Christopher Bowden, M.D. | 5,394 | | 151,252 | | 156,646 | * |
| Jacquelyn A. Fouse, Ph.D. | 41,722 | | 124,841 | | 166,563 | * |
| Andrew Hirsch | 16,518 | | 190,199 | | 206,717 | * |
| David P. Schenkein, M.D.(9) | 454,907 | | 697,063 | | 1,151,970 | 1.66% |
| Paul J. Clancy | 1,400 | | 83,897 | | 85,297 | * |
| Ian T. Clark | 1,400 | | 38,159 | | 39,559 | * |
| Kaye Foster | 3,600 | | 53,396 | | 56,996 | * |
| Maykin Ho, Ph.D. | 1,400 | | 53,747 | | 55,147 | * |
| John M. Maraganore, Ph.D. | 28,294 | | 65,622 | | 93,916 | * |
| David Scadden, M.D. | 1,971 | | 36,489 | | 38,460 | * |
| All executive officers and directors as a group (12 persons) | 556,606 | | 1,494,665 | | 2,051,271 | 2.92% |

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* Less than 1%.

- (1) Based solely on a Schedule 13G/A filed with the SEC on February 7, 2020. FMR LLC and Abigail P. Johnson are each the beneficial owners of 8,828,462 shares of common stock. FMR LLC has sole voting power over 1,866,193 shares of common stock and sole dispositive power over 8,828,462 shares of common stock. The address of FMR LLC is 245 Summer Street, Boston, MA 02210.
- (2) Based solely on a Schedule 13G/A filed with the SEC on January 8, 2020. Wellington Management Group LLP (“Wellington”), Wellington Group Holdings LLP and Wellington Investment Advisors Holdings LLP are each deemed to be the beneficial owner of 7,975,823 shares of common stock, with respect to which each entity reported shared voting power over 7,896,557 shares and shared dispositive power over 7,975,823 shares. Wellington Management Company LLP is deemed to be the beneficial owner of 7,889,788 shares of common stock, with respect to which it reported shared voting power over 7,883,937 shares and shared dispositive power over 7,889,788 shares. The shares are owned of record by clients of the following investment advisers (the “Wellington Investment Advisers”): Wellington Management Company LLP, Wellington Management Canada LLC, Wellington Management Singapore Pte Ltd, Wellington Management Hong Kong Ltd, Wellington Management International Ltd, Wellington Management Japan Pte Ltd and Wellington Management Australia Pty Ltd. Wellington Investment Advisors Holdings LLP controls directly, or indirectly through Wellington Management Global Holdings, Ltd., the Wellington Investment Advisers. Wellington Investment Advisors Holdings LLP is owned by Wellington Group Holdings LLP. Wellington Group Holdings LLP is owned by Wellington. The address of Wellington is 280 Congress Street, Boston, MA 02210.
- (3) Based solely on a Schedule 13D/A filed with the SEC on November 14, 2019. Consists of 4,010,926 shares of common stock held by Celgene European Investment Company LLC (“Celgene LLC”), 708,333 shares of common stock held by Celgene Alpine Investment Co., LLC (“Celgene Alpine LLC”), 624,575 shares of common stock held by Celgene Switzerland LLC and 1,777,824 shares of common stock held by Celgene Corporation (“Celgene”). Celgene LLC, Celgene Alpine LLC and Celgene Switzerland LLC are wholly-owned subsidiaries of Celgene. Celgene LLC has shared voting and dispositive power over 4,010,926 shares of common stock, Celgene Alpine LLC has shared voting and dispositive power over 708,333 shares of common stock, Celgene Switzerland LLC has shares voting and dispositive power over 624,575 shares of common stock and Celgene has sole voting and dispositive power over 1,777,824 shares of common stock and shared voting and dispositive power over 5,343,834 shares of common stock. The address of Celgene Corporation is 86 Morris Avenue, Summit, NJ 07901.
- (4) Based solely on a Schedule 13G/A filed with the SEC on February 12, 2020. The Vanguard Group (“Vanguard”) is deemed to be the beneficial owner of 5,606,855 shares of common stock, with respect to which it reported sole voting power over 31,554 shares, shared voting power over 14,769 shares, sole dispositive power over 5,568,635 shares and shared dispositive power over 38,220 shares. Includes 23,451 shares beneficially owned by Vanguard Fiduciary Trust Company, a wholly owned subsidiary of The Vanguard Group, Inc. as a result of Vanguard Fiduciary Trust Company serving as investment manager of collective trust accounts. Vanguard Investments Australia, Ltd., a wholly owned subsidiary of The Vanguard Group, Inc., is the beneficial owner of 22,872 shares as a result of Vanguard Investments Australia, Ltd. serving as investment manager of Australian investment offerings. The address of Vanguard is 100 Vanguard Blvd., Malvern, PA 19355.
- (5) Based solely on a Schedule 13G/A filed with the SEC on February 14, 2020. Capital International Investors has sole voting power over 4,615,362 shares of common stock and sole dispositive power over 4,649,474 shares of common stock. The address of Capital International Investors is 11100 Santa Monica Boulevard, 16th Floor, Los Angeles, CA 90025.

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- (6) Based solely on a Schedule 13G/A filed with the SEC on February 14, 2020. BB Biotech AG (“BB Biotech”) and its wholly-owned subsidiary Biotech Target N.V. (“Biotech Target”) share voting and dispositive power over 3,896,954 shares of common stock. The address of BB Biotech is Schwertstrasse 6, CH-8200 Schaffhausen, Switzerland and the address of Biotech Target is Ara Hill Top Building, Unit A-5, Pletterijweg Oost 1, Curacao.
- (7) Based solely on a Schedule 13G filed with the SEC on February 7, 2020 by BlackRock, Inc. (“BlackRock”) and certain of its subsidiaries. BlackRock is deemed to be the beneficial owner of 3,893,394 shares of common stock, with respect to which it reported sole voting power over 3,654,890 shares and sole dispositive power over 3,893,394 shares. The address of BlackRock 55 East 52nd Street, New York, NY 10055.
- (8) Includes shares of common stock held by a trust of which the reporting person is trustee and beneficiary.
- (9) Includes shares of common stock held by the David P. Schenkein 2004 Revocable Trust and shares of common stock held by the Amy P. Schenkein 2004 Revocable Trust.

DELINQUENT SECTION 16(a) REPORTS

Under Section 16(a) of the Exchange Act, directors, executive officers, our principal accounting officer and beneficial owners of 10% or more of our common stock, or reporting persons, are required to report to the SEC on a timely basis the initiation of their status as a reporting person and any changes with respect to their beneficial ownership of our common stock. Based solely on our review of copies of such forms that we have received, or written representations from reporting persons, we believe that during the fiscal year ended December 31, 2019, all reporting persons complied with all applicable filing requirements.

**PROPOSAL 1:
ELECTION OF DIRECTORS**

Our board of directors is divided into three classes, with one class of our directors standing for election each year. Directors in each class are elected at the annual meeting of stockholders held in the year in which the term for their class expires and hold office for a three-year term and until their resignation or removal or their successors are duly elected and qualified. In accordance with our certificate of incorporation and bylaws, our directors may fill existing vacancies on the board of directors.

The term of office of our Class I directors, Paul J. Clancy and Ian Clark, will expire at the Annual Meeting. The nominees for Class I directors for election at the Annual Meeting are Mr. Clancy and Mr. Clark. If any of Mr. Clancy or Mr. Clark is elected at the Annual Meeting, such individual will be elected to serve for a three-year term that will expire at our 2023 annual meeting of stockholders and until such individual's successor is elected and qualified.

If no contrary indication is made, proxies in the accompanying form will be voted for Mr. Clancy and Mr. Clark or, in the event that any of Mr. Clancy and Mr. Clark is not a candidate or is unable to serve as a director at the time of the election (which is not currently expected), for any nominee who is designated by our board of directors to fill the vacancy.

Our priority in selection of board members is identification of members who will further the interests of our stockholders through their established record of professional accomplishment, the ability to contribute positively to the collaborative culture among board members, knowledge of our business, understanding of the competitive landscape and adherence to high ethical standards. Certain individual qualifications and skills of our directors that contribute to the board of directors' effectiveness as a whole are described in the following paragraphs.

Information Regarding Directors

The following paragraphs provide information as of the date of this Proxy Statement about each director and nominee for director, as furnished to us by the directors and nominees for director. The information presented includes information each such individual has given us about his or her age, all positions he or she holds, his or her principal occupation and business experience for the past five years, and the names of other publicly-held companies of which he or she currently serves as a director or has served as a director during the past five years. In addition to the information presented below regarding each such individual's specific experience, qualifications, attributes and skills that led our board of directors to the conclusion that he or she should serve as a director, we also believe that each of our directors and director nominees has a reputation for integrity, honesty and adherence to high ethical standards. Each has demonstrated business acumen and an ability to exercise sound judgment, as well as a commitment of service to our company and our board of directors. Finally, we value their significant experience on other public company boards of directors and board committees.

Information about the number of shares of common stock beneficially owned by each of our directors and nominees for director appears above under the heading "Security Ownership of Certain Beneficial Owners and Management."

There are no family relationships between or among any of our executive officers, directors or nominees for director.

Nominees for Election to the Board of Directors

Term Expiring at the 2023 Annual Meeting of Stockholders, if elected at the Annual Meeting (Class I)

| <u>Name</u> | <u>Age</u> | <u>Present Position with Agios Pharmaceuticals, Inc.</u> |
|----------------|------------|--|
| Paul J. Clancy | 58 | Director |
| Ian T. Clark | 59 | Director |

Paul J. Clancy has served as a member of our board of directors since September 2013. Mr. Clancy has more than 35 years of experience in financial management and strategic business planning, and has served as executive vice president, senior advisor of Alexion Pharmaceuticals, Inc., a public biopharmaceutical company, since October 2019, and as chief financial officer of Alexion from July 2017 to October 2019. Prior to Alexion, Mr. Clancy served as the executive vice president and chief financial officer at Biogen Inc. (formerly known as Biogen Idec Pharmaceutical Corporation), a pharmaceutical company, or Biogen, since 2007. He also served as senior vice president of finance of Biogen Idec, with responsibilities for leading the treasury, tax, investor relations and business planning groups. Prior to the merger of Biogen and Idec Pharmaceutical Corporation, Mr. Clancy was the vice president of portfolio management at Biogen. He joined Biogen in 2001 as vice president of U.S. marketing. Before Biogen, Mr. Clancy spent 13 years at PepsiCo Inc., a publicly-traded food and beverage company, serving in a variety of financial and general management positions. Mr. Clancy is a member of the board of directors and chair of the finance and audit committee of Incyte Corporation, a public biopharmaceutical company, or Incyte. Mr. Clancy has an M.B.A. from Columbia Business School and received his B.S. in business administration from Babson College in Wellesley, MA. We believe Mr. Clancy is qualified to serve as a member of our board of directors due to his extensive financial and executive leadership experience at large multi-national companies.

Ian T. Clark has served as a member of our board of directors since December 2016. Mr. Clark has more than 30 years of experience in the biotechnology industry. Mr. Clark currently serves as an operating partner at Blackstone Life Sciences, a private investment firm. Prior to that, he was chief executive officer and head of North American Commercial Operations of Genentech Inc. (now a member of the Roche Group, a global healthcare company), a position he held from 2010 to 2016. Mr. Clark also led the Genentech executive committee and was a member of the Genentech board of directors. Mr. Clark joined Genentech in 2003 as senior vice president and general manager, bio-oncology. In 2005, he was named senior vice president, commercial operations and became a member of the executive committee, and in 2006, he was named executive vice president, commercial operations. In 2009, he was named head of global product strategy and chief marketing officer of Roche. Prior to joining Genentech, Mr. Clark held roles of increasing responsibility at Novartis, Sanofi-Synthelabo SA (Aventis SA), Ivax Pharmaceuticals, Inc. and G.D. Searle, LLC, a subsidiary of Monsanto Corporation in the United States, Canada, the United Kingdom, France and Eastern Europe. Mr. Clark is a member of the boards of directors of publicly traded biotechnology companies Takeda Pharmaceutical Company Limited, Guardant Health, Inc., Forty Seven, Inc., Corvus Pharmaceuticals, Inc. and AvroBio, Inc. In addition, Mr. Clark chairs the compensation committees of Guardant and AvroBio. He was formerly on the boards of directors of Shire plc (prior to its acquisition by Takeda), Kite Pharma, Inc. (prior to its acquisition by Gilead), Dendreon Corporation, Vernalis plc, and TerraVia Holdings, Inc. Mr. Clark also serves on the BioFulcrum Board of the Gladstone Institute, an independent, nonprofit life science research organization. Mr. Clark was formerly on the board of the Biotechnology Innovation Organization and on the Economic Advisory Council of the 12th District of the Federal Reserve Bank of San Francisco. Mr. Clark received a B.S. in biological sciences and an honorary doctorate from Southampton University in the United Kingdom. We believe Mr. Clark is qualified to serve as a member of our board of directors due to his extensive experience in and knowledge of the biotechnology sector and his leadership experience.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE FOR THE ELECTION OF EACH OF MR. CLANCY AND MR. CLARK.

Members of the Board of Directors Continuing in Office**Term Expiring at the
2021 Annual Meeting of Stockholders (Class II)**

| Name | Age | Present Position with Agios Pharmaceuticals, Inc. |
|---------------------------|------------|--|
| Kaye Foster | 60 | Director |
| Maykin Ho, Ph.D. | 67 | Director |
| John M. Maraganore, Ph.D. | 57 | Director |

Kaye Foster has served as a member of our board of directors since December 2014. Ms. Foster has more than 25 years of experience in human resources in the pharmaceutical industry and has been a Senior Advisor at the Boston Consulting Group since 2014. Previously, she was Senior Vice President, Global Human Resources at Onyx Pharmaceuticals, Inc., an Amgen, Inc. subsidiary and a biopharmaceutical company, or Onyx, from 2010 to 2014. At Onyx, which was acquired by Amgen in 2013, she led all aspects of human resources for U.S. and global operations. Prior to joining Onyx, Ms. Foster was Global Vice President of Human Resources and an Executive Committee member at Johnson and Johnson Corporation, a publicly traded healthcare company, from 2003 to 2010. Before Johnson and Johnson, Ms. Foster held several senior human resources executive positions with Pfizer Inc., a publicly traded pharmaceuticals company, supporting its pharmaceuticals businesses in Japan, Asia, Africa, Middle East and Latin America and, notably, led the integration of both the Warner-Lambert and Pharmacia mergers for these regions. Prior to that, she gained 10 years of operational experience within The Yellow Pages. She currently serves on the board of directors of Grail, Inc., a private biotechnology company, and Stanford Health Care, a hospital and healthcare system, and also serves on the board of Spelman College and chairs the Glide Memorial Foundation Board of Trustees. She earned her undergraduate degree at Baruch College of the City University of New York and received her M.B.A. from Columbia University, Graduate School of Business. We believe Ms. Foster's qualifications to serve on our board of directors include her extensive experience as an executive in the pharmaceuticals industry.

Maykin Ho, Ph.D. has served as a member of our board of directors since June 2015. Dr. Ho has more than 30 years of experience in the healthcare and finance industries. She has been a venture partner at Qiming Venture Partners, a venture capital firm in China and Hong Kong, since July 2015. From July 1992 to February 2015, she held various positions at Goldman Sachs, a global investment bank, including: from 2010 to 2015, she served as advisory director of global healthcare investment banking; from 2002 to 2010, she served as partner and co-head of healthcare investment research; and from 1992 to 2010 she served as senior biotechnology research analyst. Prior to Goldman Sachs, Dr. Ho held various managerial positions in licensing, strategic planning, marketing and research at DuPont-Merck Pharmaceuticals, a global pharmaceutical company, and DuPont de Nemours & Company. She is a member of the board of directors of Fibrogen, Inc., a publicly-traded biotechnology company; Grail Inc., a privately-held cancer-detection company; , and Parexel International, a privately-held, global pharmaceutical services company. Dr. Ho also serves on the board of directors of two non-profit research institutes: the Aaron Diamond AIDS Research Center and the Institute for Protein Innovation. In addition, she is a member of the Biotech Advisory Panel of The Stock Exchange of Hong Kong. Previously, Dr. Ho served on the board of directors and audit committee of Parexel International when it was a publicly-traded company, and on the investment committee of the Society of Neuroscience. She was a postdoctoral fellow at the pathology department of Harvard Medical School and a graduate of the Advanced Management Program at The Fuqua School of Business, Duke University. Dr. Ho received a Ph.D. in microbiology and immunology and a B.S. from the State University of New York, Downstate Medical Center. We believe Dr. Ho is qualified to serve on our board of directors due to her extensive experience in healthcare investment research and banking.

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John M. Maraganore, Ph.D. has served as a member of our board of directors since November 2011. Since 2002, Dr. Maraganore has served as the chief executive officer and as a director of Alnylam Pharmaceuticals, Inc., a publicly-traded biopharmaceutical company, or Alnylam. From 2002 to 2007, Dr. Maraganore served as president of Alnylam. From 2000 to 2002, Dr. Maraganore served as senior vice president, strategic product development with Millennium Pharmaceuticals, Inc., a biopharmaceutical company (now Takeda Oncology), or Millennium. Before Millennium, he served as director of molecular biology and director of market and business development at Biogen. Prior to Biogen, Dr. Maraganore was a scientist at ZymoGenetics, Inc., a biotechnology company, and The Upjohn Company, a pharmaceutical manufacturing company. Dr. Maraganore was formerly a director of bluebird bio, Inc., a publicly traded biopharmaceutical company. In addition, he was formerly a venture partner at Third Rock Ventures, L.P., where he participated in a limited capacity focusing on guiding strategy for Third Rock and its portfolio companies, and was formerly chairman of the board of directors of Regulus Therapeutics, Inc., a publicly-traded company. He is also the former chair and current member of the Executive Committee of the Biotechnology Innovation Organization. Dr. Maraganore holds an M.S. and a Ph.D. in Biochemistry and Molecular Biology from the University of Chicago and a B.A. in Biological Sciences also from the University of Chicago. We believe that Dr. Maraganore is qualified to serve on our board of directors because he has over 30 years of experience in the biotechnology industry, bringing to our board of directors critical scientific, research and development, and general management expertise.

Term Expiring at the 2022 Annual Meeting of Stockholders (Class III)

| Name | Age | Present Position with Agios Pharmaceuticals, Inc. |
|---------------------------|------------|--|
| Jacquelyn A. Fouse, Ph.D. | 58 | Chief Executive Officer and Director |
| David Scadden, M.D. | 67 | Director |
| David P. Schenkein, M.D. | 62 | Chairman |

Jacquelyn A. Fouse, Ph.D. joined Agios as chief executive officer on February 1, 2019 and has served as a member of our board of directors since December 2017. Dr. Fouse served as executive chair of Dermavant Sciences, a biopharmaceutical company, from July 2017 until September 2018. From September 2010 until June 2017, Dr. Fouse served in various capacities at Celgene Corporation, a biopharmaceutical company, or Celgene, serving as strategic advisor to the management executive committee from April 2017 to June 2017, president and chief operating officer from March 2016 to March 2017, president, hematology and oncology from August 2014 to February 2016, executive vice president and chief financial officer from February 2012 to July 2014, and senior vice president and chief financial officer from September 2010 to February 2012. Prior to joining Celgene, Dr. Fouse served as chief financial officer of Bunge Limited, or Bunge, a global agribusiness and food company, from 2007 to 2010. Prior to joining Bunge, Dr. Fouse served as senior vice president, chief financial officer and corporate strategy at Alcon Laboratories, Inc., or Alcon, a global medical company, since 2006, and as its senior vice president and chief financial officer since 2002. Prior to her time with Alcon she held a variety of senior leadership roles with international companies. Dr. Fouse is also a director and member of the audit committee of Incyte and is a director and member of the audit committee of Dick's Sporting Goods, Inc., a public sporting goods retailer, and was a director of Perrigo Company from November 2012 to April 2016 and a director of Celgene from February 2016 until June 2017. Dr. Fouse has informed us that she will not be standing for reelection to the board of directors of Dick's Sporting Goods, Inc. at its upcoming annual meeting in June 2020. Dr. Fouse earned a B.A. and an M.A. in Economics and a Ph.D. in Finance from the University of Texas at Arlington. She also earned a Masters in Environmental Management from the Yale University School of Forestry and Environmental Studies. We believe Dr. Fouse is qualified to serve as a member of our board of directors due to her extensive experience in the biotechnology sector and her senior leadership experience.

David Scadden, M.D. has served as a member of our board of directors since May 2017. Dr. Scadden is a hematologist/oncologist and an expert on the medical application of stem cell biology with a particular emphasis

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on its use in the setting of cancer. He is the Gerald and Darlene Jordan Professor of Medicine at Harvard University, a position he has held since 2006. Since 1995, Dr. Scadden has practiced at the Massachusetts General Hospital, where he founded and directs the Center for Regenerative Medicine and directed the Hematologic Malignancies Center of the MGH Cancer Center for 10 years. Dr. Scadden co-founded and co-directs the Harvard Stem Cell Institute, and is Chairman emeritus and Professor of the Harvard University Department of Stem Cell and Regenerative Biology. He is a member of the National Academy of Medicine, the American Academy of Arts and Sciences, is an associate member of the Broad Institute of Harvard and MIT and is a former member of the Board of External Experts for the National Heart, Lung and Blood Institute, the Board of Scientific Counselors for the National Cancer Institute, Board of Directors of the International Society for Stem Cell Research and the Executive Committee of the American Society of Hematology. Dr. Scadden is on the board of the public biotechnology company, Editas Medicines, the boards of the private biotechnology companies LifeVault Bio and Clear Creek Bio, Inc., is a scientific founder of Fate Therapeutics, a public biotechnology company, and a scientific founder and member of the board of Magenta Therapeutics, a public biotechnology company. He is the recipient of numerous honors including the E. Donnall Thomas and the Dameshek awards from the American Society of Hematology and awards from the Doris Duke Charitable Trust, the Ellison Medical Foundation, the Burroughs Wellcome Fund, and the Leukemia and Lymphoma Society. Dr. Scadden holds degrees from Bucknell University, Case Western Reserve University and honorary degrees from Harvard University, Bucknell University and Lund University in Sweden. We believe Dr. Scadden is qualified to serve on our board of directors due to his scientific expertise in the fields of hematology and oncology.

