
UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

SCHEDULE 14A
(Rule 14a-101)

INFORMATION REQUIRED IN PROXY STATEMENT
SCHEDULE 14A INFORMATION

Proxy Statement Pursuant to Section 14(a) of the
Securities Exchange Act of 1934

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

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

ZIOPHARM Oncology, 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:

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 - Fee paid previously with preliminary materials:
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 - (1) Amount previously paid:

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

 - (3) Filing Party:

 - (4) Date Filed:

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-



**One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor
Boston, Massachusetts 02129**

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS
To be Held on September 18, 2018**

To the stockholders of Ziopharm Oncology, Inc.:

NOTICE IS HEREBY GIVEN that the 2018 annual meeting of stockholders of Ziopharm Oncology, Inc. (the "Company") will be held, pursuant to due call by the board of directors, at the offices of Cooley LLP located at 1114 Avenue of the Americas, 46th Floor, New York, NY 10036-7798, on Tuesday, September 18, 2018, at 10:00 a.m. Eastern time, or at any adjournment or adjournments thereof, for the purpose of considering and taking appropriate action with respect to the following:

1. To elect the board's five nominees for director named in the accompanying proxy statement to hold office until the 2019 annual meeting of stockholders and until their successors are duly elected and qualified;
2. To ratify the selection by the audit committee of the board of directors of RSM US LLP as the Company's independent registered public accounting firm of the Company for its fiscal year ending December 31, 2018;
3. To approve, on an advisory basis, the compensation of the Company's named executive officers as disclosed in the proxy statement;
4. To approve an amendment to the Company's 2012 Equity Incentive Plan, as amended, to increase the aggregate number of shares of common stock authorized for issuance thereunder from 9,000,000 shares to 14,000,000 shares; and
5. To transact any other business as may properly come before the meeting or any adjournments thereof.

Pursuant to action of the board of directors, stockholders of record at the close of business on July 23, 2018 will be entitled to vote at the annual meeting or any adjournments thereof. Your attention is directed to the proxy statement accompanying this notice for a more complete statement of the matters to be considered at the meeting. A copy of Ziopharm Oncology, Inc.'s Annual Report for its fiscal year ended December 31, 2017 is also available on the Company's corporate website and at <http://www.proxyvote.com>. The Company's website and its contents are not incorporated into this proxy statement.

By Order of the Board of Directors,

A handwritten signature in black ink, appearing to read 'R. Hadfield', is written over a light blue horizontal line.

Robert Hadfield
Secretary and General Counsel
Boston, Massachusetts
August 8, 2018

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

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**Ziopharm Oncology, Inc.
One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor
Boston, Massachusetts 02129**

**PROXY STATEMENT
FOR THE ANNUAL MEETING OF STOCKHOLDERS**

To Be Held On September 18, 2018

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS AND VOTING

Why did I receive a notice regarding the availability of proxy materials through the internet?

Pursuant to rules adopted by the Securities and Exchange Commission, or the SEC, we have elected to provide access to our proxy materials over the internet. Accordingly, we have sent you a Notice of Internet Availability of Proxy Materials, or the Notice, because the board of directors of Ziopharm Oncology, Inc. (sometimes referred to as “we,” “us,” “our” or the “Company”) is soliciting your proxy to vote at the 2018 Annual Meeting of Stockholders, or the annual meeting, including at any adjournments or postponements thereof. All stockholders will have the ability to access the proxy materials through the website referred to in the Notice or to request a printed set of the proxy materials. Instructions on how to access the proxy materials over the internet or to request a printed set may be found in the Notice.

We intend to mail the Notice on or about August 8, 2018 to all stockholders of record entitled to vote at the annual meeting.

Will I receive any other proxy materials by mail?

We may send you a proxy card, along with a second Notice, on or after August 19, 2018.

How do I attend the annual meeting?

The annual meeting will be held on Tuesday, September 18, 2018, at 10:00 a.m. Eastern time, at the offices of Cooley LLP located at 1114 Avenue of the Americas, 46th Floor, New York, NY 10036-7798. Information on how to vote in person at the annual meeting is discussed below.

Who can vote at the annual meeting?

Only stockholders of record at the close of business on July 23, 2018, which we refer to as the Record Date, will be entitled to vote at the annual meeting. On the Record Date, there were 142,379,770 shares of common stock outstanding and entitled to vote.

Stockholder of Record — Shares Registered in Your Name: If on July 23, 2018 your shares were registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, LLC, then you are a stockholder of record. As a stockholder of record, you may vote in person at the annual meeting or vote by proxy. Whether or not you plan to attend the annual meeting, we urge you to vote by proxy over the telephone, through the internet or using a proxy card that you may request as instructed below, to ensure your vote is counted.

Beneficial Owner — Shares Registered in the Name of a Broker or Bank: If on July 23, 2018 your shares were not registered in your name, but instead are held in an account at a brokerage firm, bank, dealer or similar organization, then you are the beneficial owner of shares held in “street name” and the Notice is being forwarded to you by that organization. The organization holding your account is considered to be the stockholder of record for purposes of voting at the annual meeting. As a beneficial owner, you have the right to direct your broker or

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other agent regarding how to vote the shares in your account. You are also invited to attend the annual meeting. Since you are not the stockholder of record, however, you may not vote your shares in person at the annual meeting unless you request and obtain a valid proxy from your broker or other agent.

What am I voting on?

There are four matters scheduled for a vote:

1. Election of five directors (Proposal No. 1);
2. Ratification of the selection by the audit committee of the board of directors of RSM US LLP as the Company's independent registered public accounting firm for its fiscal year ending December 31, 2018 (Proposal No. 2);
3. Approval, on an advisory basis, of the compensation of the Company's named executive officers as disclosed in this proxy statement (Proposal No. 3); and
4. Approval of the proposed amendment to the Company's 2012 Equity Incentive Plan, as amended, to increase the number of shares of common stock authorized for issuance thereunder from 9,000,000 shares to 14,000,000 shares (Proposal No. 4).

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

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

How do I vote?

With respect to Proposal No. 1, you may vote "For" all the nominees to the board of directors or you may "Withhold" your vote for any of the nominees you specify. With respect to the other proposals, you may vote "For" or "Against," or you may abstain from voting.

We provide internet proxy voting to allow you to vote your shares online, with procedures designed to ensure the authenticity and correctness of your proxy vote instructions. Please be aware, however, that you must bear any costs associated with your internet access, such as usage charges from internet access providers and telephone companies.

Stockholder of Record — Shares Registered in Your Name: If you are a stockholder of record, you may vote in person at the annual meeting, vote by proxy over the telephone, vote by proxy through the internet, or vote by proxy using a proxy card that you may request or that we may elect to deliver at a later time. Whether or not you plan to attend the annual meeting, we urge you to vote by proxy to ensure your vote is counted. You may still attend the annual meeting and vote in person even if you have already voted by proxy.

- To vote in person, come to the annual meeting and we will give you a ballot when you arrive.
- To vote using a proxy card, you may request a proxy card by following the instructions in the Notice. Once you receive the proxy card, simply complete, sign and date the proxy card and return it promptly in the envelope provided. If you return your signed proxy card to us before the annual meeting, we will vote your shares as you direct.
- To vote over the telephone from a location in the United States, dial toll-free 1-800-690-6903, using a touch-tone phone and follow the recorded instructions. You will be asked to provide the company number and control number from the Notice. Your vote must be received by 11:59 p.m. Eastern time, on September 17, 2018 to be counted.