David P. Schenkein, M.D. has served as a member of our board of directors since August 2009, as our executive chairman from February 2019 to February 2020, and as the chairman of our board of directors since February 2020. Dr. Schenkein also served as our president and chief executive officer from August 2009 until February 2019. Dr. Schenkein has been a hematologist and medical oncologist for more than 20 years. He currently serves as a general partner of GV, the venture capital arm of Alphabet Inc. (formerly Google), and is an adjunct attending physician in hematology at Tufts Medical Center. Prior to joining Agios, from 2006 to 2009, Dr. Schenkein was the senior vice president, clinical hematology/oncology at Genentech, where he was responsible for numerous successful oncology drug approvals and leading the medical and scientific strategies for its bio-oncology portfolio. While at Genentech, he served as an adjunct clinical professor of medical oncology at Stanford University School of Medicine. Prior to joining Genentech, he served as the senior vice president of clinical research at Millennium, overseeing the clinical development and worldwide approval of VELCADE®, a first-in-class cancer therapy now approved to treat multiple myeloma and non-Hodgkins lymphoma. Dr. Schenkein currently serves on the board of directors of Prime Medicine, Inc., a private biotechnology company, and on the board of directors, compensation committee and nominating and corporate governance committee of bluebird bio, Inc., and on the board of directors, nominating and corporate governance committee and science and technology committee and Denali Therapeutics Inc., both public biotechnology companies. Dr. Schenkein was formerly on the board of Foundation Medicine, Inc., a public biotechnology company. Dr. Schenkein holds a B.A. in chemistry from Wesleyan University and an M.D. from the State University of New York Upstate Medical School. We believe that Dr. Schenkein's detailed knowledge of our company and his extensive background in the biotechnology industry, including his roles at Genentech and Millennium, provide a critical contribution to our board of directors.

CORPORATE GOVERNANCE

General

We believe that good corporate governance is important to ensure that Agios is managed for the long-term benefit of our stockholders. This section describes key corporate governance practices that we have adopted. We have adopted a code of business conduct and ethics, which applies to all of our officers, directors and employees, corporate governance guidelines and charters for our audit committee, our compensation committee, our nominating and governance committee and our science and technology committee. We have posted copies of our code of business conduct and ethics and corporate governance guidelines, as well as each of our committee charters, on the Corporate Governance page of the Investors section of our website, www.agios.com, which you can access free of charge. Information contained on the website is not incorporated by reference in, or considered part of, this Proxy Statement. We intend to disclose on our website any amendments to, or waivers from, our code of business conduct and ethics that are required to be disclosed by law or Nasdaq listing standards. We will also provide copies of these documents, as well as our other corporate governance documents, free of charge, to any stockholder upon written request to Holly Manning, Director, Investor Relations, at 88 Sidney Street, Cambridge, Massachusetts 02139; telephone: 617-649-8600; e-mail: Holly.Manning@agios.com.

Corporate Governance Guidelines

Our board of directors has adopted corporate governance guidelines to assist in the exercise of its duties and responsibilities and to serve the best interests of Agios and our stockholders. These guidelines, which provide a framework for the conduct of our board's business, provide that:

- our board's principal responsibility is to oversee the management of Agios;
- a majority of the members of our board shall be independent directors;
- the independent directors meet regularly in executive session;
- directors have full and free access to management and, as necessary and appropriate, independent advisors;
- new directors participate in an orientation program and all directors are expected to participate in continuing director education on an ongoing basis; and
- our board and its committees will conduct a self-evaluation periodically to determine whether they are functioning effectively.

Director Determination of Independence

Rule 5605 of the Nasdaq Listing Rules requires a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq Listing Rules require that, subject to specified exceptions, each member of a listed company's audit, compensation and nominating and corporate governance committees be independent, that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended, or the Exchange Act and that compensation committee members also satisfy the independence criteria set forth in Rule 10C-1 under the Exchange Act.

Under Rule 5605(a)(2) of the Nasdaq Listing Rules, a director will only qualify as an "independent director" if, in the opinion of our board of directors, that person does not have a relationship that would interfere

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with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3 of the Exchange Act, a member of an audit committee of a listed company may not, other than in their capacity as a member of the audit committee, the board of directors, or any other board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries.

In addition, in affirmatively determining the independence of any director who will serve on a company's compensation committee, Rule 10C-1 under the Exchange Act requires that a company's board of directors consider all factors specifically relevant to determining whether a director has a relationship to such company which is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: (i) the source of compensation of the director, including any consulting advisory or other compensatory fee paid by such company to the director; and (ii) whether the director is affiliated with the company or any of its subsidiaries or affiliates.

Our board of directors undertook a review of the composition of our board of directors and its committees and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family relationships, our board of directors has determined that each of our directors, with the exception of Dr. Fouse, our chief executive officer, and Dr. Schenkein, our chairman, is an "independent director" as defined under Rule 5605(a)(2) of the Nasdaq Listing Rules. In addition, our board of directors determined that Mr. Clancy, Dr. Ho and Dr. Maraganore, who comprise our audit committee, Mr. Clark, Ms. Foster and Dr. Maraganore, who comprise our compensation committee, and Mr. Clark, Ms. Foster and Dr. Ho, who comprise our nominating and corporate governance committee, satisfy the independence standards for such committees established by the SEC and the Nasdaq Listing Rules, as applicable. In making such determinations, our board of directors considered the relationships that each such non-employee director has with our company, including any relevant transactions described below in "Certain Relationships and Related Party Transactions" and the beneficial ownership of our capital stock by each non-employee director, as well as all other facts and circumstances our board of directors deemed relevant in determining independence.

Board Leadership Structure

Our corporate governance guidelines provide that the nominating and corporate governance committee shall periodically assess our board of directors' leadership structure, including whether the offices of chief executive officer and chairman of the board of directors should be separate and why the board of directors' leadership structure is appropriate given the specific characteristics or circumstances of our company. These guidelines provide the board of directors with flexibility to determine whether the two roles should be combined or separated based upon our needs and the board of directors' assessment of its leadership from time to time. We currently separate the roles of chief executive officer and chairman of the board of directors. Separating the duties of the chairman of the board from the duties of the chief executive officer allows our chief executive officer to focus on our day-to-day business, while allowing the chairman of the board to lead the board of directors in its fundamental role of providing advice to and independent oversight of management. Specifically, the chairman of our board of directors presides over meetings of the board of directors, facilitates communications between management and the board of directors and assists with other corporate governance matters.

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Because Dr. Schenkein, the chairman of our board of directors, is not independent within the meaning of the Nasdaq Listing Rules, our board of directors, upon the recommendation of our nominating and corporate governance committee, has appointed Dr. Maraganore as lead independent director. Dr. Maraganore is an independent director within the meaning of the Nasdaq Listing Rules (see “Director Determination of Independence” above). His duties as lead director include the following:

- Chairing meetings of the independent directors in executive session;
- Meeting with any director who is not adequately performing his or her duties as a member of our board of directors or any committee;
- Facilitating communications between other members of our board of directors, our chairman and our chief executive officer;
- Working with our chairman and our chief executive officer in the preparation of the agenda for each board meeting and in determining the need for special meetings of our board of directors;
- Reviewing and, if appropriate, recommending action to be taken with respect to written communications from stockholders submitted to our board of directors (see “Communications with our Board of Directors” below); and
- Consulting with our chairman and our chief executive officer on matters relating to corporate governance and board performance.

Our nominating and corporate governance committee evaluates our board leadership structure from time to time and may recommend further alterations of this structure in the future.

Director Nomination Process

Director Qualifications

In evaluating director nominees, the nominating and corporate governance committee will consider among other things the following factors:

- reputation for personal and professional integrity, honesty and adherence to high ethical standards;
- demonstrated business acumen, experience and ability to exercise sound judgments in matters that relate to the current and long-term objectives of our company;
- strong finance experience;
- commitment to understand our company and its industry;
- interest and ability to understand the sometimes conflicting interests of the various constituencies of our company, which include stockholders, employees, customers, governmental units, creditors and the general public, and to act in the interests of all stockholders;
- diversity of expertise and experience in substantive matters pertaining to our business relative to other board members;
- diversity of background and perspective, including with respect to age, gender, race, place of residence and specialized experience; and

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- practical and mature business judgment, including the ability to make independent analytical inquiries.

The nominating and corporate governance committee's goal is to assemble a board of directors that brings to the company a variety of perspectives and skills derived from high quality business and professional experience. Moreover, the nominating and corporate governance committee believes that the background and qualifications of the board of directors, considered as a group, should provide a significant mix of experience, knowledge and abilities that will allow the board of directors to fulfill its responsibilities. Nominees are not discriminated against on the basis of race, religion, national origin, sex, sexual orientation, disability or any other basis proscribed by law.

The nominating and corporate governance committee has not adopted a formal policy with respect to a fixed set of specific minimum qualifications, including diversity, for its candidates for membership on the board of directors. The committee may consider such other facts, including, without limitation, diversity, as it may deem are in the best interests of our company and its stockholders. Our directors' performance and qualification criteria are reviewed periodically by the nominating and corporate governance committee.

Identification and Evaluation of Nominees for Directors

The nominating and corporate governance committee identifies nominees for director by first evaluating the current members of our board of directors willing to continue in service. Current members with qualifications and skills that are consistent with the nominating and corporate governance committee's criteria for board of director service and who are willing to continue in service are considered for re-nomination, balancing the value of continuity of service by existing members of our board of directors with that of obtaining a new perspective or expertise.

If any member of our board of directors does not wish to continue in service or if our board of directors decides not to re-nominate a member for re-election, the nominating and corporate governance committee identifies a new nominee that meets the criteria above. The committee generally inquires of our board of directors and members of management for their recommendations. The committee may also review the composition and qualification of the boards of directors of our competitors, and may seek input from industry experts or analysts. The nominating and corporate governance committee reviews the qualifications, experience and background of candidates. Final candidates, if other than our current directors, would be interviewed by the members of the nominating and corporate governance committee and by certain of our other independent directors and executive management. In making its determinations, the nominating and corporate governance committee evaluates each individual in the context of our board of directors as a whole, with the objective of assembling a group that can best contribute to the success of our company and represent stockholder interests through the exercise of sound judgment. After review and deliberation of all feedback and data, the nominating and corporate governance committee makes its recommendation to our board of directors. To date, the nominating and corporate governance committee has not utilized third-party search firms to identify board of director candidates. The nominating and corporate governance committee may in the future choose to do so in those situations where particular qualifications are required or where existing contacts are not sufficient to identify an appropriate candidate.

Stockholders may recommend individuals to our nominating and corporate governance committee for consideration as potential director candidates by submitting their names, together with appropriate biographical information and background materials and a statement as to whether the stockholder or group of stockholders making the recommendation has beneficially owned more than 5% of our common stock for at least a year as of the date such recommendation is made, to Nominating and Corporate Governance Committee, c/o Assistant Corporate Secretary, Agios Pharmaceuticals, Inc. 88 Sidney Street, Cambridge, Massachusetts 02139. Assuming that appropriate biographical and background material has been provided on or before the dates set forth in the

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section below entitled “Stockholder Proposals,” the committee will evaluate stockholder-recommended candidates by following substantially the same process, and applying substantially the same criteria, as it follows for candidates submitted by others, as described above.

Communications with Our Board of Directors

Our board of directors will give appropriate attention to written communications that are submitted by stockholders, and will respond if and as appropriate. The chairman of the board of directors (if an independent director), or the lead director (if one is appointed), or otherwise the chair of our Nominating and Governance Committee, with the assistance of our Corporate Secretary or his or her designee, is primarily responsible for monitoring communications from stockholders and for providing copies or summaries to the other directors as he or she considers appropriate.

Communications are forwarded to all directors if they relate to important substantive matters and include suggestions or comments that the chairman of the board considers to be important for the directors to know. In general, communications relating to corporate governance and corporate strategy are more likely to be forwarded than communications relating to ordinary business affairs, personal grievances and matters as to which we receive repetitive or duplicative communications.

Stockholders who wish to send communications on any topic to our board of directors should address such communications to Agios Pharmaceuticals, Inc., c/o Assistant Corporate Secretary, 88 Sidney Street, Cambridge, Massachusetts 02139.

Board Meetings and Attendance

Our board of directors met seven times during our fiscal year 2019, including telephonic meetings. During the year, each of our directors attended 75% or more of the aggregate number of meetings of the board of directors and the committees on which they served.

Director Attendance at Annual Meetings

Although our company does not have a formal policy regarding attendance by members of our board of directors at our annual meeting, we encourage all of our directors to attend. Six of our eight then-serving directors attended our 2019 annual meeting of stockholders.

Board Committees

We have four standing committees: the audit committee, the compensation committee, the nominating and corporate governance committee and the science and technology committee. Each of these committees has a written charter approved by our board of directors. A copy of each charter can be found on the Corporate Governance page of the Investors section of our website, www.agios.com.

Audit Committee

The members of our audit committee are Mr. Clancy, Dr. Ho and Dr. Maraganore. Mr. Clancy is the chair of the audit committee. Our board of directors has determined that Mr. Clancy and Ms. Ho qualify as audit committee financial experts within the meaning of SEC regulations and the Nasdaq Listing Rules. In making this determination, our board of directors has considered the formal education and nature and scope of his or her previous experience, coupled with past and present service on various audit committees. Our audit committee assists our board of directors in its oversight of our accounting and financial reporting process and the audits of

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our financial statements. The audit committee met nine times during fiscal year 2019, including telephonic meetings. The audit committee's responsibilities include:

- appointing, approving the compensation of, and assessing the independence of our registered public accounting firm;
- overseeing the work of our registered public accounting firm, including through the receipt and consideration of reports from such firm;
- reviewing and discussing with management and the registered public accounting firm our annual and quarterly financial statements and related disclosures;
- recommending to our board of directors whether the audited financial statements should be included in our annual report;
- monitoring our internal control over financial reporting, disclosure controls and procedures and code of business conduct and ethics;
- overseeing our internal audit function;
- discussing our major financial risk exposures and risks relating to data privacy and cybersecurity, and our risk management policies;
- establishing policies regarding hiring employees from the registered public accounting firm and procedures for the receipt, retention and treatment of accounting related complaints and concerns;
- meeting independently with our internal auditing staff, registered public accounting firm and management;
- reviewing and approving or ratifying any related person transactions; and
- preparing the audit committee report required by SEC rules, which is included on page 31 of this Proxy Statement.

Compensation Committee

The members of our compensation committee are Ms. Foster, Mr. Clark and Dr. Maraganore. Ms. Foster is the chair of the compensation committee. Our compensation committee assists our board of directors in the discharge of its responsibilities relating to the compensation of our executive officers. The compensation committee met five times during fiscal year 2019. The compensation committee's responsibilities include:

- reviewing and approving corporate goals and objectives relevant to CEO compensation;
- making recommendations to our board of directors with respect to the compensation of our chief executive officer, and reviewing and approving the compensation of our other executive officers;
- overseeing an evaluation of our senior executives;
- overseeing and administering our cash and equity incentive plans;

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- reviewing and making recommendations to our board of directors with respect to director compensation;
- reviewing and discussing with management our “Compensation Discussion and Analysis,” which is included on page 34 of this Proxy Statement; and
- preparing the compensation committee report required by SEC rules, which is included on page 53 of this Proxy Statement.

Nominating and Corporate Governance Committee

The members of our nominating and corporate governance committee are Ms. Foster, Mr. Clark and Dr. Ho. Ms. Foster is the chair of the nominating and corporate governance committee. The nominating and corporate governance committee met three times during fiscal year 2019. The nominating and corporate governance committee’s responsibilities include:

- identifying individuals qualified to become board members;
- recommending to our board of directors the persons to be nominated for election as directors and to each committee of our board of directors;
- reviewing and making recommendations to the board of directors with respect to management succession planning;
- developing and recommending corporate governance principles to the board of directors; and
- overseeing periodic evaluations of the board of directors.

The processes and procedures followed by our nominating and corporate governance committee in identifying and evaluating director candidates are described above under the heading “Director Nomination Process”.

Science and Technology Committee

The members of our science and technology committee are Dr. Scadden, Dr. Fouse and Dr. Schenkein. Dr. Scadden is the chair of the science and technology committee. The science and technology committee assists our board’s oversight of our research and development activities. The science and technology committee met three times during fiscal year 2019, including telephonic meetings. The science and technology committee’s responsibilities include:

- reviewing, evaluating, and advising our board of directors and management regarding our long-term strategic goals and objectives and the quality and direction of our research and development programs;
- monitoring and evaluating trends in research and development, and recommending to our board of directors and management emerging technologies for building the company’s technological strength;
- recommending approaches to acquiring and maintaining technology positions (including but not limited to contracts, grants, collaborative efforts, alliances, and capital);

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- advising our board of directors and management on the scientific aspects of business development transactions;
- regularly reviewing the company's research and development pipeline;
- assisting our board of directors with its oversight responsibility for enterprise risk management in areas affecting the company's research and development; and
- reviewing such other topics as delegated to the science and technology committee from time to time by our board of directors.

The Board's Role in Risk Oversight

Our board of directors has responsibility for the oversight of the company's risk management processes and, either as a whole or through its committees, regularly discusses with management our major risk exposures, the potential impact of these risks on our business and the steps we take to manage them. The risk oversight process includes receiving regular reports from board committees and members of senior management to enable our board of directors to understand the company's risk identification, risk management and risk mitigation strategies with respect to areas of potential material risk, including operations, finance, legal, regulatory, strategic and reputational risk.

The audit committee reviews information regarding liquidity and operations, and oversees our management of financial risks. Periodically, the audit committee reviews our policies with respect to risk assessment, risk management, loss prevention and regulatory compliance. Oversight by the audit committee includes direct communication with our external auditors, and discussions with management regarding significant risk exposures and risks relating to data privacy and cybersecurity and the actions management has taken to limit, monitor or control such exposures. The compensation committee is responsible for assessing whether any of our compensation policies or programs has the potential to encourage excessive risk-taking. The nominating and corporate governance committee manages risks associated with the independence of the board, corporate disclosure practices, and potential conflicts of interest. The science and technology committee assists the board's oversight of the company's research and development activities. While each committee is responsible for evaluating certain risks and overseeing the management of such risks, the entire board of directors is regularly informed through committee reports about such risks. Matters of significant strategic risk are considered by our board of directors as a whole.

Risk Considerations in our Compensation Program

We along with our compensation committee of our board of directors have reviewed the compensation policies and practices for all of our employees and believe any risks arising from our compensation policies and programs are not reasonably likely to have a material adverse effect on our company or its operations. In reaching this conclusion, the compensation committee and we considered several factors, including the following:

- the establishment of base salaries consistent with our executive officers' responsibilities and market comparable companies to ensure that our executive officers would not be motivated to take excessive risks to achieve a reasonable level of financial security;
- the mix between fixed and variable, annual and long-term, and cash and equity compensation, which is intended to encourage strategies and actions that are in our company's long-term best interests;

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- vesting periods for equity compensation awards that reward sustained stock price appreciation;
- the evaluation of company performance (which drives the amount of cash and number of shares available for grant under our contingent annual performance-based cash incentive and annual equity incentive programs, respectively) based on a variety of long- and short-term objectives in which no single objective is given substantial weight, thus diversifying the risk associated with any single indicator of performance; and
- the discretion available to our compensation committee not to apply fixed formulae in assessing our company performance, thus enabling the compensation committee to, among other things, (a) eliminate the potential incentive for management to conduct activities that are in the company's annual goals, but which may not, due to new data or other inputs, ultimately prove to be in the best interest of stockholders, and (b) reward management for making decisions that are in the long-term best interest of our product development programs, even when those decisions result in the failure to meet short-term objectives.

Director Compensation

Our board of directors has adopted revisions to our non-employee director compensation policy that are designed to provide a total compensation package that enables us to attract and retain, on a long-term basis, high caliber non-employee directors. The cash and equity compensation for non-employee directors under the policy, effective January 1, 2019, is set forth in the table below.

| | <u>Annual Cash Compensation</u> | <u>Number of Options/RSUs Granted</u> |
|---|---------------------------------|--|
| Board of Directors: | | |
| Board Member | \$50,000 | \$718,000 in equity awards upon initial election (split approximately 75% in stock options and 25% in restricted stock units, or RSUs, based on value); \$360,000 in equity awards at each annual meeting thereafter (split approximately 75% in stock options and 25% in RSUs, based on value)* |
| Chairman | Additional \$30,000 | — |
| Lead Independent Director | Additional \$25,000 | — |
| Audit Committee: | | |
| Chair | \$20,000 | — |
| Member (other than Chair) | \$10,000 | — |
| Compensation Committee: | | |
| Chair | \$15,000 | — |
| Member (other than Chair) | \$7,500 | — |
| Nominating and Corporate Governance Committee: | | |
| Chair | \$10,000 | — |
| Member (other than Chair) | \$5,000 | — |

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| | <u>Annual Cash Compensation</u> | <u>Number of Options/RSUs Granted</u> |
|--|---------------------------------|---------------------------------------|
| Science and Technology Committee: | | |
| Chair | \$15,000 | — |
| Member (other than Chair) | \$7,500 | — |

* number of units for stock option and RSU awards to be determined on the date of grant based on grant date fair value.

Under the policy, non-employee members of our board of directors also are reimbursed for travel, lodging and other reasonable expenses incurred in attending board of directors or committee meetings.

The stock options granted to our non-employee directors have an exercise price equal to the fair market value of our common stock on the date of grant and expire ten years after the date of grant. The stock options and RSUs granted to our non-employee directors are subject to vesting based upon a director's continued service on our board of directors. The initial stock options and RSUs granted to our newly elected non-employee directors vest with respect to 25% of the shares on the first anniversary of the grant date and monthly thereafter until the fourth anniversary of the date of grant. The annual stock options and RSUs granted to our non-employee directors vest with respect to 100% of the shares on the first anniversary of the grant date. To the extent that a non-employee director has other responsibilities, such director may receive additional compensation to the extent deemed necessary by our board of directors. Directors who also are employees do not receive cash or equity compensation for service on the board of directors in addition to compensation payable for their service as employees.

The following table sets forth information concerning the compensation for our non-employee directors during the fiscal year ended December 31, 2019:

| <u>Name</u> | <u>Fees Earned or Paid in Cash (\$)</u> | <u>Option Awards (\$)(1)(2)</u> | <u>Stock Awards (\$)(3)(4)</u> | <u>Total (\$)</u> |
|---------------------------|---|-------------------------------------|------------------------------------|-------------------|
| Paul J. Clancy | 70,000 | 269,967 | 89,975 | 429,942 |
| Ian T. Clark | 62,500 | 269,967 | 89,975 | 422,442 |
| Kaye Foster | 75,000 | 269,967 | 89,975 | 434,942 |
| Maykin Ho, Ph.D. | 65,000 | 269,967 | 89,975 | 424,942 |
| John M. Maraganore, Ph.D. | 92,500 | 269,967 | 89,975 | 452,442 |
| David Scadden, M.D. | 65,000 | 269,967 | 89,975 | 424,942 |

- (1) Represents stock options to purchase 8,919 shares of common stock granted to each of our non-employee directors during 2019 for service on our board of directors. The shares subject to these stock options vest in full on May 29, 2020. Amounts listed represent the aggregate fair value amount computed as of the grant date of the stock option awards granted during 2019 in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718, or FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 13, Share-Based Payments, of the Notes to our Consolidated Financial Statements filed on our Annual Report on Form 10-K, filed with the SEC on February 19, 2020.
- (2) The aggregate number of shares of common stock underlying stock options outstanding as of December 31, 2019 for our non-employee directors were: Mr. Clancy: 82,019, Mr. Clark: 38,619, Ms. Foster: 51,518, Dr. Ho: 51,869, Dr. Maraganore: 63,744, and Dr. Scadden: 38,619.
- (3) Represents RSUs representing the contingent right to receive 1,878 shares of common stock granted to each of our non-employee directors during 2019 for service on our board of directors. The shares subject

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to these RSUs vest in full on May 29, 2020. Amounts listed represent the aggregate fair value amount computed as of the grant date of the RSUs granted during 2019 in accordance with FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 13, Share-Based Payments, of the Notes to our Consolidated Financial Statements filed on our Annual Report on Form 10-K, filed with the SEC on February 19, 2020.

- (4) The aggregate number of shares of common stock underlying restricted stock units outstanding as of December 31, 2019 was 1,878 shares for each of our non-employee directors.

Dr. Fouse, one of our directors who also serves as our chief executive officer, did not receive any additional compensation for her service as a director from and after February 1, 2019, when she assumed the role of chief executive officer. Dr. Schenkein, one of our directors who also served as our president and chief executive officer until February 1, 2019, and as the executive chairman of our board of directors from February 1, 2019 until February 1, 2020, did not receive any additional compensation for his service as a director in that role. In connection with his appointment as executive chairman, we entered into an amended and restated employee offer letter agreement with Dr. Schenkein, effective February 1, 2019, providing for the modified terms and conditions of his employment as described below under “Executive Compensation—Employment, Severance and Change in Control Arrangements—*Employment Offer Letters*”. Effective February 1, 2020, Dr. Schenkein transitioned from executive chairman to chairman and will be compensated pursuant to the non-employee director compensation policy described above.

Limitation of Liability and Indemnification

Our certificate of incorporation limits the personal liability of directors for breach of fiduciary duty to the maximum extent permitted by the Delaware General Corporation Law and provides that no director will have personal liability to us or to our stockholders for monetary damages for breach of fiduciary duty or other duty as a director. However, these provisions do not eliminate or limit the liability of any of our directors:

- for any breach of the director’s duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- for voting or assenting to unlawful payments of dividends, stock repurchases or other distributions; or
- for any transaction from which the director derived an improper personal benefit.

Any amendment to or repeal of these provisions will not eliminate or reduce the effect of these provisions in respect of any act, omission or claim that occurred or arose prior to such amendment or repeal. If the Delaware General Corporation Law is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of our directors will be further limited to the greatest extent permitted by the Delaware General Corporation Law.

In addition, our certificate of incorporation provides that we must indemnify our directors and officers and we must advance expenses, including attorneys’ fees, to our directors and officers in connection with legal proceedings, subject to very limited exceptions.

We maintain a general liability insurance policy that covers certain liabilities of our directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers. In addition, we have

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entered into indemnification agreements with our directors and executive officers. These indemnification agreements require us, among other things, to indemnify each such director and executive officer for some expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by him in any action or proceeding arising out of his service as one of our directors or executive officers.

Certain of our non-employee directors may, through their relationships with their employers, be insured and/or indemnified against certain liabilities incurred in their capacity as members of our board of directors.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, may be permitted to directors, executive officers or persons controlling us, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Executive and Director Compensation Processes

The compensation committee generally meets at least four 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 or the head of human resources. 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 or her compensation. The charter of the compensation committee grants the compensation committee full access to all of our books, records, facilities and personnel, as well as authority to obtain, at our expense, 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 fiscal year ended December 31, 2019, the compensation committee directly engaged Radford, a compensation consultant that is affiliated with AON, to advise the compensation committee on our compensation program, which includes base salaries, annual performance-based cash incentives and equity incentive awards. Radford did not determine or make recommendations to the compensation committee regarding the specific amount or form of compensation of our executive officers or directors for fiscal year ended December 31, 2019.

Historically, the compensation committee has made (or has recommended that the independent members of the board of directors make) 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 and the first quarter of the following 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 our compensation strategy, potential modifications to that strategy and new trends, plans or approaches to compensation, at various meetings throughout the year. The compensation committee is responsible for making determinations regarding compensation of our executive officers other than our chief executive officer, making changes to pre-approved salary ranges, salary increases, equity awards, incentive payments and pre-approved equity ranges for new hires and high performers, the initiation of offerings under our 2013 employee stock purchase plan and making material changes to benefits offered to our employees. In addition, the compensation committee makes recommendations to our board of directors regarding the compensation of directors and the chief executive officer, and the determination of the size of annual "evergreen" increases to the number of shares reserved under our 2013 stock incentive plan and 2013 employee stock purchase plan.

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Under its charter, the compensation committee may form, and delegate authority to, subcommittees, consisting of independent directors, as it deems appropriate. During fiscal year 2019, the compensation committee did not form or delegate authority to such subcommittees. During fiscal year 2019, the compensation committee delegated to the chief executive officer, or if the chief executive officer was unavailable, the chief financial officer, decision-making authority related to initial salary levels and salary adjustments, incentive payments and option grants for all non-executive officers, and non-material changes to employee benefits. Such delegated decision-making is governed by guidelines established by the compensation committee.

Report of the Audit Committee of the Board of Directors

The audit committee oversees the Company's financial reporting process on behalf of the board of directors. We have reviewed the Company's audited consolidated financial statements for the fiscal year ended December 31, 2019 and discussed them with Company management and PricewaterhouseCoopers LLP, the Company's independent registered public accounting firm.

We have received from, and discussed with, PricewaterhouseCoopers LLP, which is responsible for expressing an opinion on the conformity of the Company's audited consolidated financial statements with accounting principles generally accepted in the United States, its judgments as to the quality, not just the acceptability, of the Company's accounting principles and such other matters as are required to be discussed by the applicable requirements of the SEC and the Public Company Accounting Oversight Board (the "PCAOB"). In addition, we have received from PricewaterhouseCoopers LLP the written disclosures and the letter required by applicable requirements of the PCAOB regarding its communications with us concerning independence, have considered the compatibility of non-audit services with the auditors' independence and have discussed with PricewaterhouseCoopers LLP its independence from management and the Company.

Based on the review and discussions referred to above, we recommended to the board of directors that the audited consolidated financial statements be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2019.

This report of the audit committee is not "soliciting material," shall not be deemed "filed" with the SEC and shall not be incorporated by reference by any general statement incorporating by reference this Proxy Statement into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing, except to the extent that we specifically incorporate this information by reference, and shall not otherwise be deemed filed under such acts.

The foregoing report has been furnished by the audit committee.

Respectfully submitted,

The Audit Committee of the Board of Directors

Paul J. Clancy (chair)
Maykin Ho
John M. Maraganore

EXECUTIVE OFFICERS

The following table sets forth information regarding our executive officers as of April 10, 2020:

| Name | Age | Position(s) |
|---------------------------|------------|---|
| Jacquelyn A. Fouse, Ph.D. | 58 | Chief Executive Officer |
| Jonathan Biller | 56 | Chief Legal Officer |
| Chris Bowden, M.D. | 59 | Chief Medical Officer |
| Bruce Car, Ph.D. | 58 | Chief Scientific Officer |
| Andrew Hirsch | 49 | Chief Financial Officer and Head of Corporate Development |

The biography of Dr. Fouse can be found under “Members of the Board of Directors Continuing in Office.”

Jonathan Biller joined Agios as chief legal officer in December 2019. He has more than 30 years of legal, tax and treasury experience. Prior to joining Agios, Mr. Biller held leadership roles at Celgene, leading Celgene’s global legal function as executive vice president and general counsel from July 2018 to November 2019, and serving as senior vice president, tax and treasury from 2011 to June 2018, in which role he was responsible for the company’s global tax and treasury functions including its capital allocation strategy and tax policy. Prior to Celgene, Mr. Biller was general counsel, chief tax officer and secretary for Bunge. Prior to Bunge, Mr. Biller held roles of increasing responsibility at Alcon, Inc., during which time it was a publicly traded company. Mr. Biller began his career at law firm Hopkins & Sutter rising to the level of partner and was also partner at Foley & Lardner LLP after the firms merged. Mr. Biller also serves on the Board of Junior Achievement New Jersey. He holds a B.A. from Brown University and a J.D. from Yale Law School.

Chris Bowden, M.D. joined Agios as chief medical officer in May 2014. He has more than 20 years of experience in clinical drug development, including the approval of several cancer medicines. Prior to joining Agios, Dr. Bowden was vice president product development oncology, franchise lead (Signaling Group) at Genentech. During Dr. Bowden’s eight years at Genentech, he was responsible for the successful development of a number of novel targeted oncology medicines, including Zelboraf® for patients with BRAF V600E positive melanoma and Tarceva® for patients with EGFR activating mutation positive, non-small cell lung cancer. From 2003 to 2006, Dr. Bowden was the executive director for EMEA (Europe, Middle East, Africa) regions for BMS. In this role, he led medical affairs strategies for cancer, immunology and pain medicines. Earlier, Dr. Bowden held positions of increasing responsibility in oncology clinical development, Phases I-III at Pharmacia Corporation and Janssen Pharmaceutical, Inc., each of which is a pharmaceutical company. Prior to his industry experience, Dr. Bowden was on the oncology faculty at the University of Virginia Health Science Center where he participated in numerous industry and cooperative group trials. Dr. Bowden received his M.D. from Hahnemann University School of Medicine followed by internal medicine training at Roger Williams Medical Center and the Providence VA Medical Center, Rhode Island. He completed his medical oncology fellowship at the National Cancer Institute Medicine Branch. Dr. Bowden is board certified in internal medicine and medical oncology.

Bruce Car, Ph.D. joined Agios as chief scientific officer in January 2020. Prior to joining Agios, Dr. Car was at Bristol-Myers Squibb Company, or BMS, a global biopharmaceutical company, and its predecessor companies, since 2005, serving most recently as the interim head, BMS drug discovery. While at BMS, Dr. Car helped bring more than 200 drug candidates to clinical trials and 13 marketed drugs, including ELIQUIS®, OPDIVO® and FARXIGA®, to patients, holding roles of increasing responsibility in drug discovery, covering all therapeutic areas, drug platforms and stages of discovery. Dr. Car also led the BMS research and development campus in Bangalore, India, for six years across all aspects of discovery and later established a translational medicine function at that site. In 2017, he became the first head of the BMS translational medicine group, where he successfully built a cohesive function of over 300 scientists and specialists covering biomarkers through

pharmaco-diagnostics. Among his responsibilities in translational medicine, Dr. Car led the research and development computational biology and machine learning capabilities and pharmaco-diagnostic technology platforms. Dr. Car received veterinary medicine and Masters in pathology degrees from The University of Melbourne, Victoria, Australia, and his Ph.D. from Cornell University, where he is currently an adjunct professor. Dr. Car undertook his postdoctoral studies in immunology and inflammation at the Theodor Kocher Institute, University of Berne and ETH/University of Zurich.

Andrew Hirsch joined Agios as chief financial officer in September 2016, and was named head of corporate development in March 2018. He has more than 20 years of experience in a range of strategic and operating roles in the biotech sector, most recently having served as president and chief executive officer of BIND Therapeutics, Inc., a biotechnology company, from March 2015 until August 2016. Prior to being named president and chief executive officer at BIND, Mr. Hirsch held several other leadership positions at the company, including chief operating officer from February 2014 to March 2015, and chief financial officer from July 2012 to March 2015. Prior to joining BIND, Mr. Hirsch was chief financial officer at Avila Therapeutics, Inc., a biotechnology company, from June 2011 until its acquisition by Celgene Corporation in March 2012. From 2002 to 2011, Mr. Hirsch held roles of increasing responsibility at Biogen Idec, including vice president of Corporate Strategy and M&A and program executive for the Tecfidera development team. He holds an M.B.A. from the Tuck School at Dartmouth College and a B.A. in Economics from the University of Pennsylvania.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Our compensation committee is responsible for reviewing and approving, or recommending for approval by the board of directors, the compensation of our named executive officers, or NEOs, including salary, cash and equity incentive compensation levels, severance arrangements, change in control benefits and other forms of executive compensation. This committee is also responsible for evaluating our company's performance against its goals and making related recommendations to our board of directors, assessing the performance of our NEOs, and ensuring our compensation program is aligned with the objectives described below and competitive with those of other companies in our industry that compete with us for talent. This section discusses the principles underlying our compensation committee's policies and decisions with respect to the compensation of our NEOs.

Our NEOs for 2019 were as follows:

- Jacquelyn A. Fouse, Ph.D., our chief executive officer effective February 1, 2019;
- David P. Schenkein, M.D., our former president and chief executive officer until February 1, 2019;
- Andrew Hirsch, our chief financial officer and head of corporate development;
- Jonathan Biller, our chief legal officer effective December 3, 2019;
- Scott Biller, Ph.D., our chief scientific officer until his retirement effective December 31, 2019; and
- Christopher Bowden, M.D., our chief medical officer.

Say-on-Pay Vote Results

At our 2019 annual meeting of stockholders, we conducted a non-binding advisory vote on the compensation of our NEOs, commonly referred to as a "say-on-pay" vote, in accordance with the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010. Over 97% of the votes cast by stockholders on this proposal, excluding broker non-votes, were cast in support of the compensation paid to our NEOs. While this vote is a non-binding advisory vote, our compensation committee and board of directors take the voting results into account in determining the compensation of our NEOs. Given the strong level of support evidenced by last year's say-on-pay vote, among other factors, our compensation committee decided to maintain our general approach to executive compensation and made no significant changes to our executive compensation program this year.

Our compensation committee and board of directors will continue to consider stockholder input and monitor our executive compensation program to ensure it aligns the interests of our executive officers with the interests of our stockholders and adequately addresses any stockholder concerns that may be expressed in future votes. Consistent with the recommendation of our board of directors and the preference of our stockholders as reflected in the non-binding advisory vote on the frequency of future "say-on-pay" votes conducted at our 2016 annual meeting of stockholders, our stockholders will have an opportunity annually to cast an advisory vote in connection with compensation for our NEOs.

Executive Summary

Agios made great strides in 2019, achieving significant corporate milestones across our portfolio. We began the year by successfully executing on our previously-disclosed chief executive officer succession plan. Dr. Fouse joined the company as chief executive officer on February 1, 2019, with Dr. Schenkein transitioning to the role of executive chair. Dr. Schenkein served as our chief executive officer since 2009, and during his tenure oversaw the evolution of Agios from a pure research organization to a fully integrated biopharmaceutical company with two approved medicines from its discovery engine, multiple additional molecules in clinical development and a robust research pipeline. As our chief executive officer, Dr. Fouse brings to the company extensive global leadership experience, a proven track record and tremendous knowledge of the biotechnology industry. Throughout her career Dr. Fouse has demonstrated the ability to effectively plan for and successfully execute on clinical and commercialization strategies, which will be essential as the company works to further its transition to a sustainable multi-product company. In addition, we appointed a new chief scientific officer, Dr. Bruce Car, who replaced Dr. Scott Biller upon his retirement at the end of the year, and recruited a chief legal officer, Jonathan Biller.

The company continued to advance development of our oncology programs in both hematologic malignancies and solid tumors. We secured approval from the U.S. Food and Drug Administration, or FDA, of our supplemental new drug application, or sNDA, of TIBSOVO® in adult patients with newly diagnosed acute myeloid leukemia, or AML, with an IDH1 mutation who are ineligible for intensive chemotherapy, announced positive data from our phase 3 ClarIDHy trial of TIBSOVO® in previously treated patients with IDH1 mutant cholangiocarcinoma, and initiated our phase 3 INDIGO trial of vorasidenib in patients with grade 2 non-enhancing glioma with an IDH mutation. In addition, we received two Breakthrough Therapy designations for TIBSOVO®: one in combination with azacitidine for the treatment of newly diagnosed AML patients with an IDH1 mutation who are ineligible for intensive induction chemotherapy, and another for the treatment of relapsed or refractory myelodysplastic syndrome patients with an IDH1 mutation. We completed the single-agent dose escalation portion of our phase 1 trial of AG-270 in multiple tumor types carrying a methylthioadenosine phosphorylase, or MTAP, deletion and initiated the second phase of the trial evaluating AG-270 in combination with taxanes in MTAP-deleted non-small cell lung cancer and MTAP-deleted pancreatic ductal adenocarcinoma, while also initiating a phase 1 trial of AG-636, our dihydroorotate dehydrogenase, or DHODH, inhibitor in patients with advanced lymphoma.

On the rare genetic disease front, we continued to advance our first late-stage product candidate, the pyruvate kinase-R activator mitapivat, across three opportunities in pyruvate kinase, or PK, deficiency, thalassemia and sickle cell disease. We established clinical proof-of-concept for mitapivat in non-transfusion-dependent thalassemia based on preliminary phase 2 results, and advanced pivotal trials evaluating mitapivat as a treatment for patients with PK deficiency, completing enrollment in our phase 3 ACTIVATE-T trial and nearly completing enrollment of our phase 3 ACTIVATE trial. In addition, we actively collaborated with the National Institutes of Health under a cooperative research and development agreement to evaluate mitapivat as a treatment for patients with sickle cell disease.

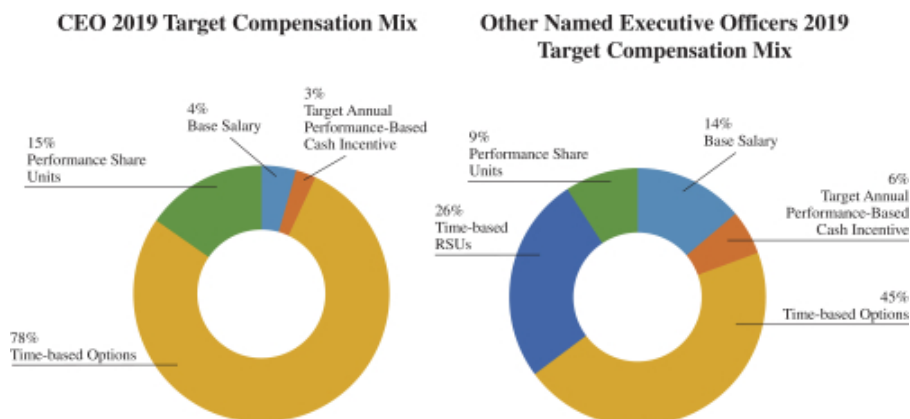
Finally, we also advanced our research pipeline, continued to drive enrollment in our other ongoing clinical trials, continued to build out our EU infrastructure and hire leadership for our European organization, and completed an underwritten public offering of our common stock, resulting in net proceeds to us of approximately \$277.2 million, significantly strengthening our balance sheet.

Based upon an evaluation of our performance against each of our goals for 2019 and the weighting assigned to each, the board determined, upon recommendation from the compensation committee, that we achieved an overall result of 90% for the year.

To foster the future success of the company, we reward our executives in a manner that reinforces our pay-for-performance philosophy and culture. Our compensation committee is committed to ensuring that a

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substantial portion of executive compensation is “at-risk” and variable. As such, on average, 96% of Dr. Fouse’s total direct compensation for 2019 and, on average, 86% of our other NEOs’ (excluding Dr. Schenkein) total direct compensation for 2019 is variable and directly affected by both the company’s and each NEO’s performance. While we do not have a formal or informal policy for allocating between long-term and short-term compensation, between cash and non-cash compensation or among different forms of non-cash compensation, we generally strive to provide our NEOs with a balance of short-term and long-term incentives to encourage consistently strong performance.