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- To vote through the internet, go to www.proxyvote.com to complete an electronic proxy card. You will be asked to provide the company number and account number from the Notice. Your vote must be received by 11:59 p.m. Eastern time, on September 17, 2018 to be counted.

Beneficial Owner — Shares Registered in the Name of a Broker or Bank: If you are a beneficial owner of shares registered in the name of your broker, bank, or other agent, you should have received a Notice containing voting instructions from that organization rather than from us. Simply follow the voting instructions in the Notice to ensure that your vote is counted. To vote in person at the annual meeting, you must obtain a valid proxy from your broker, bank, or other agent. Follow the instructions from your broker or bank included with these proxy materials, or contact your broker or bank to request a proxy form.

How many votes do I have?

On each matter to be voted upon, you have one vote for each share of common stock you own as of July 23, 2018.

If I am a stockholder of record and I do not vote, or if I return a proxy card or otherwise vote without giving specific voting instructions, what happens?

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

If you return a signed and dated proxy card or otherwise vote without marking voting selections, your shares will be voted, as applicable, “For” the election of all five nominees for director, “For” the ratification of the selection by the audit committee of the board of directors of RSM US LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2018, “For” the approval, on an advisory basis, of the compensation of our named executive officers as disclosed in this proxy statement and “For” the amendment to our 2012 Equity Incentive Plan. If any other matter is properly presented at the annual meeting, your proxyholder (one of the individuals named on your proxy card) will vote your shares using his best judgment.

If I am a beneficial owner of shares held in street name and I do not provide my broker or bank with voting instructions, what happens?

If you are a beneficial owner of shares held in street name and you do not instruct your broker, bank or other agent how to vote your shares, your broker, bank or other agent may still be able to vote your shares in its discretion. Under the rules of the New York Stock Exchange, or NYSE, brokers, banks and other securities intermediaries that are subject to NYSE rules may use their discretion to vote your “uninstructed” shares with respect to matters considered to be “routine” under NYSE rules, but not with respect to “non-routine” matters. Proposals No. 1, 3 and 4 are considered to be “non-routine” under NYSE rules meaning that your broker may not vote your shares on those proposals in the absence of your voting instructions. However, Proposal No. 2 is considered to be a “routine” matter under NYSE rules meaning that if you do not return voting instructions to your broker by its deadline, your shares may be voted by your broker in its discretion on Proposal No. 2.

If you a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you must provide voting instructions to your broker, bank or other agent by the deadline provided in the materials you receive from your broker, bank or other agent.

Who is paying for this proxy solicitation?

We will pay for the entire cost of soliciting proxies. In addition to these proxy materials, our directors and employees may also solicit proxies in person, by telephone, or by other means of communication. Directors and employees will not be paid any additional compensation for soliciting proxies. We may also reimburse brokerage firms, banks and other agents for the cost of forwarding proxy materials to beneficial owners.

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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 each Notice to ensure that all of your shares are voted.

Can I change my vote after submitting my proxy?

Stockholder of Record: Shares Registered in Your Name

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

- You may submit another properly completed proxy card with a later date.
- You may grant a subsequent proxy by telephone or through the internet.
- You may send a timely written notice that you are revoking your proxy to our Secretary at our principal executive offices at One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor, Boston, Massachusetts 02129.
- You may attend the annual meeting and vote in person by ballot. Simply attending the annual meeting will not, by itself, revoke your proxy.

Your most current proxy card, telephone proxy or internet proxy is the one that is counted.

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

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

How are votes counted?

Votes will be counted by the inspector of election appointed for the annual meeting, who will separately count, for the proposal to elect directors (Proposal No. 1), votes “For,” “Withhold” and broker non-votes; and with respect to all other proposals, votes “For” and “Against,” abstentions and, if applicable, broker non-votes. Abstentions will be counted towards the vote total for Proposals Nos. 2, 3 and 4, and will have the same effect as “Against” votes. Broker non-votes on Proposals No. 1, 3 and 4 will have no effect and will not be counted towards the vote total for any proposal.

What are “broker non-votes”?

As discussed above, when a beneficial owner of shares held in street name does not give voting instructions to his or her broker, bank or other securities intermediary holding his or her shares as to how to vote on matters deemed to be “non-routine” under NYSE rules, the broker, bank or other such agent cannot vote the shares. These un-voted shares are counted as “broker non-votes.” Proposals No. 1, 3 and 4 are considered to be “non-routine” under NYSE rules and we therefore expect broker non-votes to exist in connection with those proposals.

As a reminder, if you are a beneficial owner of shares held in street name, in order to ensure your shares are voted in the way you would prefer, you must provide voting instructions to your broker, bank or other agent by the deadline provided in the materials you receive from your broker, bank or other agent.

How many votes are needed to approve each proposal?

- For Proposal No. 1, which relates to the election of directors, the five nominees receiving the most “For” votes (from the holders of votes of shares present in person or represented by proxy and entitled to vote on the election of directors) will be elected. Only votes “For” will affect the outcome. Broker non-votes will have no effect.

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- To be approved, Proposal No. 2, which relates to the ratification of the appointment of RSM US LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018, must receive “For” votes from the holders of a majority of shares present in person or represented by proxy and entitled to vote at the meeting. If you “Abstain” from voting, it will have the same effect as an “Against” vote.
- To be approved, Proposal No. 3, which relates to the approval, on an advisory basis, of the compensation of our named executive officers, will be considered approved if it receives “For” votes from the holders of a majority of shares present in person or represented by proxy and entitled to vote at the annual meeting. If you “Abstain” from voting, it will have the same effect as an “Against” vote. Broker non-votes will have no effect.
- To be approved, Proposal No. 4, which relates to the amendment to our 2012 Equity Incentive Plan, must receive “For” votes from the holders of a majority of shares present in person or represented by proxy and entitled to vote at the meeting. If you “Abstain” from voting, it will have the same effect as an “Against” vote. Broker non-votes will have no effect.

What is the quorum requirement?

A quorum of stockholders is necessary to hold a valid meeting. A quorum will be present if stockholders holding at least a majority of the outstanding shares entitled to vote are present at the annual meeting in person or represented by proxy. On the Record Date, there were 142,379,770 shares outstanding and entitled to vote. Thus, the holders of 71,189,886 shares must be present in person or represented by proxy at the annual meeting to have a quorum.

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

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

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

A COPY OF OUR 2017 ANNUAL REPORT (INCLUDING A COPY OF OUR ANNUAL REPORT ON FORM 10-K FOR THE FISCAL YEAR ENDED DECEMBER 31, 2017, AS AMENDED, AND FILED WITH THE SEC) IS AVAILABLE WITHOUT CHARGE UPON WRITTEN REQUEST TO ZIOPHARM ONCOLOGY, INC., ONE FIRST AVENUE, PARRIS BUILDING 34, NAVY YARD PLAZA, THIRD FLOOR, BOSTON, MASSACHUSETTS 02129, ATTENTION: LEGAL AFFAIRS DEPARTMENT OR YOU MAY CONTACT US AT (617) 259-1970.