We have developed and periodically reassess our executive compensation program to align with current governance and best practices while ensuring our ability to achieve our stated objectives and philosophy and support our ambitious business goals:

What We Do

- ✓ Maintain an industry-specific peer group for benchmarking pay
- ✓ Target pay based on market norms
- ✓ Deliver executive compensation primarily through performance-based pay
- ✓ Set challenging short- and long-term incentive award goals
- ✓ Cap annual performance-based cash incentive program payouts at 150% of the target payout level
- ✓ Maintain a clawback policy for equity and incentive compensation
- ✓ Require minimum levels of stock ownership by executives
- ✓ Offer market-competitive benefits for executives that are consistent with the rest of our employees
- ✓ Consult with an independent advisor on compensation levels and practices

What We Don't Do

- × Allow hedging or pledging of equity
- × Re-price stock options
- × Offer perquisites or personal benefits beyond limited perquisites for new hires
- × Provide supplemental executive retirement plans

Compensation Objectives and Philosophy

Our mission is to transform the lives of patients with hematologic malignancies, solid tumors and rare genetic diseases by applying our scientific leadership in the field of cellular metabolism. Our compensation

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committee believes that the most effective compensation program is one that rewards sustainable value creation for stockholders, by delivering strong company performance, as well as tangible progress toward achieving our mission to improve the lives of patients. The objectives of our compensation program are to:

- attract and retain superior executive officers and other employees with outstanding skills and values who contribute to our long-term success;
- provide incentives that motivate and reward the achievement of performance goals that directly correlate to the enhancement of stockholder value, as well as to facilitate executive retention; and
- align executives' interests with those of stockholders by rewarding the achievement of short- and long-term strategic and financial goals, which we believe serves to enhance short- and long-term value creation for our stockholders.

To achieve its objectives, our compensation committee evaluates our executive compensation program with the goal of setting total compensation at levels that align with our culture, total rewards strategy, size and life stage. Specifically, our compensation committee targets base salaries at the 50th percentile of our peer group, as discussed below, and seeks to ensure that such salaries reflect each executive's level of experience, performance and responsibility and that such levels are competitive with those of other companies in our industry that compete with us for executive talent. Our compensation program also provides annual performance-based compensation with targets established at the 50th percentile of our peer group and based on performance against objectives including, among other things, achieving scientific, business, organizational and operational goals such as regulatory submissions and approvals; progress in our clinical trials and research programs; achieving key research and development milestones; maintaining the strong financial health of the company, including implementation of appropriate financing strategies; maintaining key strategic relationships; adding to and developing internal competencies, including retention of high-performing employees; and achieving desired financial metrics. In addition, we provide a significant portion of our executive compensation in the form of stock options, and restricted stock units, or RSUs, that vest over time, and performance share units, or PSUs, that vest upon the achievement of specified corporate or stock price milestones. We believe our long-term incentive awards facilitates retention and aligns the interests of our NEOs with those of our stockholders by allowing them to participate in the longer-term success of our company as reflected in the appreciation of our stock price. Our compensation committee considers a number of factors when comparing to our peers in determining equity incentive compensation for our NEOs, including annual long-term incentive values, annual equity awards expressed as a percentage of total shares outstanding, total annual and cumulative dilution, the retentive value of outstanding awards and total equity ownership. Given the dynamic biopharmaceutical market, the compensation committee does not overemphasize any one perspective. Rather, the committee takes a holistic view, further considering the achievement of company goals and how that impacts total stockholder return, as well as market data at the 25th, 50th and 75th percentile of our peer group, when determining actual award levels for the NEOs. We believe that targeting overall compensation in this manner is necessary and appropriate in order to attract and retain the quality of talent we need to successfully grow our business, achieve our challenging goals, sustain strong performance, and differentiate ourselves from those companies against which we compete for talent. However, any given individual employee's compensation may vary from the targeted pay framework, based on the unique responsibilities and requirements of his or her position, his or her experience and other qualifications, internal parity relative to similar positions within the company, and individual or company performance relative to performance goals and the peer group to ensure appropriate pay-for-performance alignment.

Overview of Executive Compensation Process

As a part of determining NEO performance and compensation, our compensation committee receives recommendations from our chief executive officer (except with respect to his or her own performance and compensation). Our chief executive officer's performance and compensation is approved by our board of

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directors based upon the recommendation of our compensation committee. The evaluation of each of our named executives is based on our overall corporate performance against annual goals that are approved by the board of directors at the beginning of each year, as discussed in more detail below.

The compensation committee has the sole authority to retain, at our expense, one or more third-party compensation consultants to assist the compensation committee in performing its responsibilities. The compensation committee may terminate the services of the consultant if the compensation committee deems it appropriate. In 2019, the compensation committee utilized the services of Radford, which is part of the Rewards Solutions practice at Aon plc, to assist it in fulfilling its responsibilities. Radford was retained exclusively by the compensation committee and has not been retained by management to perform any work for the company other than projects performed at the direction of the compensation committee. Radford provides analysis and recommendations regarding:

- trends and emerging topics with respect to executive compensation;
- peer group selection for executive compensation benchmarking;
- compensation practices of our peer group, including executive severance arrangements;
- compensation philosophy and programs, including risk assessment, for executives and non-executives;
- stock utilization and other metrics; and
- board of directors' compensation.

In addition, we subscribe to Radford's various global annual and specialized life sciences and general industry surveys on an ongoing basis. Radford advised the compensation committee on all of the principal aspects of executive compensation, including executive new hire compensation arrangements. Radford consultants attend meetings of the compensation committee, including executive sessions in which executive compensation issues are discussed, when requested to do so. Radford reports to the compensation committee and not to management, although it meets with management for purposes of gathering information for its analyses and recommendations. The compensation committee annually evaluates its engagement of compensation consultants, and selected Radford to advise with respect to compensation matters based on Radford's industry experience and reputation, which our compensation committee concluded gave Radford useful context and knowledge to advise it. The compensation committee has assessed the independence of Radford pursuant to Securities and Exchange Commission and Nasdaq rules and concluded that no conflict of interest exists that would prevent Radford from independently representing the compensation committee.

Annual base salaries for the current year, and annual performance-based cash incentives and equity incentive awards for the prior year are generally determined in the first quarter of the year based on company and individual performance of the prior year, as well as other factors, including compensation trends in the biopharmaceutical industry and among our benchmark peers. In February 2019, the compensation committee approved 2019 base salaries, 2018 performance-based cash incentive awards and annual stock option and RSU awards for Dr. S. Biller, Dr. Bowden and Mr. Hirsch, our continuing NEOs at that time. With respect to our other NEOs:

- for Dr. Fouse, in August 2018 our board approved, on the recommendation of our compensation committee, her 2019 base salary, 2019 target performance-based cash incentive award level and initial equity awards in connection with her appointment as our chief executive officer as of February 1, 2019;

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- for Dr. Schenkein, in August 2018 our board approved, on the recommendation of our compensation committee, his 2019 base salary and initial equity awards in connection with his appointment as our executive chairman as of February 1, 2019, while Dr. Schenkein's 2018 performance-based cash incentive award was approved by our board, upon the recommendation of our compensation committee in February 2019; and
- for Mr. J. Biller, in April 2019 our compensation committee approved his 2019 base salary, 2020 target performance-based cash incentive level and his initial equity awards in connection with the start of his employment in December 2019.

In April 2019, our compensation committee, or our board of directors, as applicable, approved the grant of PSU awards to our NEOs, other than Dr. Schenkein and Mr. J. Biller, and the grant of an RSU award to Mr. Hirsch, in order to increase retention and further align their interests with achievement of select near-term corporate milestones.

In February 2020, the compensation committee approved 2020 base salaries, 2019 performance-based cash incentive awards and annual stock option and RSU awards for Dr. Bowden and Mr. Hirsch. With respect to our other NEOs:

- for Dr. Fouse, in February 2020 the compensation committee reviewed her performance and presented to the board its recommendations for her 2020 base salary, 2019 performance-based cash incentive award and annual stock option and RSU awards for approval; these recommendations were considered and approved by the board;
- for Dr. Schenkein, in February 2020 the compensation committee reviewed his performance and presented to the board its recommendation for his 2019 performance-based cash incentive award for the one-month that he served as chief executive officer during 2019, which recommendation was considered and approved by the board. Following his transition to chairman effective February 1, 2020, Dr. Schenkein was compensated pursuant to the terms of our non-employee director compensation policy and did not receive any further salary or annual equity awards in 2020 related to his service as executive chairman;
- Mr. J. Biller, who joined the company as chief legal officer effective December 3, 2019, did not receive a 2019 annual performance-based cash incentive award or annual equity award in 2020; and
- for Dr. S. Biller, in February 2020 the compensation committee approved his 2019 performance-based cash incentive award. Dr. S. Biller transitioned from chief scientific officer to strategic advisor effective December 31, 2019 and did not receive annual stock option or RSU awards in 2020.

The terms of the arrangements with Mr. J. Biller, Dr. S. Biller and Dr. Schenkein are described in more detail below under “Employment, Severance and Change in Control Arrangements—*Employment Offer Letters*” and “Employment, Severance and Change in Control Arrangements—*Other Agreements*.”

Use of Comparator Peer Group

The compensation committee benchmarks our executive compensation against a peer group of companies to determine competitiveness and market trends. The compensation committee reviews the companies in our peer group annually, reviews Radford's recommendations regarding which companies should be included in the peer

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group and makes adjustments as necessary to ensure the peer group continues to properly reflect the market in which we compete for talented executives. The compensation committee also annually reviews the executive pay practices of other similarly-situated companies as reported by Radford through industry surveys and proxy analysis. These surveys are specific to the biopharmaceutical and biotechnology sectors. We request customized reports of these surveys so that the compensation data reflect the practices of companies that are similar to us. The compensation committee considers this information when making determinations for each element of compensation.

In developing the peer group of companies to inform 2019 compensation decisions, our compensation committee, with the assistance of Radford, established a peer group of 16 publicly-traded, national and regional companies in the biopharmaceutical industry based on a balance of the following criteria:

- companies with a market capitalization of between \$1.5 billion and \$14.5 billion, with approximately 175 to 1,500 employees, and with a maturity of product development pipeline and area of therapeutic focus are similar to ours;
- companies against which we believe we compete for executive talent; and
- public companies based in the United States whose compensation and financial data are available in proxy statements or other public documents.

Based on these criteria, our peer group for 2019 was comprised of the following companies:

| | | |
|---------------------------------|-------------------------------|--------------------------------|
| Alnylam Pharmaceuticals, Inc. | Ionis Pharmaceuticals Inc. | Seattle Genetics, Inc. |
| Array BioPharma Inc. | Neurocrine Biosciences, Inc. | Spark Therapeutics, Inc. |
| bluebird bio, Inc. | Portola Pharmaceuticals, Inc. | TESARO, Inc. |
| Clovis Oncology, Inc. | Puma Biotechnology Inc. | Ultragenyx Pharmaceutical Inc. |
| Exelixis, Inc. | Sage Therapeutics, Inc. | |
| Intercept Pharmaceuticals, Inc. | Sarepta Therapeutics, Inc. | |

The compensation committee believes the compensation practices of our peer group provide us with appropriate compensation benchmarks for evaluating the compensation of our NEOs. Notwithstanding the similarities of the peer group to our company, due to the nature of our business, we compete for executive talent with many companies that are larger and more established than we are or that possess greater resources than we do, as well as with prestigious academic and non-profit institutions. Other considerations, including market factors, the experience level of the executive and the executive's performance against established corporate goals and individual objectives, may require that our compensation committee vary from its historic compensation practices or deviate from its general compensation philosophy under certain circumstances.

For the purposes of informing 2020 compensation decisions, the compensation committee, with the advice of Radford, examined the peer group list and, with reference to market capitalization, therapeutic area, stage of development, number of employees and other key business metrics, approved the following 2020 peer group:

| | | |
|-------------------------------|-----------------|-------------------------------|
| ACADIA Pharmaceuticals Inc.* | Exelixis, Inc. | Portola Pharmaceuticals, Inc. |
| Alnylam Pharmaceuticals, Inc. | FibroGen, Inc.* | Sage Therapeutics, Inc. |

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| | | |
|----------------------------------|---------------------------------|--------------------------------|
| Amicus Therapeutics, Inc.* | Intercept Pharmaceuticals, Inc. | Sarepta Therapeutics, Inc. |
| bluebird bio, Inc. | Nektar Therapeutics* | Ultragenyx Pharmaceutical Inc. |
| Blueprint Medicines Corporation* | Neurocrine Biosciences, Inc. | |

*addition to 2020 peer group

The 2020 peer group represents a group of biopharmaceutical companies more similar to us in key measures than the list we used in 2019, in light of our substantial growth and the advancement of our development pipeline, focusing on companies with approximately 200 to 1,700 employees, a market capitalization between \$900 million and \$10.5 billion, and an early commercial-stage portfolio with a focus on orphan diseases. Specifically, Array BioPharma, Inc., Spark Therapeutics, Inc. and TESARO, Inc. were removed from the 2020 peer group because they were acquired (or scheduled to be acquired) by other companies, and Clovis Oncology, Inc., Ionis Pharmaceuticals Inc., Puma Biotechnology, Inc. and Seattle Genetics, Inc. were removed from the 2020 peer group because their market capitalization had fallen outside of our targeted range. ACADIA Pharmaceuticals Inc., Amicus Therapeutics, Inc., Blueprint Medicines Corporation, FibroGen, Inc. and Nektar Therapeutics were added to the 2020 peer group.

Executive Compensation Elements

The primary elements of our executive compensation program are:

- base salary;
- annual performance-based cash incentives;
- equity incentive awards;
- severance and change in control benefits;
- broad-based health and welfare benefits; and
- broad-based 401(k) plan.

Our compensation committee uses its judgment to allocate long-term and short-term compensation for our NEOs, in alignment with our pay-for-performance philosophy and the long-term interests of stockholders. After reviewing information provided by our compensation consultant and other relevant data, our compensation committee exercises its judgment to determine what it believes to be the appropriate level and mix of the various compensation components. We generally strive to provide our NEOs with a balance of short-term and long-term incentives to encourage consistently strong performance. Ultimately, the objective in allocating between long-term and currently paid compensation is to ensure adequate base compensation to attract and retain talent, while providing incentives to maximize long-term value for our company and our stockholders. Therefore, we provide cash compensation in the form of base salary to meet competitive salary norms and reward performance on an annual basis and in the form of incentive compensation to incentivize and reward performance based on specific annual goals. To further focus our executives on longer-term performance, we rely upon equity-based awards that vest over a meaningful period of time or upon the achievement of significant corporate milestones, thereby reinforcing stockholder value creation. In addition, we provide our executives with benefits that are available to all employees, including medical, vision and dental insurance; life and disability insurance; medical and

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dependent care flexible spending accounts; a 401(k) plan; and an opportunity to invest in our company pursuant to our employee stock purchase plan. Finally, we offer our executives severance benefits to incentivize them to continue to strive to achieve stockholder value in connection with change in control situations.

Base Salaries

Base salaries are used to recognize the experience, skills, knowledge and responsibilities required of our NEOs. Base salaries for our NEOs typically are established through arm's length negotiation at the time the NEO is hired, taking into account the position for which the NEO is being considered and the NEO's qualifications, prior experience and salary expectations. None of our NEOs is currently party to an employment agreement that provides for automatic or scheduled increases in base salary and we do not provide formulaic base salary increases to our NEOs. However, on an annual basis, our compensation committee reviews and evaluates, with input from our chief executive officer (other than with respect to herself), the need for adjustment of the base salaries of our NEOs based on changes and expected changes in the scope of a NEO's responsibilities, including promotions, the individual contributions made by and performance of the NEO during the prior year, the NEO's performance over a period of years, overall labor market conditions, the relative ease or difficulty of replacing the executive with a well-qualified person, our overall growth and development as a company and general salary trends in our industry and among our peer group and where the NEO's salary falls in the salary range presented by that data. In making decisions regarding salary increases, we may also draw upon the experience of members of our board of directors with other companies.

Based on a review of market data provided by Radford, the current compensation levels of our NEOs and company performance and individual contributions, in February 2019, our compensation committee approved 2019 salary increases for our NEOs, other than Dr. Fouse, Dr. Schenkein and Mr. J. Biller. Dr. Fouse, our chief executive officer, and Mr. J. Biller, our chief legal officer, assumed their roles in February 1, 2019 and December 3, 2019, respectively, and Dr. Schenkein transitioned from the role of president and chief executive officer to executive chairman effective February 1, 2019. With respect to Dr. Fouse and Dr. Schenkein, their 2019 base salaries were approved by our board of directors, upon the recommendation of our compensation committee, in August 2018. With respect to Mr. J. Biller, his 2019 base salary was approved by our compensation committee in April 2019. The 2018 and 2019 base salaries of each of our NEOs were:

| | 2018 | 2019 | % Change |
|------------------------------|-------------------------|-------------------------|-----------------|
| | Base Salary (\$) | Base Salary (\$) | |
| Jacquelyn A. Fouse, Ph.D.(1) | — | 725,000 | N/A |
| David P. Schenkein, M.D.(2) | 625,000 | 175,000 | -72.0% |
| Andrew Hirsch | 471,329 | 500,476 | 6.2%(4) |
| Jonathan Biller(3) | — | 500,000 | N/A |
| Scott Biller, Ph.D. | 446,573 | 480,041 | 7.5%(4) |
| Christopher Bowden, M.D. | 467,141 | 490,539 | 5.0%(4) |

- (1) Dr. Fouse was appointed chief executive officer effective February 1, 2019.
- (2) Dr. Schenkein transitioned from the role of president and chief executive officer to executive chairman, with an adjusted base salary of \$175,000, effective February 1, 2019. Dr. Schenkein was compensated for his service as our chief executive officer in January 2019 at his 2018 chief executive officer salary of \$625,000, pro-rated for the period he served in that role.
- (3) Mr. J. Biller was appointed chief legal officer effective December 3, 2019.
- (4) Increase reflects merit and market-based adjustments.

Annual Performance-based Cash Incentives

We have designed our annual performance-based cash incentive program, which is guided by specified annual corporate and individual goals and contributions, to emphasize pay-for-performance and to reward our NEOs for our performance during the preceding year. The target pay opportunity of the annual cash incentive for the chief executive officer is determined by our board of directors, based upon the recommendation of our compensation committee, and the amount of the annual cash incentive for all other NEOs is determined by our compensation committee. In making such determinations and recommendations, the compensation committee examined the totality of anticipated and unanticipated achievements by us and each NEO in the preceding year, including our performance against specific research, clinical, operational and financial company goals. In recent years, these annual company goals have primarily focused on the advancement of our lead programs.

Our compensation committee determined to formally cap annual cash incentive program payouts in any given year at 150% of the target payout level. Under our annual incentive program, cash incentive awards are determined by first establishing a cash incentive pool, which is then allocated among all eligible plan participants and adjusted based upon recommendations by our compensation committee and upon approval by our board of directors driven by performance as measured against the company's annual goals. Below is the list of the company's 2019 goals and relative weighting assigned to each goal, as considered by our compensation committee and board of directors in their respective assessment of company performance in 2019:

- Maximize long-term value and impact of IDH inhibitors: *relative weighting: 30%*
- Drive PKR development across indications and build leadership in PK deficiency: *relative weighting: 25%*
- Drive towards clinical proof-of-concept for early clinical programs (MAT2A, DHODH): *relative weighting: 20%*
- Advance discovery pipeline in our three focus areas through our own efforts and with external partners: *relative weighting: 15%*
- Build EU infrastructure necessary for first potential product launch: *relative weighting 10%*

In addition to these goals, our compensation committee and board of directors evaluated the company's performance with respect to maintaining financial strength and developing our organization and culture in order to ensure execution of our long-term vision, applying a discretionary modifier of 80% to 120% to the company's weighted goal achievement in order to arrive at our overall company performance score for the year.

In December 2019, our chief executive officer recommended to our compensation committee that our company's performance against 2019 goals be assessed based on the following achievements in 2019:

- Secured FDA approval of an sNDA for TIBSOVO® in adult patients with newly diagnosed AML with a susceptible IDH1 mutation as detected by an FDA-approved test who are at least 75 years old or who have comorbidities that preclude use of intensive induction chemotherapy, and successfully commercialized TIBSOVO® in this indication following approval;
- Initiated the phase 3 INDIGO trial of vorasidenib in patients with grade 2 non-enhancing glioma with an IDH mutation;
- Completed enrollment in the phase 3 ACTIVATE-T trial of mitapivat in regularly transfused adults with PK deficiency;

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- Established clinical proof-of-concept based on a preliminary analysis of the Phase 2 trial of mitapivat in patients with non-transfusion-dependent thalassemia;
- Completed the single-agent dose escalation portion of the phase 1 trial of AG-270 in multiple tumor types carrying an MTAP deletion and initiated the second phase of the trial evaluating AG-270 in combination with taxanes in MTAP-deleted non-small cell lung cancer and MTAP-deleted pancreatic ductal adenocarcinoma;
- Initiated a phase 1 dose escalation trial of AG-636 in patients with advanced lymphoma;
- Made key hires to our EU team in advance of a European Medicines Agency CHMP opinion for TIBSOVO® in relapsed or refractory AML with an IDH1 mutation;
- Continued to advance our research pipeline across our three areas of focus while advancing our late-stage preclinical programs;
- Completed an underwritten public offering of 9,487,500 shares of common stock, resulting in net proceeds to us of approximately \$277.2 million, and ended 2019 with cash, cash equivalents and marketable securities of approximately \$717.8 million, sufficient to meet our estimated operating expense and capital expenditure requirements through at least the end of 2021; and
- Continued to evolve our organization and expand internal capabilities consistent with our core values and culture, including hiring a new chief legal officer and chief scientific officer, while successfully executing on our CEO transition.

Based on the company's achievement against our 2019 goals, the overall company performance score for 2019 was determined to be 90% by our board of directors upon the recommendation of the compensation committee.

| 2019 Corporate Goals | Weighting | Assessment (out of 100%) | Weighted Performance |
|---|------------------|---|---------------------------------|
| <i>Maximize long-term value and impact of IDH inhibitors</i> | 30% | 95% | 28% |
| <i>Drive PKR development across indications and build leadership in PKD</i> | 25% | 110% | 28% |
| <i>Drive towards clinical proof-of-concept for early clinical programs</i> | 20% | 75% | 15% |
| <i>Advance discovery pipeline in our three focus areas through our own efforts and with external partners</i> | 15% | 50% | 8% |
| <i>Build EU infrastructure necessary for first potential product launch</i> | 10% | 110% | 11% |
| Total | 100% | | 90% |
| <i>Maintain financial strength and develop organization and culture to ensure execution of company's long-term vision (80%-120% multiplier)</i> | | 100% | 100% |
| Adjusted Company Performance Score = Total Weighted Performance X Multiplier | | | 90% |

Our compensation committee also evaluates the individual performance of our NEOs, with the input of our chief executive officer in the case of the evaluation of our other NEOs and makes recommendations to our board of directors with regard to the evaluation of our chief executive officer's individual performance. Consistent with this process, our compensation committee assessed the performance of Dr. Fouse and Dr. Schenkein in 2019 based on our relative achievement of our corporate goals as well as their respective leadership in driving the execution of our strategic plans. In assessing the individual performance of our NEOs

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other than our chief executive officer, our compensation committee, with the input of our chief executive officer, considered each such officer's individual contributions to the completion of our goals, and the officer's individual achievements in helping to build the company and execute on our strategy. These achievements include the following:

- In 2019, Mr. Hirsch led our finance, accounting and business development functions, executing a successful follow-on public offering in November and managing alliance relationships with Celgene Corporation (prior to and following its acquisition by Bristol-Myers Squibb Company) and CStone Pharmaceuticals. He also made significant progress in developing our finance, corporate development, information technology and investor relations functions.
- In 2019, Dr. S. Biller led our research and discovery science function, advancing the preclinical development of AG-946, which enabled an IND submission and clearance by the FDA in the first quarter of 2020; and advancing development activities for our next wave of preclinical development programs across the areas of hematologic malignancies, solid tumors and rare genetic diseases.
- In 2019, Dr. Bowden led our clinical and regulatory teams responsible for: obtaining FDA approval of an sNDA for TIBSOVO® in adult patients with newly diagnosed AML with a susceptible IDH1 mutation as detected by an FDA-approved test who are at least 75 years old or who have comorbidities that preclude use of intensive induction chemotherapy; completing enrollment in our phase 3 ACTIVATE-T trial of mitapivat; achieving clinical proof-of-concept for mitapivat in non-transfusion-dependent thalassemia based on preliminary phase 2 trial results; initiating the phase 3 INDIGO trial of vorasidenib in patients with grade 2 non-enhancing glioma with an IDH mutation; and continuing enrollment across our ongoing clinical trials.

Based on company and individual performance, our board of directors approved, upon the recommendation of the compensation committee, the 2019 cash incentive payment for our chief executive officer, and the compensation committee approved the 2019 cash incentive payments for our other NEOs, as follows:

| | Target Award as a Percentage of Base Salary | 2019 Actual Cash Incentive Payment (\$) | 2019 Actual Cash Incentive Payment (% of Target Award) |
|-----------------------------|--|--|---|
| Jacquelyn A. Fouse, Ph.D. | 65% | 424,125 | 90% |
| David P. Schenkein, M.D.(1) | 65% | 30,469 | 90% |
| Andrew Hirsch | 45% | 202,693 | 90% |
| Jonathan Biller(2) | 45% | — | — |
| Scott Biller, Ph.D.(3) | 45% | 194,897 | 90% |
| Christopher Bowden, M.D. | 45% | 198,668 | 90% |

(1) Dr. Schenkein transitioned from the role of president and chief executive officer to executive chairman, effective February 1, 2019. In connection with his transition to executive chairman, Dr. Schenkein was entitled to receive a prorated bonus with respect to the period of time that he served as chief executive officer during 2019.

(2) Mr. J. Biller was appointed chief legal officer effective December 3, 2019 and was not eligible for a 2019 cash incentive award payment.

- (3) Dr. S. Biller retired as our chief scientific officer effective December 31, 2019. Following his retirement, Dr. S. Biller began serving as a strategic advisor and will continue in that role through the end of 2020. In connection with his transition to strategic advisor, Dr. S. Biller remained eligible for his 2019 cash incentive award with respect to his service as our chief scientific officer at his 2019 salary level, as adjusted for company performance.

All NEOs' 2019 annual cash incentive target award percentages remained the same from 2018, except for Dr. Fouse and Mr. J. Biller, both of whom were not employed by the company in 2018. The 2019 cash incentive payments for all employees, including the NEOs, were paid in 2020.

As discussed below under “—2020 Executive Compensation Decisions”, the annual cash incentive target award percentages for 2020 performance for our continuing NEOs remain unchanged from 2019. Our compensation committee established Mr. J. Biller's annual cash incentive target award percentage for 2020 performance at 45%, which is the same as the annual cash incentive target award percentages for our other NEOs, other than our chief executive officer.

Equity Incentive Awards

Our equity award program is the primary long-term incentive vehicle for our executives. We believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture and help to align the interests of our executives and our stockholders. Our executives benefit from stock options and RSUs as our stock price increases through the creation of stockholder value; similarly, the PSU awards granted to our executives vest only after the achievement of specified company performance milestones which benefit the company as a whole, or upon the achievement of a stock price performance threshold. Accordingly, we believe stock option, RSU and PSU awards provide meaningful incentives to our executives that increase the value of our stock over time. In addition, the vesting feature of our equity grants contributes to executive retention by providing an incentive to our executives to remain employed with us during the vesting period.

Equity compensation represents the largest at-risk component of our NEOs' compensation arrangements. We believe that it is appropriate to align the interests of our NEOs with those of our stockholders to achieve and sustain long-term stock price appreciation. We typically use stock option, RSU and PSU awards to compensate our NEOs in the form of initial grants in connection with the commencement of employment, and generally grant stock options and RSUs on an annual basis thereafter. In addition, from time to time we grant certain employees, including our NEOs, supplemental RSU and/or PSU awards in order to further promote retention and emphasize individual employees' impact on our organizational success.

We grant equity awards to our NEOs with both time-based and performance-based vesting. The stock options that we grant to our NEOs with time-based vesting typically become exercisable as to 25% of the shares underlying the option on the first anniversary of the grant date, and as to an additional 1/48th of the shares underlying the option monthly thereafter. The RSUs we grant to our NEOs vest in equal annual installments on each anniversary of the date of grant, until the third anniversary of such date. The PSU awards that we have granted to our NEOs vest in connection with the achievement of specified company performance or stock price milestones. The exercise price of all stock options equals the fair market value of shares of our common stock on the date of grant. Prior to the exercise of an option, the holder has no rights as a stockholder with respect to the shares subject to such option, including no voting rights and no right to receive dividends or dividend equivalents. Vesting for stock options ceases on termination of employment and exercise rights for stock options cease shortly after termination of employment except in the case of death or disability. Vesting of both RSU and PSU awards ceases upon termination of employment.

In specified termination and change in control circumstances, equity awards held by our NEOs are subject to accelerated vesting. See “—Severance and Change in Control Benefits” below for further information.

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Annual Equity Grants

Our compensation committee has set the target mix for annual equity grants to our NEOs to be split approximately 75% stock options and 25% in RSUs, based on value. The compensation committee believes that this equity mix helps to ensure that compensation remains tied to stock performance and achievement of corporate milestones (through stock options), and promotes retention (via RSUs that vest over time to deliver equivalent value to stock options while using fewer authorized shares). None of our NEOs are currently party to an employment agreement that provides for an automatic award of equity grants, other than initial equity awards made in connection with the start of employment.

In determining the size of the annual stock option and RSU grants to our NEOs, our compensation committee, with the assistance from Radford, considers our company performance, individual performance, the potential for enhancing the creation of value for our stockholders, the amount of equity previously awarded to the NEOs and the vesting terms of such prior awards, the company's broader organizational equity needs and overall dilution, as well as industry and peer group benchmark data. We evaluate our equity award program on an annual basis to ensure that it appropriately links to our long-term performance by aligning the interests of our executives and our stockholders, remains competitive with industry and peer benchmarks and is consistent with our overall equity needs and dilution levels.

Our compensation committee, or our board of directors, as applicable, made annual equity incentive awards in the form of stock options and RSUs to our NEOs in the amounts set forth in the table below during 2019. In the case of each award, these grants were based on the NEO's existing equity incentive holdings, level of responsibility within our company, equity ownership in relation to the peer group benchmark, and the compensation committee's assessment (or our board of directors' assessment, in the case of our chief executive officer) of the NEO's individual performance and our overall company performance, in each case without reference to any specific metric.

| | 2019 Annual Stock Option Awards(3) | 2019 Annual RSU Awards(4) |
|------------------------------|---|--------------------------------------|
| Jacquelyn A. Fouse, Ph.D.(1) | — | — |
| David P. Schenkein, M.D. | 45,719 | 8,324 |
| Andrew Hirsch | 40,000 | 10,000 |
| Jonathan Biller(2) | — | — |
| Scott Biller, Ph.D. | 40,000 | 10,000 |
| Christopher Bowden, M.D. | 40,000 | 10,000 |

(1) Dr. Fouse was appointed as our chief executive officer effective February 1, 2019 and did not receive an annual equity incentive award in 2019. For information about her new hire equity grants and 2019 PSU award, see "*—New Hire and Other One-Time Equity Grants*" below.

(2) Mr. J. Biller was appointed as our chief legal officer effective December 3, 2019 and did not receive an annual equity incentive award in 2019. For information about his new hire equity grants, see "*—New Hire and Other One-Time Equity Grants*" below.

(3) Effective February 22, 2019, our compensation committee, or board of directors, as applicable, approved the grant of these stock option awards to our NEOs, other than Dr. Fouse and Mr. J. Biller. The options have an exercise price of \$58.86 per share, the closing price on the date of grant, and are subject to time-based vesting, with 25% of the shares underlying the award vesting on the first anniversary of the grant date and the remaining shares vesting monthly thereafter in equal increments over 36 months, subject to continued service.

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- (4) Effective February 22, 2019, our compensation committee, or board of directors, as applicable, approved the grant of these RSU awards to our NEOs, other than Dr. Fouse and Mr. J. Biller. The RSUs are subject to time-based vesting, with one-third of the shares of common stock underlying the RSUs vesting on the first, second and third anniversaries of the grants date, subject to continued service.

New Hire and Other One-Time Equity Grants

Dr. Fouse and Mr. J. Biller each joined the company as executive officers during 2019, and in connection with the start of their employment received equity grants in the form of stock options, RSUs and/or PSUs, as reflected in the table below. In addition, during 2019 our compensation committee, or board of directors, as applicable, approved the grant of one-time PSU and/or RSU awards to our NEOs as set forth below, in order to increase retention and further align their interests with the achievement of select near-term corporate milestones.

| | 2019 One-Time Stock Option Awards | 2019 One-Time RSU Awards | 2019 One-Time PSU Awards(5) |
|---------------------------|--|-------------------------------------|--|
| Jacquelyn A. Fouse, Ph.D. | 350,346(1) | — | 79,833(6) |
| David P. Schenkein, M.D. | — | — | — |
| Andrew Hirsch | — | 17,678(3) | 16,162 |
| Jonathan Biller | 78,824(2) | 17,259(4) | 25,568(7) |
| Scott Biller, Ph.D. | — | — | 15,502 |
| Christopher Bowden, M.D. | — | — | 15,841 |

- (1) Reflects new hire grant on February 1, 2019, as approved by our board of directors upon recommendation by the compensation committee. The options have an exercise price of \$53.87 per share, the closing price on the date of grant, and are subject to time-based vesting, with 25% of the shares underlying the award vesting on the first anniversary of the grant date and the remaining shares vesting monthly thereafter in equal increments over 36 months, subject to continued service.
- (2) Reflects new hire grant on December 3, 2019, as approved by our compensation committee. The options have an exercise price of \$39.11 per share, the closing price on the date of grant, and are subject to time-based vesting, with 25% of the shares underlying the award vesting on the first anniversary of the grant date and the remaining shares vesting monthly thereafter in equal increments over 36 months, subject to continued service.
- (3) Reflects a supplemental grant of RSUs on April 22, 2019, as approved by our compensation committee. The RSUs are subject to time-based vesting, with one-third of the shares of common stock underlying the RSUs vesting on the first, second and third anniversaries of the grant date, subject to continued service.
- (4) Reflects new hire grant on December 3, 2019, as approved by our compensation committee. The RSUs are subject to time-based vesting, with one-third of the shares of common stock underlying the RSUs vesting on the first, second and third anniversaries of the grant date, subject to continued service.
- (5) Effective April 11, 2019, our compensation committee or board of directors, as applicable, approved the grant of PSUs to our NEOs, other than Dr. Schenkein and Mr. J. Biller. The PSUs vest as to one-third of the underlying shares of common stock upon the achievement of each of three specified research, regulatory and commercial milestones, subject to continued service.
- (6) Includes a new hire grant of 42,695 PSUs on February 1, 2019, as approved by our board of directors. The PSUs vest if, during the five-year period beginning on February 1, 2019 and ending on February 1, 2024, the closing price of our common stock equals or exceeds \$120 per share for at least 20 consecutive trading days at any time during such five-year period, subject to continued service.

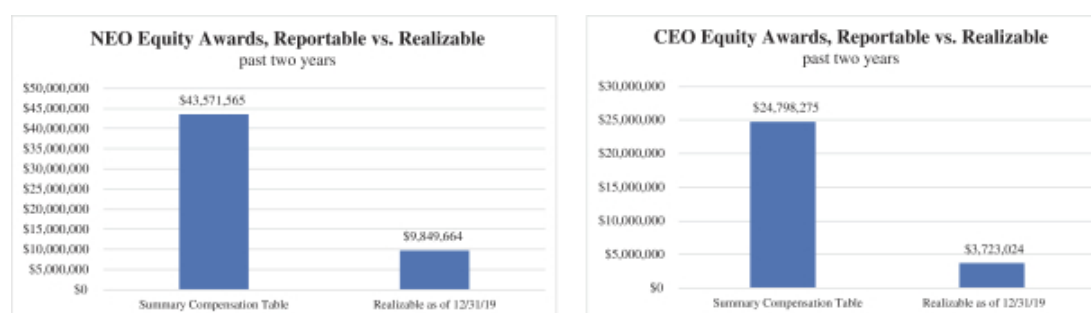
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- (7) Reflects new hire grant on December 3, 2019, as approved by our compensation committee. The PSUs vest as to one-third of the underlying shares of common stock upon the achievement of each of three specified research, regulatory and commercial milestones, subject to continued service.

Our Alignment of Pay and Performance: Realizable Pay

Paying for performance and aligning our management's interests with those of stockholders serve as foundational priorities for our compensation approach. These priorities are intertwined: when our company performs well, stockholders benefit and our executives should be paid accordingly. In our view, the best way to create this alignment of interests is through executive compensation packages heavily weighted towards at risk long term incentives.

Since our initial public offering in 2013, our stock price has been volatile. As such, the grant date fair value of option grants – as displayed in the Summary Compensation Table on page 54 – are not necessarily an accurate reflection of the actual realizable pay value of the compensation packages received by our NEOs over the last several years. For example, as detailed in our Grants of Plan-Based Awards for 2019 table on page 57, annual option grants to our NEOs in February 2019 had an exercise price of \$58.86 per share, Dr. Fouse's new hire option grant had an exercise price of \$53.87 per share, and Mr. J. Biller's new hire option grant had an exercise price of \$39.11, all of which were the closing prices of our common stock on the date of grant and are the prices used to value those grants for the Summary Compensation Table. Similarly, RSU and PSUs grants during the year were valued based on our stock price on the date of grant. Based on our stock price of \$47.75 as of December 31, 2019, those 2019 awards have significantly less realizable value. To graphically demonstrate the difference:



The above charts compare the aggregate value of our NEO's option, RSU and PSU grants for 2018 and 2019 as reported in the Summary Compensation Table and estimates of the realizable value of such grants as of December 31, 2019, when our stock price closed at \$47.75 per share. Realizable value represents (i) the intrinsic value of the option awards using the stock price as of December 31, 2019; (ii) the number of shares underlying each RSU award valued at the stock price as of December 31, 2019; and (iii) the number of shares underlying each PSU award based on the probable outcome at the time of grant valued at the stock price as of December 31, 2019. As demonstrated in these charts, our NEOs' equity grants have dramatically declined in realizable value, reflecting an alignment of the interests of executives with those of stockholders.

2020 Executive Compensation Decisions

In February 2020, our compensation committee, and our board, as applicable, approved 2020 base salaries, target annual performance-based cash incentive levels and annual stock option and RSU awards for our NEOs, other than Mr. J. Biller, Dr. S. Biller and Dr. Schenkein, as set forth in the table below. Mr. J. Biller joined the company in December 2019 and, as a result, was not eligible for a salary increase or annual equity

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incentive awards in 2020. Dr. S. Biller retired as chief scientific officer, effective December 31, 2019, and was not eligible for annual equity incentive awards in 2020; during 2020, Dr. S. Biller will serve as strategic advisor and be compensated as set forth in the table below. Dr. Schenkein transitioned from his role as executive chairman to chairman, effective February 1, 2020, and was not eligible for annual equity incentive awards in 2020; effective February 1, 2020, Dr. Schenkein will be compensated pursuant to our non-employee director compensation policy. For more information, see the description of Dr. S. Biller's employment arrangement below under "Employment, Severance and Change in Control Arrangements—*Employment Offer Letters*".

The table below presents 2020 compensation of our 2019 NEOs other than Dr. Schenkein.

| | Target Bonus Award as a Percentage of 2020 Base Salary | Change in Target Bonus Award from 2019 | 2020 Base Salary (\$) | % Base Salary Increase over 2019 | 2020 Equity Incentive Awards (Options)(6) | 2020 Equity Incentive Awards (RSUs)(7) |
|------------------------------|---|---|------------------------------|---|--|---|
| Jacquelyn A. Fouse, Ph.D. | 65% | — | 746,750 | 3.0%(4) | 137,000 | 34,000 |
| David P. Schenkein, M.D. (1) | — | — | — | — | — | — |
| Andrew Hirsch | 45% | — | 515,490 | 3.0%(4) | 45,000 | 12,000 |
| Jonathan Biller (2) | 45% | — | 500,000 | — | — | — |
| Scott Biller, Ph.D. (3) | 35% | -10% | 240,020 | -50% | — | — |
| Christopher Bowden, M.D. | 45% | — | 515,007 | 5.0%(5) | 45,000 | 12,000 |

(1) Dr. Schenkein transitioned from the role of executive chairman to chairman effective February 1, 2020. Following this transition, Dr. Schenkein is compensated solely pursuant to our non-employee director compensation policy. Dr. Schenkein did not receive annual equity incentive awards in 2020.

(2) Mr. J. Biller joined the company as chief legal officer as of December 3, 2019. Mr. J. Biller did not receive a salary increase, annual performance-based cash incentive award or annual equity incentive awards in 2020.

(3) Dr. S. Biller retired as chief scientific officer effective December 31, 2019. Following his retirement, Dr. S. Biller will serve as strategic advisor and will be compensated in 2020 as shown in the table above. Dr. S. Biller did not receive annual equity incentive awards in 2020.

(4) Increase reflects merit-based adjustments.

(5) Increase reflects merit- and market-based adjustments.

(6) Effective February 14, 2020, our compensation committee, or board of directors, as applicable, approved the grant of these stock option awards at an exercise price of \$51.51 per share, the closing price on the date of grant. The options are subject to time-based vesting, with 25% of the shares underlying the award vesting on the first anniversary of the grant date and the remaining shares vesting monthly thereafter in equal increments over 36 months, subject to continued service.

(7) Effective February 14, 2020, our compensation committee, or board of directors, as applicable, approved the grant of these RSUs. The RSUs are subject to time-based vesting, with one-third of the shares of common stock underlying the RSUs vesting on the first, second and third anniversaries of the grant date, subject to continued service.

Salary increases for 2020 were made effective as of January 1, 2020. The annual cash incentive target award percentage for our continuing NEOs remained unchanged from 2019. Annual performance-based cash incentive program payouts for 2020 annual cash incentives will be based on our performance against specific

research, clinical, operational and financial company goals and, as stated above, will be capped at 150% of the target payout level.