PROPOSALS

Proposal No. 1. Election of Directors

Our board of directors currently consists of the following five directors: Sir Murray Brennan, M.D., GNZM; James A. Cannon; Scott Tarriff; Randal J. Kirk; and Senator Wyche Fowler. Sir Murray Brennan and Senator Wyche Fowler, who have each served as a director since 2005, were not nominated for re-election and their terms as directors will expire at the annual meeting. On March 12, 2018, Michael Weiser, M.D., Ph.D. resigned from our board of directors and all committees thereof. Following Dr. Weiser's resignation, there are two vacancies on our board of directors.

Each director nominee identified below, other than Messrs. Ezickson and Pagán, was previously elected by the stockholders. Messrs. Ezickson and Pagán were each recommended for nomination to the board of directors by our corporate governance and nominating committee. A third party search firm recommended each of Messrs. Ezickson and Pagán to our board, which then independently evaluated Messrs. Ezickson and Pagán. If elected, each nominee has consented to serve as one of our directors, to hold office until the next annual meeting of stockholders, until his successor is elected and shall have qualified, or until his earlier death, resignation or removal. Proxies cannot be voted for a greater number of persons than the number of nominees named in the proxy statement. If any director nominee should withdraw or otherwise become unavailable to serve, the proxies which would have otherwise been voted for that director nominee may be voted for a substitute director nominee selected by our board. We are not aware of any reason that a nominee will be unable or unwilling to serve as a director.

In 2016, we adopted a Director Resignation Policy. Under this policy, any nominee in an uncontested election who does not receive a majority of the votes cast (i.e. receives a greater number of votes "withheld" from his or her election than votes "for" in such election) shall submit his or her offer of resignation for consideration by the corporate governance and nominating committee. The corporate governance and nominating committee shall consider all of the relevant facts and circumstances and recommend to the board the action to be taken with respect to such offer of resignation, and the board will then act on such recommendation.

Assuming that all nominees are elected at the annual meeting, we will have two vacancies on our board following the annual meeting. Vacancies on the board may be filled only by persons elected by a majority of the remaining directors or may be elected by a plurality of the stockholder votes cast. A director elected by the board to fill a vacancy, including vacancies created by an increase in the number of directors, shall serve for the remainder of the full term or until the director's successor is duly elected and qualified, or until the director's earlier death, resignation or removal. Our board of directors may appoint a director or directors to fill the vacancies on the board at any time following the annual meeting.

Our corporate governance and nominating committee seeks to assemble a board that, as a whole, possesses the appropriate balance of professional and industry knowledge, financial expertise and management experience necessary to oversee and direct our business. To that end, the corporate governance and nominating committee has evaluated the board's current members in the broader context of the board's overall composition. The corporate governance and nominating committee maintains a goal of recruiting members who complement and strengthen the skills of other members and who also exhibit integrity, collegiality, sound business judgment and other qualities that the corporate governance and nominating committee views as critical to effective functioning of the board.

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The following table sets forth each nominee to be elected at the annual meeting, the year each nominee was first elected as a director, the position(s) currently held by each nominee with us and the year each nominee's term will expire, if such nominee is elected at the annual meeting.

<u>Name of Nominee</u>	<u>Position(s) with the Company</u>	<u>Year First Became a Director</u>	<u>Year Proposed Term Will Expire</u>
Scott Tarriff	Lead Director ⁽¹⁾	2015	2019
James A. Cannon	Director	2005	2019
Randal J. Kirk	Director	2011	2019
Elan Z. Ezickson	Director	—	2019
Douglas W. Pagán	Director	—	2019

- (1) In connection with the board's decision to not nominate Dr. Brennan for re-election, the board of directors appointed Scott Tarriff to serve as the non-executive Lead Director, effective August 2, 2018.

None of the director nominees are related by blood, marriage or adoption to any of our other director nominees or executive officers. Mr. Randal J. Kirk, as a designee of Intrexon Corporation, or Intrexon, has been nominated and recommended for re-election at the annual meeting in accordance with a Stock Purchase Agreement dated January 6, 2011 between us and Intrexon. Pursuant to that agreement, we agreed that at each stockholders' meeting at which directors are to be elected, we will nominate and recommend for election to the board an individual designated by Intrexon, provided that the board determines that he or she is a suitable candidate. We further agreed that if Intrexon's designee is not elected to the board by our stockholders, then, at Intrexon's election, such designee will be entitled to attend all board and committee meetings as an observer subject to certain conditions and limitations. Other than Mr. Kirk, no other the director nominee is party to an arrangement or understanding with any person pursuant to which the nominee is to be selected or nominated for election as a director.

Vote Required

Pursuant to our bylaws, directors are elected by a plurality of the votes of the holders of shares present in person or represented by proxy and entitled to vote on the election of directors. The five nominees receiving the highest number of "For" votes will be elected. Shares represented by executed proxies will be voted, if authority to do so is not withheld, for the election of the five nominees named above. If you do not vote for a particular nominee, or you withhold authority for one or all nominees, your vote will not count either "For" or "Against" the nominee, although it will be counted for purposes of determining whether there is a quorum.

The board recommends that you vote FOR the election of each named nominee.

Proposal No. 2. Ratification of Selection of Independent Registered Public Accounting Firm

The board of directors and management are committed to the quality, integrity and transparency of our financial reports. Independent auditors play an important part in our system of financial control. In accordance with the duties set forth in its written charter, the audit committee of the board has selected RSM US LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018. RSM US LLP has audited the Company's financial statements since 2010. A representative of RSM US LLP is expected to attend the annual meeting. He or she will have an opportunity to make a statement if he or she so desires and will be available to respond to appropriate questions from stockholders.

We are not required by statute or our bylaws or other governing documents to obtain stockholder ratification of the appointment of RSM US LLP as our independent registered public accounting firm. The audit committee has submitted the selection of RSM US LLP to the stockholders for ratification as a matter of good corporate practice. If the stockholders do not ratify the appointment, the audit committee may reconsider its selection. Notwithstanding the proposed ratification of the selection of RSM US LLP by the stockholders, the audit committee, in its discretion, may direct the appointment of a new independent registered public accounting firm at any time during the year without notice to, or the consent of, the stockholders, if the audit committee determines that such a change would be in our best interests and the best interests of our stockholders.

Vote Required

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote at the annual meeting will be required to ratify the selection of RSM US LLP. Abstentions will be counted toward the tabulation of votes cast on proposals presented to the stockholders and will have the same effect as "Against" votes.

The board recommends that you vote FOR the ratification of the selection of RSM US LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2018.

Proposal No. 3. Advisory Vote on Executive Compensation

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, and Section 14A of the Securities Exchange Act of 1934, as amended, or the Exchange Act, our stockholders are entitled to vote to approve, on an advisory basis, the compensation of our named executive officers as disclosed in this proxy statement in accordance with the SEC rules. At the 2017 annual meeting of stockholders, our stockholders indicated their preference that we solicit a non-binding advisory vote on the compensation of the named executive officers, commonly referred to as a “say-on-pay vote,” every year. The Board has adopted a policy that is consistent with that preference indicated by our stockholders. Accordingly, this year we are again asking the stockholders to approve, on an advisory basis, the compensation of our named executive officers as disclosed in this proxy statement.