Severance and Change in Control Benefits

In 2016, our compensation committee adopted a Severance Plan, which applies to our NEOs and certain other employees, and which became effective as of April 22, 2016. The Severance Plan provides for severance benefits in the event of a termination of such NEO's employment by us without cause or by such employee for good reason either (i) before or more than 18 months after a change in control, or (ii) within 18 months following a change in control. The severance benefits set forth in the Severance Plan supersede the severance benefits and certain equity acceleration benefits set forth in employment offer letters with our NEOs. Specifically, the Severance Plan eliminates single-trigger vesting on all equity grants made to our NEOs after April 22, 2016 and provides that all unvested equity awards shall vest in full if a NEO's employment is terminated by an acquirer or us without cause or by such NEO for good reason, each within 18 months following a change in control. For equity awards that were made prior to April 22, 2016, the applicable terms, if any, of the currently effective award agreements and employment offer letter between such NEO and us shall continue to apply and provide that:

- in the event of a termination of a NEO without cause or by a NEO for good reason not in connection with a change in control, then, subject to an effective release of claims against us, Dr. Bowden shall be entitled to receive accelerated vesting of 25% of the original number of shares such equity awards granted.
- upon a change in control, and subject to an effective release of claims against us, Dr. Bowden will be entitled to accelerated vesting of 75% of the then unvested shares under any equity awards granted prior to April 22, 2016, with the remaining 25% of such awards continuing to vest in accordance with the vesting schedule for such awards. If Dr. Bowden is terminated without cause or leaves for good reason upon or within 18 months following the change in control, then his equity awards shall immediately vest and become exercisable in full.

Please refer to “—Employment, Severance and Change in Control Arrangements” below for a more detailed discussion of severance and change in control benefits for our NEOs. We also have provided estimates of the value of the severance payments made and other benefits provided to our NEOs under specified termination circumstances under the caption “—*Potential Payments Upon Termination or Change in Control*” below. We believe that providing these benefits helps us compete for executive talent. These benefits are designed to promote stability and continuity of our senior management and are intended to preserve employee morale and productivity and encourage retention in the face of the disruptive impact of an actual, threatened, or rumored change in control of the company.

Health and Welfare Benefits

Our NEOs are eligible to participate in all of our employee benefit plans, including our medical, dental, vision, life and disability insurance plans, in each case on the same basis as other employees. We believe that these health and welfare benefits help ensure that we have a productive and focused workforce through reliable and competitive health and other benefits.

401(k) Retirement Plan

We maintain a 401(k)-retirement plan that is intended to be a tax-qualified defined contribution plan under Section 401(k) of the Internal Revenue Code, or the Code. In general, all of our employees are eligible to

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participate, beginning on the first day of the month following commencement of their employment. The 401(k) plan includes a salary deferral arrangement pursuant to which participants may elect to reduce their current compensation by up to the statutorily prescribed limit, equal to \$19,000 in 2019, and have the amount of the reduction contributed to the 401(k) plan. Participants who turned age 50 in 2019 were also eligible to make “catch-up” contributions, which in 2019 may be up to an additional \$6,000 above the statutory limit. In 2019, we matched employee 401(k) contributions at a rate of \$1.00 for each dollar contribution, up to 4% of eligible contributions. Matching contributions are 100% vested immediately.

Clawback Policy

Effective April 2016, we adopted a “clawback policy” which, in general, provides that, in the event that we are required to prepare an accounting restatement for periods ending on or after such date, we will make a reasonable attempt to recover from our current or former executive officers the pre-tax amount of certain incentive-based compensation in excess of what would have been paid to such executive officer after giving effect to the accounting restatement. For purposes of the policy, incentive-based compensation means any compensation that is granted, earned or vested based wholly or in part upon the attainment of any measures determined and presented in accordance with the accounting principles used in preparing the company’s financial statements, or any measures derived wholly or in part from such financial information, stock price or total stockholder return. If the incentive-based compensation is based on our stock price or total stockholder return and the amount of excess incentive-based compensation is not calculable directly from the information in an accounting restatement, the amount recovered shall be based on a reasonable estimate of the effect of the accounting restatement on the stock price or total stockholder return upon which the incentive-based compensation was received. The policy shall be interpreted by our board of directors, or a duly established committee thereof.

Perquisites

Consistent with our pay-for-performance philosophy, we provide only limited perquisites to our executives in connection with new hires. We do not provide personal perquisites such as automobile leases, driver services or provide aircraft for personal use.

Anti-Hedging and Pledging Policy

Our insider trading policy expressly prohibits all of our employees, including our NEOs, as well as our directors, from engaging in speculative transactions in our stock, including short sales, puts/calls, hedging transactions and margin accounts or pledges.

No Tax Gross-ups

We do not provide for any tax gross-up payments to our NEOs.

Accounting and Tax Considerations

We account for equity compensation paid to our employees under the rules of FASB Codification Topic 718, which rules require us to estimate and record an expense over the service period of any such award. Accounting rules also require us to record cash compensation as an expense at the time the obligation is accrued. To date, these accounting requirements have not impacted our executive compensation programs and practices.

Section 162(m) of the Internal Revenue Code generally disallows a tax deduction to public companies for compensation in excess of \$1 million paid in any taxable year to each of the company’s chief executive officer,

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chief financial officer and three most highly compensated officers (other than the chief executive officer and chief financial officer). Historically, compensation paid to our chief financial officer and compensation that qualified under Section 162(m) as performance-based compensation was exempt from the deduction limitation. However, subject to certain transition rules, tax reform legislation signed into law on December 22, 2017, expanded the deduction limitation to apply to compensation in excess of \$1 million paid in any taxable year to our chief financial officer and eliminated the qualified performance-based compensation exception. As a result, for taxable years beginning after December 31, 2017, all compensation in excess of \$1 million paid to each of the executives described above (other than certain grandfathered compensation) will not be deductible by us. Our board of directors and compensation committee reserve the right to use their business judgment to authorize compensation payments that may be subject to the limitations under Section 162(m) when the board or compensation committee, as applicable, believe that compensation is appropriate and in the best interests of the company and our stockholders, after taking into consideration changing business conditions and performance of our employees.

Stock Ownership Guidelines

In 2016, our compensation committee established equity ownership guidelines for our directors and executive officers to further align the interests of our board of directors and NEOs with those of stockholders. The equity ownership guidelines are as follows: our chief executive officer must own shares worth at least three times his or her base salary; our other executive officers must own shares worth at least their base salary; and our non-employee directors must own shares worth at least three times the annual cash retainer. Our chief executive officer, other executive officers and non-employee directors have five years from first being subject to these guidelines to satisfy the applicable ownership threshold.

Compensation Committee Report

The compensation committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with our management. Based on this review and discussion, the compensation committee recommended to our board of directors that the Compensation Discussion and Analysis be included in this proxy statement.

This report of the compensation committee is not “soliciting material,” shall not be deemed “filed” with the SEC and shall not be incorporated by reference by any general statement incorporating by reference this proxy statement into any filing under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing, except to the extent that we specifically incorporate this information by reference, and shall not otherwise be deemed filed under such acts.

The foregoing report has been furnished by the compensation committee.

Respectfully submitted,

The Compensation Committee of the Board of Directors

Kaye Foster (chair)
Ian T. Clark
John M. Maraganore

Summary Compensation Table

The following table shows information regarding the compensation of our NEOs during the fiscal years ended December 31, 2019, 2018 and 2017.

| Name and Principal Position | Year | Salary (\$) | Bonus (\$) | Stock Awards (\$)(5) | Option Awards (\$)(5) | Non-equity | All Other | Total (\$) |
|--|------|-------------|------------|----------------------|-----------------------|-------------------------------------|----------------------|------------|
| | | | | | | Incentive Plan Compensation (\$)(6) | Compensation (\$)(7) | |
| Jacquelyn A. Fouse, Ph.D.(1) <i>Chief Executive Officer</i> | 2019 | 664,583 | — | 2,538,474 | 12,875,608 | 424,125 | 105,204(8) | 16,607,994 |
| | 2018 | — | — | — | — | — | — | — |
| | 2017 | — | — | — | — | — | — | — |
| David P. Schenkein, M.D.(2) <i>Former President and Chief Executive Officer; Executive Chairman</i> | 2019 | 212,500 | — | 489,951 | 1,840,179 | 30,469 | 3,277 | 2,576,376 |
| | 2018 | 625,000 | — | 1,893,938 | 5,160,125 | 507,813 | 12,448 | 8,199,324 |
| | 2017 | 585,040 | — | — | 4,921,476 | 456,300 | 9,548 | 5,972,364 |
| Andrew Hirsch <i>Chief Financial Officer</i> | 2019 | 500,476 | — | 1,923,145 | 1,609,989 | 202,693 | 12,528 | 4,248,831 |
| | 2018 | 471,329 | — | 641,025 | 1,746,517 | 265,123 | 12,864 | 3,136,858 |
| | 2017 | 453,201 | — | — | 1,639,353 | 217,537 | 9,964 | 2,320,055 |
| Jonathan Biller(3) <i>Chief Legal Officer</i> | 2019 | 39,583 | 110,000 | 1,008,334 | 2,025,036 | — | 936 | 3,183,889 |
| | 2018 | — | — | — | — | — | — | — |
| | 2017 | — | — | — | — | — | — | — |
| Scott Biller, Ph.D.(4) <i>Chief Scientific Officer</i> | 2019 | 480,041 | — | 908,592 | 1,609,989 | 194,897 | 12,621 | 3,206,140 |
| | 2018 | 446,573 | — | 641,025 | 1,746,517 | 251,198 | 12,741 | 3,098,054 |
| | 2017 | 429,397 | — | — | 1,639,353 | 223,287 | 9,840 | 2,301,877 |
| Christopher Bowden, M.D. <i>Chief Medical Officer</i> | 2019 | 490,539 | — | 915,590 | 1,609,989 | 198,668 | 12,422 | 3,227,208 |
| | 2018 | 467,141 | — | 641,025 | 1,746,517 | 262,767 | 11,280 | 3,128,730 |
| | 2017 | 449,174 | — | — | 1,639,353 | 233,571 | 8,710 | 2,330,808 |

- (1) Dr. Fouse’s 2019 annual base salary was \$725,000; however, as Dr. Fouse joined the company as chief executive officer effective February 1, 2019, her base salary reported was pro-rated in 2019. In addition, Dr. Fouse received stock option and PSU awards upon hire. Dr. Fouse also serves as a member of our board of directors, but did not receive any additional compensation in 2019 for her service as a director.
- (2) Dr. Schenkein transitioned from the role of president and chief executive officer to executive chairman effective February 1, 2019. His 2019 annual base salary for the role of president and chief executive officer was \$625,000 and his 2019 annual base salary for the role of executive chairman was \$175,000; however, his base salary reported was pro-rated in 2019 for the period he served in each role. Dr. Schenkein’s 2019 reported salary consists of (i) \$52,083 earned for his service as president and chief executive officer during January 2019 and (ii) \$160,417 earned for his service as executive chairman from February 2019 through December 2019.
- (3) Mr. J. Biller’s 2019 annual base salary was \$500,000; however, as Mr. J. Biller joined the company as chief legal officer effective December 3, 2019, his base salary reported was pro-rated in 2019. In addition, Mr. J. Biller received a sign-on bonus of \$110,000 and received stock option, RSU and PSU awards upon hire.
- (4) Dr. S. Biller retired as our chief scientific officer, effective December 31, 2019.
- (5) Amounts listed represent the aggregate fair value amount computed as of the grant date of the awards granted in accordance with FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 13, Share-Based Payments, of the Notes to our Consolidated Financial Statements filed on our Annual Report on Form 10-K, filed with the SEC on February 19, 2020. For PSUs, these amounts

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reflect the grant date fair value of such awards based upon the probable outcome at the time of grant. The value of the April 2019 PSU awards for Dr. Fouse, Mr. Hirsch, Dr. S. Biller and Dr. Bowden at the grant date assuming that the highest level of performance conditions were achieved would be \$2,299,956, \$1,000,913, \$960,039 and \$981,033, respectively. The value of the December PSU award for Mr. J. Biller at the grant date assuming that the highest level of performance conditions was achieved would be \$999,964.

- (6) Amounts represent awards to our NEOs under our annual performance-based cash incentive program. See “*Annual Performance-based Cash Incentives*” for a description of that program. Annual cash incentive compensation earned during the year is typically paid in the following year.
- (7) For 2019, amounts include a matching contribution to the company’s 401(k) plan for Dr. Fouse, Mr. Hirsch, Dr. S. Biller and Dr. Bowden of \$10,500, \$11,000, \$11,200 and \$11,200, respectively. Amounts also include the dollar value of company-paid life insurance and disability insurance premiums paid during the fiscal year for the NEO.
- (8) For 2019, includes a housing allowance for Dr. Fouse in the amount of \$93,573 in connection with her joining the company as chief executive officer effective February 1, 2019.

Pay Ratio Disclosure

As required by Section 953(b) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 402(u) of Regulation S-K, we are required to disclose the ratio of our median employee’s annual total compensation to the annual total compensation of our principal executive officer. The purpose of this new disclosure is to provide a measure of the equitability of pay within our company. We believe our compensation philosophy and process yield an equitable result for all of our employees.

The annual total compensation for our chief executive officer in the pay ratio disclosure differs from the annual total compensation amount reflected in the Summary Compensation Table. Specifically, our chief executive officer on the determination date, October 1, 2019, was Dr. Fouse, who has served the company in that capacity as of February 1, 2019. Because Dr. Fouse served as chief executive officer for less than the full year, we adjusted her annual total compensation for 2019, as reported in the Summary Compensation Table, to estimate the compensation that she reasonably would have received if she had served as chief executive officer for all of 2019. We annualized Dr. Fouse’s compensation as chief executive officer for 2019 as follows:

| Pay Component | Actual Value Disclosed in the Summary Compensation Table | Amount as Adjusted for Purposes of CEO Pay Ratio Disclosure | Reason for Adjustment |
|-------------------------------|---|--|---|
| Salary | \$ 664,583 | \$ 725,000 | Full year salary as CEO |
| Stock Awards | \$ 2,538,474 | \$ 2,538,474 | No adjustment |
| Option Awards | \$12,875,608 | \$12,875,608 | No adjustment |
| Non-Equity Incentive | \$ 424,125 | \$ 424,125 | No adjustment; bonus awarded at 90% of target award percentage |
| All Other Compensation | \$ 105,204 | \$ 106,006 | \$93,573 relocation rental assistance unadjusted; life insurance of \$1,131 adjusted to reflect annual amount of \$1,234; 401(k) matching contributions adjusted to \$11,200 annual maximum |
| Total Compensation | \$16,607,994 | \$16,669,213 | |

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As a result of the adjustments discussed above, Dr. Fouse's compensation as chief executive officer for 2019, for purposes of this pay ratio disclosure, was \$16,669,213. The total compensation for 2019 for our median employee, identified as discussed below was \$267,104, resulting in a pay ratio of approximately 62 to 1. We believe this is an elevated pay ratio, as it reflects the value of sign-on equity awards granted to our chief executive officer, which would not be awarded on a continuing basis.

Consistent with the process established to identify our median employee for 2018, we identified the median employee as of October 1, 2019 by (i) aggregating for each applicable employee (A) annual base salary for salaried employees (or hourly rate multiplied by expected annual work schedule, for hourly employees), (B) target bonus for 2019, and (C) the estimated fair value of any equity awards granted during the fiscal year ended December 31, 2019 and, (ii) ranking this aggregated compensation measure for our employees from lowest to highest. Amounts paid in currencies other than U.S. Dollars were converted based on the average annual exchange rate as of October 1, 2019. This calculation was performed for all employees, excluding Dr. Fouse. This process resulted in the identification of an employee whose 2019 compensation was anomalous. As a result, we selected an alternate median employee, whose compensation is substantially similar to the aforementioned employee based on the compensation measure used to select the median employee (as disclosed above), while also being more representative of the other individuals at and near the median of our employee population.

The pay ratio reported above is a reasonable estimate calculated in a manner consistent with SEC rules based on our internal records and the methodology described above. The SEC rules for identifying the median compensated employee and calculating the pay ratio based on that employee's annual total compensation allow companies to adopt a variety of methodologies, to apply certain exclusions, and to make reasonable estimates and assumptions that reflect their employee populations and compensation practices. Therefore, the pay ratio reported by other companies may not be comparable to the pay ratio reported above, as other companies have different employee populations and compensation practices and may utilize different methodologies, exclusions, estimates and assumptions in calculating their own pay ratios.

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Grants of Plan-Based Awards for 2019

The following tables sets forth information concerning each grant of an award made to a NEO during the fiscal year ended December 31, 2019 under any plan, contract, authorization or arrangement pursuant to which cash, securities, similar instruments or other property may be received. The cash awards were made under our annual cash incentive program and the equity awards were made under our 2013 Stock Incentive Plan. Each grant was authorized by our compensation committee, or board of directors, as applicable. For more information on equity acceleration benefits under specified circumstances, see “—Employment, Severance and Change in Control Arrangements.”

| Name | Date of Grant | Estimated Future Payouts Under Non-Equity Incentive Plan Awards(4) | | | Estimated Future Payouts Under Equity Incentive Plan Awards | | | All Other Stock Awards: Number of Shares of Stock or Units(#) | All Other Option Awards: Number of Securities Underlying Options (#)(8) | Exercise or Base Price of Option Awards (\$)(9) | Grant Date Fair Value of Stock and Option Awards (\$)(10) |
|-----------------------------|---------------|--|-------------|--------------|---|------------|-------------|---|---|---|---|
| | | Threshold (\$) | Target (\$) | Maximum (\$) | Threshold (#) | Target (#) | Maximum (#) | | | | |
| Jacqualyn A. Fouse, Ph.D. | | — | 471,250 | 706,875 | | | | | | | |
| | 2/1/2019 | | | | 42,695(5) | 42,695(5) | — (5) | | | | 1,771,843 |
| | 4/11/2019 | | | | 12,379(6) | 37,138(6) | — (6) | 350,346 | 53.87 | | 12,875,608 766,631 |
| David P. Schenkein, M.D.(1) | | — | 33,854 | 50,781 | | | | 8,324(7) | | | 489,951 |
| | 2/22/2019 | | | | | | | | 45,719 | 58.86 | 1,840,179 |
| Andrew Hirsch | | — | 225,214 | 337,821 | | | | 10,000(7) | | | 588,600 |
| | 2/22/2019 | | | | | | | | 40,000 | 58.86 | 1,609,989 |
| | 4/11/2019 | | | | 5,387(6) | 16,162(6) | — (6) | | | | 333,617 |
| | 4/22/2019 | | | | | | | 17,678(7) | | | 1,000,928 |
| Jonathan Biller(2) | | — | — | — | 8,523(6) | 25,568(6) | — (6) | | | | 333,335 |
| | 12/3/2019 | | | | | | | 17,259(7) | | | 674,999 |
| | 12/3/2019 | | | | | | | | 78,824 | 39.11 | 2,025,036 |
| Scott Biller, Ph.D.(3) | | — | 216,018 | 324,028 | | | | 10,000(7) | | | 588,600 |
| | 2/22/2019 | | | | | | | | 40,000 | 58.86 | 1,609,989 |
| | 4/11/2019 | | | | 5,167(6) | 15,502(6) | — (6) | | | | 319,992 |
| | | | | | | | | | | | |
| Christopher Bowden, M.D. | | — | 220,743 | 331,114 | | | | 10,000(7) | | | 588,600 |
| | 2/22/2019 | | | | | | | | 40,000 | 58.86 | 1,609,989 |
| | 4/11/2019 | | | | 5,280(6) | 15,841(6) | — (6) | | | | 326,990 |

- (1) Dr. Schenkein was eligible to receive a pro-rated bonus for the one-month in 2019 that he served as chief executive officer
- (2) Mr. J. Biller was not eligible for an annual cash incentive bonus award for 2019.
- (3) Following his transition to strategic advisor effective January 1, 2020, Dr. S. Biller remained eligible for his 2019 cash incentive award with respect to his service as our chief scientific officer at his 2019 salary level, as adjusted for company performance.
- (4) Amounts shown in the threshold, target and maximum columns reflect the minimum, target and maximum amounts, respectively, payable under our annual incentive cash program as described above under “Annual Performance-based Cash Incentives.” Actual amounts paid are presented in the Summary Compensation Table above.
- (5) PSUs vest upon the achievement of specified stock-price performance milestones established by the compensation committee and described in the footnotes to the Outstanding Equity Awards at Fiscal Year End table below. Threshold and target payouts assume 100% of the specified performance vesting criteria are achieved. There is no maximum payout for the PSUs.

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- (6) PSUs vest upon the achievement of specified corporate milestones established by the compensation committee and described in the footnotes to the Outstanding Equity Awards at Fiscal Year End table below. Threshold payout assumes one-third of the specified performance vesting criteria are achieved. Target payout assumes 100% of the specified performance vesting criteria are achieved. There is no maximum payout for the PSUs.
- (7) RSUs subject to time-based vesting criteria established by the compensation committee and described in the footnotes to the Outstanding Equity Awards at Fiscal Year End table below.
- (8) Options subject to time-based vesting criteria established by the compensation committee and described in the footnotes to the Outstanding Equity Awards at Fiscal Year End table below.
- (9) The exercise price of these stock options is equal to the closing price of our common stock on the grant date.
- (10) Amounts listed represent the aggregate fair value amount computed as of the grant date of the awards granted in accordance with FASB ASC Topic 718. Assumptions used in the calculation of these amounts are included in Note 13, Share-Based Payments, of the Notes to our Consolidated Financial Statements filed on our Annual Report on Form 10-K, filed with the SEC on February 19, 2020. For PSUs, these amounts reflect the grant date fair value of such awards based upon the probable outcome at the time of grant.

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Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information concerning outstanding equity awards for each of our NEOs at December 31, 2019. For more information on equity acceleration benefits under specified circumstances, see “-Employment, Severance and Change in Control Arrangements.”

| Name | Grant Date | Option Awards | | | | | Stock Awards | | | | |
|---------------------------|---------------|---|--|--|----------------------------|------------------------|--|--|--|--|--|
| | | Number of Securities Underlying Unexercised Options Exercisable (#) | Number of Securities Underlying Unexercised Options Unexercisable (#)(1) | Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options (#) | Option Exercise Price (\$) | Option Expiration Date | Number of Shares or Units of Stock That Have Not Vested (#)(2) | Market Value of Shares or Units of Stock That Have Not Vested (#)(3) | Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)(4) | Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested (#)(3) | |
| Jacqualyn A. Fouse, Ph.D. | 12/03/2017 | 7,996 | 8,004 | - | \$ 61.17 | 12/03/2027 | | | | | |
| | 05/31/2018 | 5,700 | - | - | \$ 93.50 | 05/31/2028 | | | | | |
| | 02/01/2019 | - | 350,346 | - | \$ 53.87 | 02/01/2029 | | | | | |
| | 02/01/2019 | - | - | - | - | - | - | - | 42,695(5) | 2,038,686 | |
| | 04/11/2019 | - | - | - | - | - | - | - | 12,379(6) | 591,097 | |
| David P. Schenkein, M.D. | 04/30/2013 | 136,363 | - | - | \$ 9.05 | 04/30/2023 | | | | | |
| | 03/05/2014 | 137,471 | - | - | \$ 31.64 | 03/04/2024 | | | | | |
| | 03/02/2015 | 136,000 | - | - | \$ 107.89 | 03/01/2025 | | | | | |
| | 02/16/2016 | 97,750 | 4,250 | - | \$ 39.76 | 02/15/2026 | | | | | |
| | 02/21/2017 | 101,219 | 41,681 | - | \$ 50.40 | 02/20/2027 | | | | | |
| | 02/16/2018 | 44,685 | 52,815 | - | \$ 77.70 | 02/16/2028 | | | | | |
| | 02/16/2018 | - | - | - | - | - | 16,250 | 775,938 | | | |
| | 02/22/2019 | - | 45,719 | - | \$ 58.86 | 2/22/2029 | | | | | |
| | 02/22/2019 | - | - | - | - | - | 8,324 | 397,471 | | | |
| | Andrew Hirsch | 09/20/2016 | 101,558 | 23,442 | - | \$ 49.83 | 09/19/2026 | | | | |
| 02/21/2017 | | 33,712 | 13,888 | - | \$ 50.40 | 2/20/2027 | | | | | |
| 02/16/2018 | | 15,120 | 17,880 | - | \$ 77.70 | 2/16/2028 | | | | | |
| 02/16/2018 | | - | - | - | - | - | 5,500 | 262,625 | | | |
| 02/22/2019 | | - | 40,000 | - | \$ 58.86 | 2/22/2029 | | | | | |
| 02/22/2019 | | - | - | - | - | - | 10,000 | 477,500 | | | |
| 04/11/2019 | | - | - | - | - | - | | | 5,387(6) | 257,229 | |
| 04/22/2019 | | - | - | - | - | - | 17,678 | 844,125 | | | |
| Jonathan Biller | 12/03/2019 | - | 78,824 | - | \$ 39.11 | 12/03/2029 | | | | | |
| | 12/03/2019 | - | - | - | - | - | 17,259 | 824,117 | | | |
| | 12/03/2019 | - | - | - | - | - | | | 8,523(6) | 406,973 | |
| Scott Biller, Ph.D. | 03/05/2014 | 11,354 | - | - | \$ 31.64 | 03/04/2024 | | | | | |
| | 03/02/2015 | 68,000 | - | - | \$ 107.89 | 03/01/2025 | | | | | |
| | 02/16/2016 | 37,762 | 1,886 | - | \$ 39.76 | 02/15/2026 | | | | | |
| | 02/21/2017 | 33,712 | 13,888 | - | \$ 50.40 | 2/20/2027 | | | | | |
| | 02/16/2018 | 15,120 | 17,880 | - | \$ 77.70 | 02/16/2028 | | | | | |
| | 02/16/2018 | - | - | - | - | - | 5,500 | 262,625 | | | |
| | 02/22/2019 | - | 40,000 | - | \$ 58.86 | 02/22/2029 | | | | | |
| | 02/22/2019 | - | - | - | - | - | 10,000 | 477,500 | | | |
| | 04/11/2019 | - | - | - | - | - | | | 5,167(6) | 246,724 | |
| Christopher Bowden, M.D. | 05/31/2014 | 71,000 | - | - | \$ 35.16 | 05/30/2024 | | | | | |
| | 03/02/2015 | 17,000 | - | - | \$ 107.89 | 03/01/2025 | | | | | |
| | 02/16/2016 | 43,334 | 1,886 | - | \$ 39.76 | 02/15/2026 | | | | | |
| | 02/21/2017 | 33,712 | 13,888 | - | \$ 50.40 | 2/20/2027 | | | | | |
| | 02/16/2018 | 15,120 | 17,880 | - | \$ 77.70 | 02/16/2028 | | | | | |
| | 02/16/2018 | - | - | - | - | - | 5,500 | 262,625 | | | |
| | 02/22/2019 | - | 40,000 | - | \$ 58.86 | 02/22/2029 | | | | | |
| | 02/22/2019 | - | - | - | - | - | 10,000 | 477,500 | | | |
| | 04/11/2019 | - | - | - | - | - | | | 5,280(6) | 252,120 | |

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- (1) The shares vest with 25% of the shares underlying the option vesting on the first anniversary of the grant date and the remaining shares vesting monthly thereafter in equal increments over 36 months, subject to continued service.
- (2) Represents RSUs, each unit representing a contingent right to receive one share of common stock. One-third of the shares underlying the units vest on the first, second and third anniversary of the grant date, subject to continued service.
- (3) Amounts shown are based on a price of \$47.75 per share, which was the closing price of our common stock as reported on the Nasdaq Global Select Market on December 31, 2019, the last trading day of the year.
- (4) These amounts represent the number of PSUs granted assuming threshold performance conditions are met.
- (5) Represents PSUs, each unit representing a contingent right to receive one share of common stock if, during the five-year period beginning on February 1, 2019 and ending on February 1, 2024, the closing price of our common stock equals or exceeds \$120 per share for at least 20 consecutive trading days at any time during such five-year period.
- (6) Represents PSUs, each unit representing a contingent right to receive one share of common stock. One-third of the shares underlying the units vest upon the achievement of each of three specified research, regulatory and commercial milestones, as determined by our compensation committee. The performance period ends on December 31, 2022.

Option Exercises and Stock Vested in 2019

The following table sets forth information concerning option exercises and stock vested for each of our NEOs during the fiscal year ended December 31, 2019:

| | Option Awards | | Stock Awards | |
|---------------------------|---|--|--|---|
| | Number of Shares Acquired on Exercise(1) | Value Realized on Exercise(1) | Number of Shares Acquired on Vesting(1) | Value realized on Vesting(2) |
| Jacquelyn A. Fouse, Ph.D. | — | — | 1,400 | 66,332 |
| David P. Schenkein, M.D. | — | — | 8,125 | 481,731 |
| Andrew Hirsch | — | — | 17,750 | 1,001,398 |
| Jonathan Biller(3) | — | — | — | — |
| Scott Biller, Ph.D. | 22,218 | 956,373 | 2,750 | 163,048 |
| Christopher Bowden, M.D. | 20,000 | 604,145 | 9,015 | 513,198 |

- (1) The value realized when the stock options were exercised represents the excess of the fair market value of the shares at the time of exercise over the exercise price of the stock options.
- (2) The value realized when the stock awards vested represents the number of shares underlying the units vested multiplied by market value of the shares on the vesting date.
- (3) Mr. J. Biller commenced employment as our chief legal officer in December 2019.

Employment, Severance and Change in Control Arrangements

Severance Benefits Plan

In 2016, our compensation committee adopted a Severance Benefits Plan, or the Severance Plan, which applies to our NEOs and certain other officers and key employees, other than: Dr. Schenkein as of February 1, 2020, when he transitioned from the role of our executive chairman to chairman; and Dr. S. Biller as of January 1, 2020, when he transitioned from the role of our chief scientific officer to strategic advisor. The Severance Plan provides for severance benefits in the event of a termination of such NEO's employment by us without cause or by such employee for good reason either (i) before or more than 18 months after a change in control, or (ii) within 18 months following a change in control. Except as specifically provided below, the severance benefits set forth in the Severance Plan supersede any severance benefits set forth in award agreements and/or employment offer letters with such NEOs.

Benefits Provided Upon Termination Not in Connection with a Change in Control. Under the terms of the Severance Plan, subject to the execution and effectiveness of a release of claims against us, if a NEO's employment is terminated by us without cause or by such NEO for good reason prior to or more than 18 months following a change in control:

- (i) for NEOs other than Dr. Schenkein, we are obligated (A) to pay an amount equal to his or her then-current monthly base salary for a period of 12 months and 100% of such NEO's target annual cash incentive in a lump sum, and (B) subject to certain exceptions, to contribute to the cost of COBRA coverage for health and dental insurance on the same basis as our contribution to company-provided health and dental insurance coverage in effect for active employees with the same coverage elections for a period of 12 months; and
- (ii) there will be no vesting acceleration for any equity award made to our NEOs on or after April 22, 2016, the effective date of the Severance Plan, and for any equity awards granted prior to the effective date of the Severance Plan, the treatment of such equity awards shall be dictated by the applicable terms, if any, of the award agreements and/or employment offer letter between such NEO and us.

Prior to February 1, 2020, Dr. Schenkein was eligible for the same benefits as described above, except that his salary continuation period was 9 months, his bonus payout was 75% of target, and his COBRA coverage was for a period of 9 months.

Benefits Provided Upon Termination in Connection with a Change in Control. Under the terms of the Severance Plan, subject to the execution and effectiveness of a release of claims against us, if a NEO's employment is terminated by us without cause or by such NEO for good reason within 18 months following a change in control:

- (i) for NEOs other than Dr. Schenkein, we are obligated (A) to pay an amount equal to his or her then-current monthly base salary for a period of 12 months and 100% of such NEO's target annual cash incentive in a lump sum, with the exception of Dr. Fouse, who will be entitled to an amount equal to her then-current monthly base salary for a period of 24 months and 200% of her target annual cash incentive in a lump sum, and (B) subject to certain exceptions, to contribute to the cost of COBRA coverage for health and dental insurance on the same basis as our contribution to company-provided health and dental insurance coverage in effect for active employees with the same coverage elections for a period of 12 months, with the exception of Dr. Fouse, who will be entitled to such insurance for a period of 24 months; and
- (ii) any unvested equity awards shall become fully vested; provided that the treatment for such NEOs' equity awards granted prior to the effective date of the Severance Plan shall be governed by the

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applicable terms, if any, of the award agreements and/or employment offer letter between such NEO and us.

Prior to February 1, 2020, Dr. Schenkein was eligible for the same benefits as described above, except that his salary continuation period was 9 months, his bonus payout was 75% of target, and his COBRA coverage was for a period of 9 months. For a discussion of the vesting acceleration for equity awards made to Drs. S. Biller and Bowden prior to April 22, 2016, the effective date of the Severance Plan, see “—*Employment Offer Letters*,” below.

Employment Offer Letters

We have entered into employment offer letters with each of our NEOs pursuant to which such NEO is employed “at will,” meaning each NEO or we may terminate the employment arrangement at any time. Such offer letters establish the NEO’s title, initial compensation arrangements, and eligibility for benefits made available to employees generally.

In connection with his appointment as executive chairman effective February 1, 2019, we entered into an amended and restated employee offer letter agreement with Dr. Schenkein, effective February 1, 2019, providing for the modified terms and conditions of his employment, including (i) an annual base salary of \$175,000; (ii) a pro-rated bonus in respect of the one-month period in 2019 that he served as our chief executive officer; (iii) a one-time grant of an option to purchase 45,719 shares of the Company’s common stock, exercisable at a price per share equal to \$58.86, the closing price on the date of grant, which shall vest as to 25% of the underlying shares on the first anniversary of the date of grant and as to the remaining shares on a monthly basis thereafter; (iv) a one-time grant of 8,324 RSUs, each unit representing a right to receive one share of the Company’s common stock, which shall vest in equal annual installments on the first, second and third anniversaries of the date of grant; (v) for any calendar year after 2019 during which he serves as executive chairman, an annual grant of equity awards with an aggregate value equal to 35% of the aggregate value of equity awards made in the ordinary course in such year to the then current chief executive officer, or the Annual Grant; and (vi) severance benefits in accordance with the Severance Plan, unless his employment ends for any reason effective as of either February 1, 2020 or February 1, 2021. Effective February 1, 2020, Dr. Schenkein transitioned from the role of our executive chairman to chairman and, as such, he will not receive the Annual Grant, will be compensated solely pursuant to our non-employee director compensation policy and will no longer be eligible for severance benefits under the Severance Plan.

The terms of the employment offer letter with Drs. S. Biller and Bowden provide for any equity awards that were made prior to April 22, 2016, the effective date of the Severance Plan, to accelerate as follows: (A) in the event of a change in control, 75% of such executive’s unvested shares shall vest immediately, and 25% of such executive’s unvested shares shall continue to vest, but shall be subject to immediate vesting in full if he is terminated without cause or resigns for good reason upon or within 18 months following such change in control, and (B) in the event that such executive is terminated without cause or resigns for good reason prior to a change in control, then 25% of the original number of shares underlying such executive’s equity awards shall immediately vest in full. As of the date hereof, all outstanding equity awards that were granted prior to April 22, 2016 to Drs. S. Biller and Bowden were fully vested, and as such, the aforementioned acceleration is no longer applicable to such awards.

In connection with her appointment as chief executive officer, we entered into an employee offer letter agreement with Dr. Fouse, effective February 1, 2019 providing for the terms of her employment, including (i) an annual base salary of \$725,000; (ii) an annual target bonus equal to 65% of her base salary; (iii) a one-time grant of an option to purchase 350,346 shares of common stock at an exercise price of \$53.87 per share, the closing price on the date of grant, which shall vest as to 25% of the underlying shares on February 1, 2020 and as to the remaining shares on a monthly basis thereafter; (iv) a one-time grant of 42,695 PSUs, each unit representing a

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contingent right to receive one share of common stock if, during the five-year period beginning on February 1, 2019 and ending on February 1, 2024, the closing price of our common stock equals or exceeds \$120 per share for at least 20 consecutive trading days at any time during such five-year period; (v) a monthly housing allowance of up to \$10,000 per month for no longer than twelve months following her start date; and (vi) severance benefits in accordance our Severance Plan, described above.

In connection with his appointment as chief legal officer, we entered into an employee offer letter agreement with Mr. J. Biller, effective December 3, 2019 providing for the terms of his employment, including (i) an annual base salary of \$500,000; (ii) a one-time signing bonus of \$100,000; (iii) an annual target bonus equal to 45% of his base salary; (iv) a one-time grant of an option to purchase 78,824 shares of common stock at an exercise price of \$39.11 per share, the closing price on the date of grant, which shall vest as to 25% of the underlying shares on December 3, 2020 and as to the remaining shares on a monthly basis thereafter; (v) a one-time grant of 17,259 RSUs, each unit representing a contingent right to receive one share of common stock, which shall vest in equal annual installments on the first, second and third anniversaries of the date of grant; (vi) a one-time grant of 25,568 PSUs, each unit representing a contingent right to receive one share of common stock, which shall vest as to one-third of the underlying shares of common stock upon the achievement of specified research, regulatory and commercial milestones; (vii) a monthly housing allowance of up to \$5,000 per month for no longer than nine months following his start date; and (viii) severance benefits in accordance our Severance Plan, described below.

Other Agreements

Dr. S. Biller retired as our chief scientific officer effective December 31, 2019. In connection with his transition to the role of strategic advisor, which he will hold for a period of one year, we entered into a letter agreement with Dr. S. Biller in January 2020 providing for the terms of his employment, including (i) an annual base salary of \$240,020; (ii) an annual target bonus equal to 35% of his adjusted base salary; (iii) continued vesting of his outstanding equity awards; and (iv) continued eligibility for employee benefits. Dr. S. Biller remained eligible for his annual cash bonus at his 2019 salary and target bonus level, as adjusted for company performance, but will not be eligible for annual equity awards or be covered by the Severance Plan in 2020.

We have entered into non-competition, non-solicitation, confidentiality and assignment agreements with each of our NEOs. Under the non-competition, non-solicitation, confidentiality and assignment agreements, each NEO has agreed (i) not to compete with us during such officer's employment and for a period of one year after the termination of such officer's employment, (ii) not to solicit our employees or customers during his employment and for a period of one year after the termination of such officer's employment, (iii) to protect our confidential and proprietary information, and (iv) to assign to us related intellectual property that is developed during the course of such officer's employment and for a period of six months after the termination of such officer's employment, that results from tasks assigned by us or that results from the use of our property, premises, or confidential information.

Potential Payments Upon Termination or Change in Control

In 2016, our compensation committee adopted the Severance Plan, which applies to our NEOs, other than Dr. Schenkein as of February 1, 2020, when he transitioned from the role of our executive chairman to chairman; and Dr. Biller as of January 1, 2020, when he transitioned from the role of our chief scientific officer to strategic advisor. The Severance Plan provides for severance benefits in the event of a termination of such NEO's employment by us without cause or by such employee for good reason, either (i) before or more than 18 months after a change in control, or (ii) within 18 months following a change in control. See "*Severance Benefits Plan*" for a further description of the terms of the Severance Plan. Receipt of any severance benefits under the Severance Plan require that the NEO comply with the provisions of any applicable non-competition, non-solicitation, and other obligations to us; and (b) execute and deliver a suitable severance agreement and

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release under which the NEO releases and discharges us and our affiliates from and on account of any and all claims between us and the NEO.

The following table sets forth potential payments upon termination and change in control that would be made to our NEOs, assuming that such termination or change in control occurred on December 31, 2019, after giving effect to the Severance Plan. In addition to the amounts shown in the table below, each NEO would be entitled to receive payments for base salary through the date of termination and payment for any reimbursable business expenses incurred.

| Name | Benefit | Triggering Event | | |
|---------------------------|----------------------------------|--|---|--|
| | | Change in Control (Without Termination of Employment) (\$) | Resignation For Good Reason or Termination Without Cause Before or More Than 18 Months Following a Change In Control (\$) | Resignation For Good Reason or Termination Without Cause Upon or Within 18 Months Following a Change-in-Control (\$) |
| Jacqualyn A. Fouse, Ph.D. | Severance Payments | — | 725,000(3) | 1,450,000(10) |
| | Bonus Payment | — | 471,250(4) | 942,500(11) |
| | Continuation of Benefits | — | 12,473(5) | 24,946(12) |
| | Market Value of Stock Vesting(1) | — | — | 3,812,026(13) |
| | Total | — | 1,208,723 | 6,229,472 |
| David P. Schenkein, M.D. | Severance Payments | — | 131,250(6) | 131,250(6) |
| | Bonus Payment | — | 25,391(7) | 25,391(7) |
| | Continuation of Benefits | — | —(8) | —(8) |
| | Market Value of Stock Vesting(1) | — | — | 1,207,366(13) |
| | Total | — | 156,841 | 1,364,007 |
| Andrew Hirsch | Severance Payments | — | 500,476(3) | 500,476(3) |
| | Bonus Payment | — | 225,214(4) | 225,214(4) |
| | Continuation of Benefits | — | 21,397(5) | 21,397(5) |
| | Market Value of Stock Vesting(1) | — | — | 2,355,985(13) |
| | Total | — | 747,088 | 3,103,073 |
| Jonathan Biller | Severance Payments | — | 500,000(3) | 500,000(3) |
| | Bonus Payment | — | 225,000(4) | 225,000(4) |
| | Continuation of Benefits | — | —(8) | —(8) |
| | Market Value of Stock Vesting(1) | — | — | 2,726,029(13) |
| | Total | — | 725,000 | 3,451,029 |
| Scott Biller, Ph.D. | Severance Payments | — | 480,041(3) | 480,041(3) |
| | Bonus Payment | — | 216,018(4) | 216,018(4) |
| | Continuation of Benefits | — | 14,229(5) | 14,229(5) |
| | Market Value of Stock Vesting(1) | 11,302(2) | 15,073(9) | 1,495,415(13) |
| | Total | 11,302 | 725,361 | 2,205,702 |
| Christopher Bowden, M.D. | Severance Payments | — | 490,538(3) | 490,538(3) |
| | Bonus Payment | — | 220,742(4) | 220,742(4) |
| | Continuation of Benefits | — | 21,397(5) | 21,397(5) |
| | Market Value of Stock Vesting(1) | 11,302(2) | 15,073(9) | 1,511,602(13) |
| | Total | 11,302 | 747,751 | 2,244,279 |

- (1) These awards would become vested and the value of the acceleration would be equal to (i), in the case of options, the shares subject to unvested options multiplied by the excess of the then current stock price over

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the exercise price of the options and (ii), in the case of RSUs and PSUs, the number of unvested RSUs and/or PSUs multiplied by the then current stock price. For purposes of this table, we have calculated the value of the acceleration using the closing price of our common stock on December 31, 2019, or \$47.75 per share.

- (2) Represents the acceleration of vesting as to 75% of the unvested equity awards held by the NEO which were granted prior to the adoption of the Severance Plan on April 22, 2016.
- (3) Represents 12 monthly payments of each executive's monthly base salary from the time of termination.
- (4) Represents a lump sum payment equal to each executive's target annual cash incentive bonus.
- (5) Represents the cost of continued health and dental benefits. These benefits are payable until 12 months following termination.
- (6) Represents 9 monthly payments of each executive's monthly base salary from the time of termination.
- (7) Represents 75% of the target bonus for which Dr. Schenkein was eligible at the time of termination. Pursuant to the terms of his amended and restated employee offer letter agreement, Dr. Schenkein was entitled to receive a pro-rated bonus for the period of time that he served as chief executive officer during 2019.
- (8) The executive was not enrolled for health or dental benefits at the time of termination.
- (9) Represents the acceleration of vesting as to 25% of the original equity awards held by the executive which were granted prior to April 22, 2016 (or if the number of unvested shares subject to such equity award is less than 25% of the original number of shares subject to such equity award, then all remaining unvested shares subject to such equity award shall fully vest). This acceleration of vesting only occurs if the NEO resigns for good reason or is terminated without cause before a change in control.
- (10) Represents 24 monthly payments of executive's monthly base salary from the time of termination.
- (11) Represents a lump sum payment equal to two years of executive's target annual cash incentive bonus.
- (12) Represents the cost of continued health and dental benefits. These benefits are payable until 24 months following termination.
- (13) Represents the acceleration of vesting as to 100% of the unvested equity awards held by the NEO.