This vote is not intended to address any specific item of compensation, but rather the overall compensation of our named executive officers and the philosophy, policies and practices described in this proxy statement. The compensation of our named executive officers is disclosed in the section entitled “Executive Compensation” below, including the tabular and narrative disclosures set forth in such section under the headings “Executive Compensation Tables” and “Compensation Discussion and Analysis.” As discussed in those disclosures, we believe that our compensation policies and decisions are focused on pay-for-performance principles and strongly aligned with our stockholders’ interests. Compensation of our named executive officers is designed to enable us to attract and retain talented and experienced executives, whose knowledge, skills and performance are critical to our success, and motivate these executive officers to achieve our business objectives and to lead us in a competitive environment.

At the 2017 annual meeting of stockholders, approximately 86.6% of the votes cast on the advisory vote on executive compensation proposal were in favor of our named executive officer compensation as disclosed in our 2017 proxy statement and, as a result, our named executive officer compensation was approved.

We are asking our stockholders to indicate their support for the compensation of our named executive officers as described in this proxy statement by casting a non-binding advisory vote “FOR” the following resolution:

“RESOLVED, that the stockholders hereby approve the compensation of the “named executive officers” of Ziopharm Oncology, Inc., as disclosed in the section entitled “Executive Compensation” in the proxy statement for the Ziopharm Oncology, Inc. 2018 Annual Meeting of Stockholders pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the Compensation Discussion and Analysis, compensation tables and narrative discussion.”

Vote Required

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote at the annual meeting will be required to approve, on an advisory basis, the compensation of our named executive officers as described herein. Because the vote is advisory, it will not be binding on us, the board or our compensation committee. Nevertheless, the views expressed by our stockholders, whether through this vote or otherwise, are important to us and, accordingly, the board and our compensation committee intend to consider the results of this vote in making determinations in the future regarding executive compensation arrangements.

The board recommends that you vote FOR the proposal to approve the compensation of our named executive officers, as described in this proxy statement.

Proposal No. 4. Amendment to 2012 Equity Incentive Plan

Our board of directors believes that our broad-based equity compensation program is essential to attract, retain and motivate people with the necessary talent and experience and to provide additional incentive to achieve our short- and long-term business objectives. Substantially all of our employees participate in our equity compensation programs and we believe that our equity programs create a strong link between our employees and our stockholders' interests. Equity compensation promotes an employee ownership culture, motivates employees to create stockholder value and, because the awards are typically subject to vesting and other conditions, promotes a focus on long-term value creation. Our board of directors believes we must continue to offer competitive equity compensation packages in order to attract and motivate the talent necessary for our continued growth and success.

On August 2, 2018, our board of directors amended and restated our 2012 Equity Incentive Plan, as amended, which we refer to as the 2012 Equity Plan, subject to stockholder approval. We are requesting that our stockholders approve this amendment and restatement of our 2012 Equity Plan that would increase the number of shares available for issuance under the 2012 Equity Plan by 5,000,000 shares, including a corresponding increase in the numbers of shares that may be issued under the 2012 Equity Plan pursuant to the exercise of incentive stock options, or ISOs. Except for the increase to the number of shares available for issuance under the 2012 Equity Plan, as amended by this proposal, the terms of the 2012 Equity Plan following approval of this proposal are unchanged. We believe that the number of shares available for issuance under the 2012 Equity Plan, as amended by this proposal, will be sufficient for approximately three years of equity grant activity under our current compensation program. As of June 30, 2018, only 318,961 shares are available for future grant under the 2012 Equity Plan.

Key Provisions of the 2012 Equity Plan

- *No Stock Option Repricing/Exchange:* The board of directors does not have the authority to reprice any outstanding stock option or stock appreciation right by reducing the exercise price of the stock option or stock appreciation right or to cancel any outstanding stock option or stock appreciation right that has an exercise price or strike price in excess of the current fair market value in exchange for cash or other stock awards without obtaining the approval of our stockholders within 12 months prior to the repricing or cancellation and re-grant event.
- *No Discounted Stock Options or SARs:* Stock options and stock appreciation rights cannot be granted with an exercise price less than the fair market value on the date of grant.
- *No "Evergreen" Provision:* The 2012 Equity Plan does not contain an "evergreen" or similar provision. The 2012 Equity Plan fixes the number of shares available for future grants and does not provide for any increase based on increases in the number of outstanding shares of common stock.
- *No Reload Rights:* Stock options granted under the 2012 Equity Plan do not contain provisions entitling participants to automatic grants of additional stock options in connection with the exercise of the original option.
- *Independent Committee:* As it relates to our employees, the 2012 Equity Plan is administered by our compensation committee, which consists solely of "outside directors" within the meaning of Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code, "non-employee directors" within the meaning of Rule 16b-3 of the Exchange Act and "independent directors" as defined by Nasdaq.

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Our Responsible Use of Equity — 2015 - 2017 Burn Rate and 2017 Outstanding Awards Overhang

The following table provides certain additional information regarding our 2012 Equity Plan equity incentive program and our equity burn rate over the last three fiscal years and current and projected overhang.

Burn Rate	2015	2016	2017
Stock Options Granted	427,800	362,800	688,800
Full Value Shares Granted	1,590,574	711,770	907,032
Total Equity Awards	2,018,374	1,074,570	1,595,832
Weighted Average Common Shares Outstanding	125,416,084	130,391,463	136,938,264
Burn Rate	1.61%	0.82%	1.17%
Total Equity Awards Forfeited	200,835	84,100	122,000
Net Burn Rate	1.45%	0.76%	1.08%
Current Overhang (As of June 30, 2018)			
Stock Options Outstanding			3,803,802
Full Value Awards Outstanding			3,439,206
Total Equity Awards Outstanding			7,243,008
Awards Available for Future Grant			318,961
Common Shares Outstanding as of June 30, 2018			142,379,770
Current Overhang as of June 30, 2018			5.3%
Projected Overhang			
Shares Requested			5,000,000
Projected Overhang (if this Proposal No. 4 is approved)			8.8%

Note that burn rate and overhang are calculated on a non-diluted basis.

Closing price of our common stock as reported on Nasdaq Capital Market on July 23, 2018 (Record Date): \$2.80

Note Regarding Forecasts and Forward-Looking Statements

We do not as a matter of course make public forecasts as to our total shares outstanding and utilization of various equity awards due to the unpredictability of the underlying assumptions and estimates. In particular, the forecasts set forth above in this proposal include embedded assumptions regarding option exercise, employee turnover and competitive grant guidelines which are highly dependent on the public trading price of our common stock and other factors, which we do not control, and, as a result, we do not as a matter of practice provide forecasts. In evaluating these forecasts, our compensation committee recognized the high variability inherent in these assumptions. The inclusion of the forecasts set forth above should not be regarded as an indication that these forecasts will be predictive of actual future outcomes, and the forecasts should not be relied upon as such. Neither we nor any other person makes any representation to any of our stockholders regarding actual outcomes compared to the information contained in the forecasts set forth above. Actual outcomes may be, and likely will be, materially different than those reflected in the forecasts. We do not intend to update or otherwise revise the forecasts to reflect circumstances existing after the date when made or to reflect the occurrence of future events even if any or all of the assumptions underlying the forecasts are shown to be in error. The forecasts are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21A of the Exchange Act. These statements involve risks and uncertainties that could cause actual outcomes to differ materially from those in the forward-looking statements, including our ability to attract and

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retain talent, achievement of performance metrics, if any, with respect to certain equity awards, the extent of option exercise activity, and others described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017, as amended.

Description of the 2012 Equity Incentive Plan, as amended

The material features of the 2012 Equity Plan as proposed to be amended are outlined below. This summary is qualified in its entirety by reference to the complete text of the 2012 Equity Plan, as amended, which is attached to this proxy statement as *Appendix A*. Stockholders are urged to read the actual text of the 2012 Equity Plan in its entirety.

Types of Awards

The terms of the 2012 Equity Plan provide for the grant of ISOs, nonstatutory stock options, or NSOs, restricted stock awards, restricted stock unit awards, stock appreciation rights, other stock awards and performance awards that may be settled in cash, stock or other property.

Shares Available for Awards

If this proposal is approved, the aggregate number of shares of our common stock reserved for issuance under the 2012 Equity Plan will not exceed 14,000,000 shares. This aggregate share reserve is the sum of (i) 5,000,000 newly requested shares and (ii) 9,000,000 previously approved shares under the 2012 Equity Plan.

If a stock award granted under the 2012 Equity Plan (i) expires or otherwise terminates without all of the shares covered by such stock award having been issued, or (ii) is settled in cash, such expiration, termination or settlement will not reduce (or otherwise offset) the number of shares of common stock that may be available for issuance under the 2012 Equity Plan. If any shares of common stock issued pursuant to a stock award are forfeited back to or repurchased by us because of the failure to meet a contingency or condition required to vest such shares, then the shares that are forfeited or repurchased will revert to and again become available for issuance under the 2012 Equity Plan. In addition, any shares of common stock reacquired by us in satisfaction of tax withholding obligations on a stock award or as consideration for the exercise or purchase price of a stock award will again become available for issuance under the 2012 Equity Plan.

Eligibility

All of our 48 employees and five non-employee directors as of the Record Date are eligible to participate in the 2012 Equity Plan and may receive all types of awards other than ISOs. ISOs may be granted under the 2012 Equity Plan only to our employees (including officers) and employees of our affiliates.

Annual Award Limits

Under the 2012 Equity Plan, a maximum of 2,000,000 shares of our common stock may be granted to any one participant during any one calendar year pursuant to stock options, stock appreciation rights and other stock awards whose value is determined by reference to an increase over an exercise price or strike price of at least 100% of the fair market value of our common stock on the date of grant. In addition, the maximum amount covered by performance awards that may be granted to any one participant in any one calendar year (whether the grant, vesting or exercise is contingent upon the attainment during a performance period of the performance goals described below) is 2,000,000 shares of our common stock in the case of performance stock awards and \$2,000,000 in the case of performance cash awards.

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Administration

The 2012 Equity Plan is administered by our board of directors, which may in turn delegate authority to administer the 2012 Equity Plan to a committee. Our board of directors has delegated authority to administer the 2012 Equity Plan to the compensation committee, but may, at any time, re-vest in itself some or all of the power previously delegated to this committee. Our compensation committee may make grants of cash and equity awards under the 2012 Equity Plan. The board of directors and the compensation committee are each considered to be a Plan Administrator for purposes of this proposal. Subject to the terms of the 2012 Equity Plan, the Plan Administrator may determine the recipients, numbers and types of awards to be granted, and the terms and conditions of the awards, including the period of their exercisability and vesting. Subject to the limitations set forth below, the Plan Administrator also determines the fair market value applicable to a stock award and the exercise price of stock options and stock appreciation rights granted under the 2012 Equity Plan.

The Plan Administrator may also delegate to one or more of our officers the authority to designate employees who are not officers to be recipients of certain stock awards and the number of shares subject to such stock awards, provided that the board of directors must specify the total number of shares of our common stock that may be subject to the stock awards granted by such officer, and such officer may not grant a stock award to himself or herself. In 2012, our board of directors delegated to our Chief Executive Officer and Chief Operating Officer the authority to grant stock awards to non-officer employees not exceeding specified limits approved by the board.

Repricing; Cancellation and Re-Grant of Stock Awards

Under the 2012 Equity Plan, the board of directors does not have the authority to reprice any outstanding stock option or stock appreciation right by reducing the exercise price of the stock option or stock appreciation right or to cancel any outstanding stock option or stock appreciation right that has an exercise price or strike price in excess of the current fair market value in exchange for cash or other stock awards without obtaining the approval of our stockholders within 12 months prior to the repricing or cancellation and re-grant event.

Stock Options

Stock options may be granted under the 2012 Equity Plan pursuant to stock option agreements. The 2012 Equity Plan permits the grant of stock options that qualify as ISOs or NSOs. Individual stock option agreements may be more restrictive as to any or all of the permissible terms described in this section.

The exercise price of NSOs may not be less than 100% of the fair market value of the common stock subject to the stock option on the date of grant. The exercise price of ISOs may not be less than 100% of the fair market value of the common stock subject to the stock option on the date of grant and, in some cases (see "*Limitations on Incentive Stock Options*" below), may not be less than 110% of such fair market value.

The term of stock options granted under the 2012 Equity Plan may not exceed ten years and, in some cases (see "*Limitations on Incentive Stock Options*" below), may not exceed five years. Unless the terms of an optionholder's stock option agreement or other agreement with us provide for earlier or later termination, if an optionholder's service relationship with us, or any affiliate of ours, ceases due to death or disability (or the optionholder dies within a certain period, if any, following cessation of service), the optionholder, or his or her beneficiary, as applicable, may exercise any vested stock options for up to 12 months after the date the service relationship ends due to the optionholder's disability or up to 18 months after the date the service relationship ends due to the optionholder's death. Except as otherwise provided in an applicable stock option agreement or other agreement with us, if an optionholder's service relationship with us, or any affiliate of ours, is terminated for cause, all stock options held by such optionholder will terminate upon the date of such optionholder's termination of service, and the optionholder will be prohibited from exercising any stock option from such termination date. Except as explicitly provided otherwise in an optionholder's stock option agreement or other

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agreement with us, if an optionholder's service relationship with us, or any affiliate of ours, ceases for any other reason, the optionholder may exercise any vested stock options for up to three months after the date the service relationship ends. Under the 2012 Equity Plan, the stock option term may be extended in the event that exercise of the stock option following termination of service is prohibited by applicable securities laws or if the sale of stock received upon exercise of a stock option would violate our insider trading policy. In no event may a stock option be exercised after its original expiration date.

Acceptable forms of consideration for the purchase of our common stock pursuant to the exercise of a stock option under the 2012 Equity Plan will be determined by our board of directors and may include (i) cash, check, bank draft or money order made payable to us, (ii) payment pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board, (iii) common stock previously owned by the optionholder, (iv) a net exercise feature (for NSOs only), or (v) other legal consideration approved by our board of directors. Stock options granted under the 2012 Equity Plan may become exercisable in cumulative increments, or "vest," as determined by our board of directors at the rate specified in the stock option agreement. Shares covered by different stock options granted under the 2012 Equity Plan may be subject to different vesting schedules as our board of directors may determine. The board of directors also has flexibility to provide for accelerated vesting of stock awards in certain events.

Generally, an optionholder may not transfer a stock option other than by will or the laws of descent and distribution or a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted under applicable law. However, to the extent permitted under the terms of the applicable stock option agreement, an optionholder may designate a beneficiary who may exercise the stock option following the optionholder's death.