Securities Authorized for Issuance Under Our Equity Compensation Plans

The following table provides information about the securities authorized for issuance under our equity compensation plans as of December 31, 2019.

Equity Compensation Plan Information

| Plan category | Number of securities to be issued upon exercise of outstanding options, warrants and rights (a) | Weighted-average exercise price of outstanding options, warrants and rights (b) | Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c) |
|--|--|--|--|
| Equity compensation plans approved by security holders | | | |
| 2007 Stock Incentive Plan | 331,671 | \$ 4.69 | — |
| 2013 Stock Incentive Plan | 6,897,605 | \$ 61.65(1) | 2,127,478(2) |
| 2013 Employee Stock Purchase Plan | — | — | 82,555(3) |
| Equity compensation plans not approved by security holders | | | |
| Total | 7,229,276 | \$ 58.61(1) | 2,210,033 |

- (1) The calculation does not take into account the 766,953 shares of common stock subject to outstanding RSUs or the 260,838 shares of common stock subject to outstanding PSUs. Such shares will be issued at the time such awards vest, without any cash consideration payable for those shares.
- (2) Our 2013 Stock Incentive Plan, or 2013 Plan, has an evergreen provision that allows for an annual increase in the number of shares available for issuance under the 2013 Plan to be added on the first day of each fiscal year, beginning with the fiscal year ending December 31, 2014 and continuing until the expiration of the 2013 Plan, equal to the least of 2,000,000 shares of our common stock, 4% of the number of shares of our common stock outstanding on the first day of the applicable fiscal year or an amount determined by our board of directors. On January 1, 2020, 2,000,000 additional shares were reserved for issuance under the 2013 Plan pursuant to this provision.
- (3) Our 2013 Employee Stock Purchase Plan, or 2013 ESPP, has an evergreen provision that allows for an annual increase in the number of shares available for issuance under the 2013 ESPP to be added on the first day of each fiscal year, beginning on January 1, 2014 and ending on December 31, 2023, in an amount equal to the least of 509,091 shares of our common stock, 1% of the total number of shares of our common stock outstanding on the first day of the applicable fiscal year or an amount determined by our board of directors. On January 1, 2020, 509,091 additional shares were reserved for issuance under the 2013 ESPP pursuant to this provision.

Compensation Committee Interlocks and Insider Participation

For 2019, the members of our compensation committee were Ms. Foster (chair), Mr. Clark, and Dr. Maraganore, none of whom is, or ever has been, an officer or employee of our company. None of our executive officers served as a director or a member of a compensation committee (or other committee serving an equivalent function) of any other entity, one of whose executive officers served as a director or member of our compensation committee during the fiscal year ended December 31, 2019.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Since January 1, 2019, we have engaged in the following transactions with our directors, director nominees, executive officers and holders of more than 5% of our voting securities (or their immediate family members), and affiliates of our directors, executive officers and 5% stockholders. We believe that all of the transactions described below were made on terms no less favorable to us than could have been obtained from unaffiliated third parties.

November 2019 Offering

In November 2019, we completed a public offering of 9,487,500 shares of common at a public offering price of \$31.00 per share. We received net proceeds from this offering of \$277.2 million, after deducting underwriting discounts and commissions paid by us. Dr. Fouse purchased 40,322 shares of common stock in the offering for approximately \$1.3 million. Dr. Schenkein purchased 8,064 shares of common stock in the offering for approximately \$250,000.

Celgene Corporation

Based solely on a Schedule 13D/A filed with the SEC on November 14, 2019, entities affiliated with Celgene Corporation, or Celgene, beneficially own more than 5% of our outstanding shares of common stock.

Public Offerings

In November 2019, we completed a public offering of 9,487,500 shares of common at a public offering price of \$31.00 per share. An affiliate of Celgene purchased 403,225 shares of our common stock in the offering for approximately \$12.5 million.

2010 Agreement

In April 2010, we entered into a collaboration agreement with Celgene. Under the terms of the 2010 Agreement, we are eligible to receive up to \$80.0 million in potential remaining milestone payments for our IDH1FA[®] program. The remaining potential milestone payments are comprised of: (i) up to \$55.0 million in milestone payments upon achievement of specified ex-U.S. regulatory milestone events, of which \$35.0 million relates to the first regulatory approval in any of China, Japan or a major European country, and (ii) a \$25.0 million milestone payment upon achievement of a specified ex-U.S. commercial milestone event. Pursuant to the 2010 Agreement, we may also receive royalties at tiered, low-double digit to mid-teen percentage rates on net sales of IDH1FA[®]. During the year ended December 31, 2019, we earned \$10.5 million in royalty revenue under the 2010 Agreement.

Effective as of August 2016, we and Celgene agreed to terminate the 2010 Agreement as to the program directed to the IDH1 target, for which ivosidenib is the lead development candidate. As a result, neither party has any further financial obligation, including royalties or milestone payments, to the other concerning ivosidenib or the IDH1 program.

Policies and Procedures for Related Party Transactions

We have adopted written policies and procedures for the review of any transaction, arrangement or relationship in which we are a participant, the amount involved exceeds \$120,000, and one of our executive officers, directors, director nominees or 5% stockholders (or their immediate family members), each of whom we refer to as a “related person,” has a direct or indirect material interest.

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If a related person proposes to enter into such a transaction, arrangement or relationship, which we refer to as a “related person transaction,” the related person must report the proposed related person transaction to our principal financial officer. The policy calls for the proposed related person transaction to be reviewed and, if deemed appropriate, approved by the audit committee. Whenever practicable, the reporting, review and approval will occur prior to entry into the transaction. If advance review and approval is not practicable, the committee will review, and, in its discretion, may ratify the related person transaction. The policy also permits the chairman of the committee to review and, if deemed appropriate, approve proposed related person transactions that arise between committee meetings, subject to ratification by the committee at its next meeting. Any related person transactions that are ongoing in nature will be reviewed annually.

A related person transaction reviewed under the policy will be considered approved or ratified if it is authorized by the committee after full disclosure of the related person’s interest in the transaction. As appropriate for the circumstances, the committee will review and consider:

- the related person’s interest in the related person transaction;
- the approximate dollar value of the amount involved in the related person transaction;
- the approximate dollar value of the amount of the related person’s interest in the transaction without regard to the amount of any profit or loss;
- whether the transaction was undertaken in the ordinary course of our business;
- whether the terms of the transaction are no less favorable to us than terms that could have been reached with an unrelated third party;
- the purpose of, and the potential benefits to us of, the transaction; and
- any other information regarding the related person transaction or the related person in the context of the proposed transaction that would be material to investors in light of the circumstances of the particular transaction.

The committee may approve or ratify the transaction only if the committee determines that, under all of the circumstances, the transaction is in or is not inconsistent with our best interests. The committee may impose any conditions on the related person transaction that it deems appropriate.

In addition to the transactions that are excluded by the instructions to the SEC’s related person transaction disclosure rule, our board of directors has determined that the following transactions do not create a material direct or indirect interest on behalf of related persons and, therefore, are not related person transactions for purposes of this policy:

- interests arising solely from the related person’s position as an executive officer of another entity (whether or not the person is also a director of such entity), that is a participant in the transaction, where (a) the related person and all other related persons own in the aggregate less than a 10% equity interest in such entity, (b) the related person and their immediate family members are not involved in the negotiation of the terms of the transaction and do not receive any special benefits as a result of the transaction, (c) the amount involved in the transaction equals less than the greater of \$1 million dollars or 2% of the annual consolidated gross revenues of the other entity that is a

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party to the transaction, and (d) the amount involved in the transaction equals less than 2% of our annual consolidated gross revenues;
and

- a transaction that is specifically contemplated by provisions of our charter or bylaws.

Our related persons transaction policy provides that transactions involving compensation of executive officers shall be reviewed and approved by the compensation committee in the manner specified in its charter.

PROPOSAL 2—ADVISORY VOTE ON EXECUTIVE COMPENSATION

We are providing our stockholders the opportunity to vote to approve, on an advisory, non-binding basis, the compensation of our NEOs as disclosed in this Proxy Statement in accordance with Section 14A of the Exchange Act. This proposal, which is commonly referred to as “say-on-pay,” is required by the Dodd-Frank Wall Street Reform, or the Dodd-Frank Act, and Consumer Protection Act of 2010, which added Section 14A to the Exchange Act. Our executive compensation program is designed to reward value creation for stockholders and to attract, motivate, and retain our executive officers, who are critical to our success. Under this program, our NEOs are rewarded for the achievement of our short- and long-term strategic and financial goals, which we believe serves to enhance short- and long-term value creation for our stockholders. The program contains elements of cash and equity-based compensation and is designed to align the interests of our executives with those of our stockholders and paying for performance.

The section of this Proxy Statement titled “Executive Compensation” beginning on page 34, including “Compensation Discussion and Analysis,” describes in detail our executive compensation program and the decisions made by our compensation committee. As we describe in greater detail in the “Compensation Discussion and Analysis” section, our executive compensation program is designed to reward value creation for stockholders and progress towards achieving our mission and promote company performance. At the same time, we believe our program does not encourage excessive risk-taking by management. While we do not have a formal or informal policy for allocating between long-term and short-term compensation, between cash and non-cash compensation or among different forms of non-cash compensation, we generally strive to provide our NEOs with a mix of short-term and long-term performance-based incentives to encourage strong performance, and our board of directors believes that this link between compensation and the achievement of our short- and long-term business goals has helped drive our performance over time.

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

RESOLVED, that the compensation paid to the company’s NEOs, as disclosed pursuant to the compensation disclosure rules of the SEC, including the “Compensation Discussion and Analysis”, the compensation tables and any related material disclosed in this Proxy Statement, is hereby approved.

As an advisory vote, this proposal is not binding. The outcome of this advisory vote does not overrule any decision by the company or the board of directors (or any committee thereof), create or imply any change to the fiduciary duties of the company or the board of directors (or any committee thereof), or create or imply any additional fiduciary duties for the company or the board of directors (or any committee thereof). However, our compensation committee and board of directors value the opinions expressed by our stockholders in their vote on this proposal and intend to consider carefully the outcome of the vote when making future compensation decisions for NEOs. Our board of directors has adopted a policy of providing annual advisory votes to approve the compensation of our NEOs. The next advisory vote to approve the compensation of our NEOs will occur at our 2021 annual meeting of stockholders.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT STOCKHOLDERS VOTE, ON AN ADVISORY BASIS, TO APPROVE THE COMPENSATION OF OUR NEOS BY VOTING ‘FOR’ THIS PROPOSAL.

**PROPOSAL 3:
RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTANTS**

The audit committee has appointed PricewaterhouseCoopers LLP (“PwC”) as the company’s independent registered public accounting firm for the fiscal year ending December 31, 2020 and the board of directors has directed that management submit the selection of independent registered public accountants for ratification by the stockholders at the annual meeting. PwC has served as the company’s registered public accountant since May 5, 2017. Representatives of PwC are expected to participate in the annual meeting, will have an opportunity to make a statement if they so desire, and be available to respond to appropriate questions.

Stockholder ratification of the appointment of PwC as the company’s independent registered public accounting firm is not required by Delaware law, our certificate of incorporation or our bylaws. However, the board of directors is submitting the audit committee’s selection of PwC 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 to retain that firm. Even if the selection is ratified, the audit committee in its discretion may direct the appointment of a different independent registered public accounting firm at any time during the year if the audit committee determines that such a change would be in the best interests of the company and its stockholders.

Independent Registered Public Accountants’ Fees

The following table represents aggregate fees billed to us for services related to the fiscal years ended December 31, 2019 and 2018 by PwC.

| | Fiscal Year Ended December 31, | |
|-----------------------|---|---------------------|
| | 2019 | 2018 |
| Audit Fees(1) | \$ 1,287,000 | \$ 1,160,842 |
| Audit Related Fees(2) | — | 10,000 |
| Tax Fees(3) | 111,963 | 96,031 |
| All Other Fees(4) | 6,356 | 6,994 |
| Total | \$ 1,405,319 | \$ 1,273,867 |

- (1) Audit fees consist of fees billed for professional services performed for the audit of our annual consolidated financial statements, the review of interim consolidated financial statements, and related services that are normally provided in connection with registration statements, such as comfort letters and SEC comment letter filings.
- (2) Audit related fees consist of fees billed for assurance and related services that are reasonably related to the performance of the audit or review of our consolidated financial statements, such as fees for the adoption of new accounting standards.
- (3) Tax fees consist of fees for professional services, including tax consulting, compliance, and transfer pricing services.
- (4) All other fees consist of database subscription fees.

The audit committee has considered whether the provision of non-audit services is compatible with maintaining the independence of PwC, and has concluded that the provision of such services is compatible with maintaining such independence.

Pre-Approval Policies and Procedures

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

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

Our audit committee may also delegate to one or more subcommittees or an individual member of our audit committee the authority to approve any audit or non-audit services to be provided to us by our registered public accounting firm. Any approval of services by a subcommittee or member of our audit committee pursuant to this delegated authority is reported on at the next meeting of our audit committee. During our 2019 and 2018 fiscal years, all of the services provided by PwC were pre-approved by our audit committee.

Recommendation of the Board of Directors

OUR BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT THE STOCKHOLDERS VOTE TO RATIFY THE APPOINTMENT OF PRICEWATERHOUSECOOPERS LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2020.

STOCKHOLDER PROPOSALS

Proposals of stockholders, including nominations for election to our board of directors, intended to be included in our proxy statement and form of proxy relating to, and presented at, our annual meeting of stockholders to be held in 2021 must be received by us no later than December 17, 2020, which is 120 days prior to the first anniversary of the mailing date of this proxy, unless the date of the 2021 annual meeting of stockholders is changed by more than 30 days from the anniversary of the Annual Meeting, in which case the deadline for such proposals will be a reasonable time before we begin to print and send our proxy materials. These proposals must comply with the requirements as to form and substance established by the SEC for such proposals in order to be included in the proxy statement.

In addition, our bylaws establish an advance notice procedure for nominations for election to our board of directors and other matters that stockholders wish to present for action at an annual meeting, but which will not be included in our proxy statement. In general, notice must be received at our principal executive offices not less than 90 calendar days before nor more than 120 calendar days before the one year anniversary of the previous year's annual meeting of stockholders. Therefore, to be presented at our 2021 annual meeting of stockholders, such a proposal must be received by us no earlier than January 28, 2021 and no later than February 27, 2021. However, if the date of the annual meeting is more than 20 days earlier or more than 60 days later than such anniversary date, notice must be received not earlier than the close of business 120 calendar days prior to such annual meeting and no later than the close of business on the later of 90 days prior to such annual meeting and 10 days following the day on which notice of the date of such annual meeting was mailed or public announcement of the date of such annual meeting was first made. If the stockholder fails to give notice by these dates, then the persons named as proxies in the proxies solicited by the board of directors for the 2021 annual meeting may exercise discretionary voting power regarding any such proposal. Stockholders are advised to review our bylaws which also specify requirements as to the form and content of a stockholder's notice.

Any proposals, notices or information about proposed director candidates should be sent to:

William Cook, Assistant Corporate Secretary
Agius Pharmaceuticals, Inc.
88 Sidney Street
Cambridge, MA 02139

OTHER MATTERS

We do not know of any business that will be presented for consideration or action by the stockholders at the Annual Meeting other than that described in this Proxy Statement. If, however, any other business is properly brought before the meeting, shares represented by proxies will be voted in accordance with the best judgment of the persons named in the proxies or their substitutes.

We hope that you will virtually attend the Annual Meeting. Whether or not you plan to attend the Annual Meeting virtually, we urge you to vote your shares over the internet or by telephone, or to complete, date, sign and return the proxy card that may be delivered to you upon request in the accompanying postage-prepaid envelope. A prompt response will greatly facilitate arrangements for the meeting, and your cooperation will be appreciated.



ANNUAL MEETING OF AGIOS PHARMACEUTICALS, INC.

Date: Thursday, May 28, 2020
Time: 9:00 A.M. (Eastern Time)
Place: Meeting live via the internet - please visit proxydocs.com/AGIO for more details

Please make your marks like this: Use dark black pencil or pen only

The Board of Directors Recommends a Vote **FOR** each of the director nominees listed in proposal 1 and **FOR** proposals 2 and 3.

1: To elect each of the two Class I director nominees set forth in the Proxy Statement for three-year terms expiring at the 2023 annual meeting of stockholders.

- Nominees:**
 (a) Paul J. Clancy
 (b) Ian T. Clark

| | | |
|------------------------------|--|----------------------------|
| Vote For All Nominees | Withhold Vote From All Nominees | Vote For All Except |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

INSTRUCTIONS: To withhold authority to vote for any nominee, mark the "Vote For All Except" box and write the letter(s) of the nominee(s) in the space provided to the right.

2: To vote, on an advisory basis, to approve named executive officer compensation.

| | | | |
|--|--------------------------|--------------------------|--------------------------|
| | For | Against | Abstain |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

3: To ratify the appointment of PricewaterhouseCoopers LLP as the independent registered public accounting firm for the fiscal year ending December 31, 2020.

| | | | |
|--|--------------------------|--------------------------|--------------------------|
| | For | Against | Abstain |
| | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

To attend the meeting online and/or vote your shares during the annual meeting online, please register at www.proxydocs.com/AGIO.

Authorized Signatures - This section must be completed for your Instructions to be executed.

| | |
|------------------|-------------------|
| | |
| Please Sign Here | Please Date Above |
| | |
| Please Sign Here | Please Date Above |

Please sign exactly as your name(s) appears on your stock certificate. If held in joint tenancy, all persons should sign. Trustees, administrators, etc., should include title and authority. Corporations should provide full name of corporation and title of authorized officer signing the proxy.

↑ Please separate carefully at the perforation and return just this portion in the envelope provided. ↑



**Annual Meeting of Agios Pharmaceuticals, Inc.
 to be held on Thursday, May 28, 2020
 for Holders as of April 7, 2020**

This proxy is being solicited on behalf of the Board of Directors
VOTE BY:

INTERNET

- Go To www.proxydocs.com/AGIO
- Cast your vote online 24 hours a day/7 days a week.
 - Have your Proxy Card/Voting Instructions Form ready.

TELEPHONE

- Call **866-509-2148**
- Use any touch-tone telephone toll-free 24 hours a day/7 days a week.
 - **Have your Proxy Card/Voting Instruction Form ready.**
 - Follow the simple recorded instructions.

OR

MAIL

- OR**
- Mark, sign and date your Proxy Card/Voting Instruction Form.
 - Detach your Proxy Card/Voting Instruction Form.
 - Return your Proxy Card/Voting Instruction Form in the postage-paid envelope provided.

The undersigned hereby appoints Jacquelyn Fouse, Andrew Hirsch and Jonathan Biller, and each of them, as the true and lawful attorneys of the undersigned, with full power of substitution and revocation, and authorizes them, and each of them, to vote all the shares of common stock of Agios Pharmaceuticals, Inc. which the undersigned is entitled to vote at said meeting and any adjournment thereof upon the matters specified and upon such other matters as may be properly brought before the meeting or any adjournment thereof, conferring authority upon such true and lawful attorneys to vote in their discretion on such other matters as may properly come before the meeting and revoking any proxy heretofore given.

THE SHARES REPRESENTED BY THIS PROXY WILL BE VOTED AS DIRECTED OR, IF NO DIRECTION IS GIVEN, SHARES WILL BE VOTED FOR THE ELECTION OF THE DIRECTORS LISTED IN PROPOSAL 1 AND FOR PROPOSALS 2 AND 3. THE PROXIES WILL VOTE IN THEIR DISCRETION ON ANY OTHER BUSINESS AS MAY PROPERLY COME BEFORE THE MEETING AND ANY ADJOURNMENT THEREOF.

**PROXY TABULATOR FOR
 AGIOS PHARMACEUTICALS, INC.
 c/o MEDIATE COMMUNICATIONS
 P.O. BOX 8016
 CARY, NC 27512-9903**





**Proxy for Annual Meeting of Stockholders to be held
on Thursday May 28, 2020**

This proxy is being solicited on behalf of the Board of Directors

Please vote, date and sign this Proxy on the other side and return it in the enclosed envelope.

The Stockholder signing on the reverse side (the “undersigned”), having received the Annual Report and Proxy Statement, hereby appoint(s) Jacquelyn Fouse, Andrew Hirsch and Jonathan Biller and each of them, Proxies of the undersigned (with full power of substitution) to virtually attend the Annual Meeting of Agios Pharmaceuticals, Inc. (the “Company”) to be held on Thursday May 28, 2020, and all adjournments and postponements thereof (the “Meeting”), and to vote all shares of Common Stock of the Company that the undersigned would be entitled to vote, if personally present, in regard to all matters that may properly come before the Meeting.

The undersigned hereby confer(s) upon the Proxies, and each of them, discretionary authority to consider and act upon such business, matters or proposals as may properly come before the Meeting. **The Proxy, when properly executed, will be voted in the manner specified herein. If no specification is made, the Proxies intend to vote FOR all nominees for director in Proposal 1 and FOR proposals 2 and 3.**

↑ Please separate carefully at the perforation and return just this portion in the envelope provided. ↑