Limitations on Incentive Stock Options

The aggregate fair market value, determined at the time of grant, of shares of our common stock with respect to ISOs that are exercisable for the first time by an optionholder during any calendar year under all of our stock plans may not exceed \$100,000. The stock options or portions of stock options that exceed this limit are treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any affiliate unless the following conditions are satisfied:

- the exercise price of the ISO must be at least 110% of the fair market value of the stock subject to the ISO on the date of grant; and
- the term of the ISO must not exceed five years from the date of grant.

If this proposal is approved, the aggregate maximum number of shares of common stock that may be issued pursuant to the exercise of ISOs granted under the 2012 Equity Plan is 14,000,000 shares.

Restricted Stock Awards

Restricted stock awards may be granted under the 2012 Equity Plan pursuant to restricted stock award agreements. A restricted stock award may be granted in consideration for cash, check, bank draft or money order payable to us, the recipient's services performed for us or an affiliate of ours, or any other form of legal consideration acceptable to the board of directors. Shares of our common stock acquired under a restricted stock award may be subject to forfeiture to us in accordance with a vesting schedule to be determined by our board of directors. Rights to acquire shares of our common stock under a restricted stock award may be transferred only upon such terms and conditions as are set forth in the restricted stock award agreement. Except as otherwise provided in the applicable restricted stock award agreement, restricted stock awards that have not vested will be forfeited upon the participant's termination of continuous service for any reason.

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Restricted Stock Unit Awards

Restricted stock unit awards may be granted under the 2012 Equity Plan pursuant to restricted stock unit award agreements. Payment of any purchase price may be made in any legal form acceptable to the board of directors. We will settle a payment due to a recipient of a restricted stock unit award by delivery of shares of our common stock, by cash, by a combination of cash and stock, or in any other form of consideration determined by our board of directors and set forth in the restricted stock unit award agreement. Dividend equivalents may be credited in respect of shares of our common stock covered by a restricted stock unit award. Restricted stock unit awards may be subject to vesting in accordance with a vesting schedule to be determined by our board of directors. Except as otherwise provided in the applicable restricted stock unit award agreement, restricted stock units that have not vested will be forfeited upon the participant's termination of continuous service for any reason.

Stock Appreciation Rights

Stock appreciation rights may be granted under the 2012 Equity Plan pursuant to stock appreciation right agreements. Each stock appreciation right is denominated in common stock share equivalents. The strike price of each stock appreciation right will be determined by our board of directors but will in no event be less than 100% of the fair market value of the stock subject to the stock appreciation right at the time of grant. Our board of directors may also impose restrictions or conditions upon the vesting of stock appreciation rights that it deems appropriate. Stock appreciation rights may be paid in our common stock, in cash, in a combination of cash and stock, or in any other form of legal consideration approved by our board of directors and set forth in the stock appreciation right agreement. Stock appreciation rights will be subject to the same conditions upon termination and restrictions on transfer as stock options under the 2012 Equity Plan.

Performance Awards

The 2012 Equity Plan allows us to grant cash and stock-based performance awards. Performance awards may be granted, vest or be exercised based upon the attainment during a specified period of time of specified performance goals. The length of any performance period, the performance goals to be achieved during the performance period, and the measure of whether and to what degree such performance goals have been attained will be determined by the Plan Administrator.

Performance goals under the 2012 Equity Plan will be based on any one or more of the following performance criteria: (i) earnings (including earnings per share and net earnings); (ii) earnings before interest, taxes and depreciation; (iii) earnings before interest, taxes, depreciation and amortization; (iv) total stockholder return; (v) return on equity or average stockholder's equity; (vi) return on assets, investment, or capital employed; (vii) stock price; (viii) margin (including gross margin); (ix) income (before or after taxes); (x) operating income; (xi) operating income after taxes; (xii) pre-tax profit; (xiii) operating cash flow; (xiv) sales or revenue targets; (xv) increases in revenue or product revenue; (xvi) expenses and cost reduction goals; (xvii) improvement in or attainment of working capital levels; (xviii) economic value added (or an equivalent metric); (xix) market share; (xx) cash flow; (xxi) cash flow per share; (xxii) share price performance; (xxiii) debt reduction; (xxiv) implementation or completion of projects or processes; (xxv) customer satisfaction; (xxvi) stockholders' equity; (xxvii) capital expenditures; (xxviii) debt levels; (xxix) operating profit or net operating profit; (xxx) workforce diversity; (xxxi) growth of net income or operating income; (xxxii) billings; (xxxiii) achievement of drug development milestones; (xxxiv) regulatory achievements, including approval of a compound; (xxxv) progress of internal research or clinical programs; (xxxvi) progress of partner programs; (xxxvii) implementation or completion of projects and processes; (xxxviii) clinical progress, (xxxix) in-licensing; and (xl) other measures of performance selected by the Plan Administrator.

Performance goals may be based on a company-wide basis, with respect to one or more business units, divisions, affiliates, or business segments, and in either absolute terms or relative to the performance of one or

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more comparable companies or the performance of one or more relevant indices. In establishing a performance goal, the performance subcommittee (and the Plan Administrator, if permitted) may provide that performance will be appropriately adjusted as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated performance goals; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; and (5) to exclude the effects of any “extraordinary items” as determined under generally accepted accounting principles. In addition, the compensation committee (and the Plan Administrator, if permitted) retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of performance goals and to define the manner of calculating the performance criteria it selects to use for a performance period.

Other Stock Awards

Other forms of stock awards valued in whole or in part with reference to our common stock may be granted either alone or in addition to other stock awards under the 2012 Equity Plan. Our Plan Administrator will have sole and complete authority to determine the persons to whom and the time or times at which such other stock awards will be granted, the number of shares of our common stock to be granted and all other conditions of such other stock awards. Other forms of stock awards may be subject to vesting in accordance with a vesting schedule to be determined by our board of directors.

Clawback Policy

Awards granted under the 2012 Equity Plan will be subject to recoupment in accordance with any clawback policy that we are required to adopt pursuant to the listing standards of any national securities exchange or association on which our securities are listed or as is otherwise required by the Dodd-Frank Act or other applicable law. In addition, the board of directors may impose other clawback, recovery or recoupment provisions in an award agreement as the board of directors determines necessary or appropriate, including a reacquisition right in respect of previously acquired shares of our common stock or other cash or property upon the occurrence of cause.

Changes to Capital Structure

In the event of certain capitalization adjustments, the board of directors will appropriately adjust: (i) the class(es) and maximum number of securities subject to the 2012 Equity Plan; (ii) the class(es) and maximum number of securities that may be issued pursuant to the exercise of ISOs; (iii) the class(es) and maximum number of securities that may be awarded to any person pursuant to the annual limits; and (iv) the class(es) and number of securities and price per share of stock subject to outstanding stock awards.

Corporate Transactions

In the event of a corporate transaction (as defined in the 2012 Equity Plan and described below), the board of directors may have the discretion to take one or more of the following actions with respect to outstanding stock awards (contingent upon the closing or consummation of such transaction), unless otherwise provided in the stock award agreement or other written agreement with the participant or unless otherwise provided by the board of directors at the time of grant:

- arrange for the surviving or acquiring corporation (or its parent company) to assume or continue the award or to substitute a similar stock award for the award (including an award to acquire the same consideration paid to our stockholders pursuant to the corporate transaction);
- arrange for the assignment of any reacquisition or repurchase rights held by us with respect to the stock award to the surviving or acquiring corporation (or its parent company);

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- accelerate the vesting, in whole or in part, (and, if applicable, the exercisability) of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us with respect to the award;
- cancel or arrange for the cancellation of the stock award, to the extent not vested or exercised prior to the effective time of the corporate transaction, in exchange for such cash consideration, if any, as the board of directors may consider appropriate; and
- cancel or arrange for the cancellation of the stock award, to the extent not vested or not exercised prior to the effective time of the corporate transaction, in exchange for a payment, in such form as may be determined by the board of directors, equal to the excess, if any, of (i) the value of the property the participant would have received upon the exercise of the stock award immediately prior to the effective time of the corporate transaction, over (ii) any exercise price payable in connection with such exercise.

The board of directors is not obligated to treat all stock awards or portions of stock awards in the same manner. The board of directors may take different actions with respect to the vested and unvested portions of a stock award.

For purposes of the 2012 Equity Plan, a corporate transaction will be deemed to occur in the event of the consummation of (i) a sale or other disposition of all or substantially all of our consolidated assets, (ii) a sale or other disposition of more than 90% of our outstanding securities, (iii) a merger, consolidation or similar transaction following which we are not the surviving corporation, or (iv) a merger, consolidation or similar transaction following which we are the surviving corporation but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction.

Change in Control

Under the 2012 Equity Plan, a stock award may be subject to additional acceleration of vesting and exercisability upon or after a change in control (as defined in the 2012 Equity Plan) as may be provided in the stock award agreement or other written agreement with the participant, but in the absence of such provision, no such acceleration will occur.

Plan Amendments and Termination

Our board of directors will have the authority to amend or terminate the 2012 Equity Plan at any time. However, except as otherwise provided in the 2012 Equity Plan, no amendment or termination of the 2012 Equity Plan may materially impair any rights under awards already granted to a participant unless agreed to by the affected participant. We will obtain stockholder approval of this amendment and any future amendment to the 2012 Equity Plan as required by applicable law and listing requirements. No ISOs may be granted under the 2012 Equity Plan after March 7, 2022.

U.S. Federal Income Tax Consequences

The information set forth below is a summary only and does not purport to be complete. The information is based upon current federal income tax rules and therefore is subject to change when those rules change. Because the tax consequences to any recipient may depend on his or her particular situation, each recipient should consult the recipient's tax adviser regarding the federal, state, local, and other tax consequences of the grant or exercise of an award or the disposition of stock acquired as a result of an award. The 2012 Equity Plan is not qualified under the provisions of Section 401(a) of the Code and is not subject to any of the provisions of the Employee Retirement Income Security Act of 1974. Our ability to realize the benefit of any tax deductions described below depends on our generation of taxable income as well as the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of our tax reporting obligations.

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The exemption from Section 162(m)'s deduction limit for performance-based compensation has been repealed, effective for taxable years beginning after December 31, 2017, such that compensation paid to our covered executive officers in excess of \$1 million will not be deductible unless it qualifies for transition relief applicable to certain performance-based compensation arrangements already in place as of November 2, 2017. Because of certain ambiguities and uncertainties as to the application and interpretation of Section 162(m) of the Code and the regulations issued thereunder, including the uncertain scope of the transition relief under the legislation repealing the "performance-based compensation" exception from the deduction limit, no assurance can be given that any awards that were previously granted under the 2012 Equity Plan, or that may be granted under the 2012 Equity Plan, that may be or have been intended to satisfy the requirements for the "performance-based compensation" exception under Section 162(m) of the Code will, in fact, be exempt. Further, the Plan Administrator reserves the right to modify 2012 Equity Plan awards that were initially intended to be exempt from Section 162(m) if it determines that such modifications are consistent with our business needs.

Nonstatutory Stock Options

Generally, there is no taxation upon the grant of an NSO if the stock option is granted with an exercise price equal to the fair market value of the underlying stock on the grant date. On exercise, an optionholder will recognize ordinary income equal to the excess, if any, of the fair market value on the date of exercise of the stock over the exercise price. If the optionholder is employed by us or one of our affiliates, that income will be subject to withholding taxes. The optionholder's tax basis in those shares will be equal to their fair market value on the date of exercise of the stock option, and the optionholder's capital gain holding period for those shares will begin on that date.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the optionholder.

Incentive Stock Options

The 2012 Equity Plan provides for the grant of stock options that qualify as "incentive stock options," as defined in Section 422 of the Code. Under the Code, an optionholder generally is not subject to ordinary income tax upon the grant or exercise of an ISO. If the optionholder holds a share received on exercise of an ISO for more than two years from the date the stock option was granted and more than one year from the date the stock option was exercised, which is referred to as the required holding period, the difference, if any, between the amount realized on a sale or other taxable disposition of that share and the holder's tax basis in that share will be long-term capital gain or loss.

If, however, an optionholder disposes of a share acquired on exercise of an ISO before the end of the required holding period, which is referred to as a disqualifying disposition, the optionholder generally will recognize ordinary income in the year of the disqualifying disposition equal to the excess, if any, of the fair market value of the share on the date the ISO was exercised over the exercise price. However, if the sales proceeds are less than the fair market value of the share on the date of exercise of the stock option, the amount of ordinary income recognized by the optionholder will not exceed the gain, if any, realized on the sale. If the amount realized on a disqualifying disposition exceeds the fair market value of the share on the date of exercise of the stock option, that excess will be short-term or long-term capital gain, depending on whether the holding period for the share exceeds one year.

For purposes of the alternative minimum tax, the amount by which the fair market value of a share of stock acquired on exercise of an ISO exceeds the exercise price of that stock option generally will be an adjustment included in the optionholder's alternative minimum taxable income for the year in which the stock option is exercised. If, however, there is a disqualifying disposition of the share in the year in which the stock option is exercised, there will be no adjustment for alternative minimum tax purposes with respect to that share. In

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computing alternative minimum taxable income, the tax basis of a share acquired on exercise of an ISO is increased by the amount of the adjustment taken into account with respect to that share for alternative minimum tax purposes in the year the stock option is exercised.

We are not allowed an income tax deduction with respect to the grant or exercise of an ISO or the disposition of a share acquired on exercise of an ISO after the required holding period. If there is a disqualifying disposition of a share, however, we are allowed a deduction in an amount equal to the ordinary income includible in income by the optionholder, subject to Section 162(m) of the Code and provided that amount constitutes an ordinary and necessary business expense for us and is reasonable in amount, and either the employee includes that amount in income or we timely satisfy our reporting requirements with respect to that amount.

Restricted Stock Awards

Generally, the recipient of a restricted stock award will recognize ordinary income at the time the stock is received equal to the excess, if any, of the fair market value of the stock received over any amount paid by the recipient in exchange for the stock. If, however, the stock is not vested when it is received (for example, if the employee is required to work for a period of time in order to have the right to sell the stock), the recipient generally will not recognize income until the stock becomes vested, at which time the recipient will recognize ordinary income equal to the excess, if any, of the fair market value of the stock on the date it becomes vested over any amount paid by the recipient in exchange for the stock. A recipient may, however, file an election with the Internal Revenue Service, within 30 days following his or her receipt of the stock award, to recognize ordinary income, as of the date the recipient receives the award, equal to the excess, if any, of the fair market value of the stock on the date the award is granted over any amount paid by the recipient for the stock.

The recipient's basis for the determination of gain or loss upon the subsequent disposition of shares acquired from stock awards will be the amount paid for such shares plus any ordinary income recognized either when the stock is received or when the stock becomes vested.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the stock award.

Restricted Stock Unit Awards

Generally, the recipient of a restricted stock unit structured to conform to the requirements of Section 409A of the Code or an exception to Section 409A of the Code will recognize ordinary income at the time the stock is delivered equal to the excess, if any, of the fair market value of the shares of our common stock received over any amount paid by the recipient in exchange for the shares of our common stock. To conform to the requirements of Section 409A of the Code, the shares of our common stock subject to a restricted stock unit award may generally only be delivered upon one of the following events: a fixed calendar date (or dates), separation from service, death, disability or a change in control. If delivery occurs on another date, unless the restricted stock units otherwise comply with or qualify for an exception to the requirements of Section 409A of the Code, in addition to the tax treatment described above, the recipient will owe an additional 20% federal tax and interest on any taxes owed.

The recipient's basis for the determination of gain or loss upon the subsequent disposition of shares acquired from restricted stock units will be the amount paid for such shares plus any ordinary income recognized when the stock is delivered.

Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the restricted stock unit award.

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Stock Appreciation Rights

We may grant under the 2012 Equity Plan stock appreciation rights separate from any other award or in tandem with other awards under the 2012 Equity Plan.

Where the stock appreciation rights are granted with a strike price equal to the fair market value of the underlying stock on the grant date, the recipient will recognize ordinary income equal to the fair market value of the stock or cash received upon such exercise. Subject to the requirement of reasonableness, the provisions of Section 162(m) of the Code, and the satisfaction of a tax reporting obligation, we will generally be entitled to a tax deduction equal to the taxable ordinary income realized by the recipient of the stock appreciation right.

New Plan Benefits

Awards under the 2012 Equity Plan are discretionary and are not subject to set benefits or amounts, and we have not approved any awards that are conditioned on stockholder approval of the amendment to the 2012 Equity Plan. Accordingly, we cannot currently determine the benefits or number of shares subject to awards that may be granted in the future to executive officers, directors or employees under the 2012 Equity Plan.

The following table shows, for each of the individuals and the various groups indicated, the number of stock options and shares subject to restricted stock awards that have been granted (even if not currently outstanding) under the 2012 Equity Plan since it was initially approved by our stockholders in 2012 through June 30, 2018.

Name/Group	Number of Securities Underlying Awards Granted
Laurence J. N. Cooper, M.D., Ph.D., Chief Executive Officer	1,691,250
David M. Mauney, M.D., Executive Vice President, Chief Business Officer and Interim Chief Operating Officer ⁽¹⁾	—
Francois Lebel, M.D., Executive Vice President, Research and Development and Chief Medical Officer	755,350
Kevin G. Lafond, Sr. Vice President – Finance, Chief Accounting Officer and Treasurer	332,800
Caesar J. Belbel, Former Executive Vice President, Chief Legal Officer and Secretary	1,201,350
Murray Brennan, M.D., Director	136,123
James A. Cannon, Director Nominee	114,194
Senator Wyche Fowler, Jr., Director	114,194
Randal J. Kirk, Director Nominee	121,936
Scott Tarriff, Director Nominee	94,186
Elan Z. Ezickson, Director Nominee	—
Douglas W. Pagán, Director Nominee	—
All Current Executive Officers as a Group (4 individuals)	3,980,750
All Current Directors who are not Executive Officers as a Group (5 individuals)	580,633
All Current Employees who are not Executive Officers as a Group (40 individuals)	2,212,083

- (1) Dr. Mauney joined us in September 2017 and received an inducement award in the form of an option to purchase 500,000 shares, which was granted outside the 2012 Equity Plan.

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Securities Authorized for Issuance under Equity Compensation Plans

The following table provides certain information with respect to all of our equity compensation plans in effect as of December 31, 2017:

	Number of securities to be issued upon exercise of outstanding options, warrants and rights ⁽¹⁾ (a)	Weighted-average exercise price of outstanding options, warrants and rights ⁽¹⁾ (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	3,852,135	\$ 5.12	303,928
Equity compensation plans not approved by security holders ⁽²⁾	—	—	—
Total	3,852,135	\$ 5.12	303,928

- (1) There are no warrants outstanding under the 2003 Stock Option Plan or 2012 Equity Plan.
(2) We do not maintain any equity compensation plans that are not approved by our stockholders.

Vote Required

The affirmative vote of the holders of a majority of the shares present in person or represented by proxy and entitled to vote at the annual meeting will be required to amend the 2012 Equity Plan. Abstentions will be counted toward the tabulation of votes cast on proposals presented to the stockholders and will have the same effect as negative votes. Broker non-votes are counted towards a quorum, but are not counted for any purpose in determining whether this matter has been approved.

The board recommends that you vote FOR the amendment of the 2012 Equity Plan.

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Other Matters

The board of directors is not aware of any matter to be presented for action at the annual meeting other than the four proposals described above. The board does not intend to bring any other matters before the annual meeting.

Stockholder Proposals for the 2019 Annual Meeting of Stockholders

For a proposal to be considered for inclusion in our proxy materials for presentation at the 2019 Annual Meeting of Stockholders pursuant to Rule 14a-8 under the Exchange Act, the proposal must be received by our Secretary at our principal executive offices at One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor, Boston, Massachusetts 02129, by no later than April 10, 2019, unless the date of 2019 Annual Meeting of Stockholders is changed by more than 30 days from the one-year anniversary of this year's annual meeting, in which case the deadline will be a reasonable time before we begin to distribute the proxy materials for the 2019 Annual Meeting of Stockholders. Due to the complexity of the respective rights of the stockholders and us in this area, any stockholder desiring to propose such an action is advised to consult with his or her legal counsel with respect to such rights. We suggest that any such proposal be submitted to us by certified mail, return receipt requested.

Rule 14a-4 under the Exchange Act governs our use of our discretionary proxy voting authority with respect to a stockholder proposal that the stockholder has not sought to include in our proxy statement. Rule 14a-4 provides that if a proponent of a proposal fails to notify us at least 45 days prior to the month and day of mailing of the prior year's proxy statement, management proxyholders will be allowed to use their discretionary voting authority as to whether the proposal is raised at the annual meeting, without any discussion of the matter. If a stockholder wishes to bring a matter before the stockholders at the 2019 Annual Meeting of Stockholders but does not notify us before June 24, 2019 (or a reasonable time before we begin to distribute the proxy materials for the 2019 Annual Meeting of Stockholders if the date of the 2019 Annual Meeting of Stockholders is changed by more than 30 days from the one-year anniversary of this year's annual meeting), for all proxies we receive, the management proxyholders will have discretionary authority to vote on the matter, including discretionary authority to vote in opposition to the stockholder's proposal.

CURRENT DIRECTORS, DIRECTOR NOMINEES AND EXECUTIVE OFFICERS

The following table contains biographical information, as of the date of this proxy statement, of each of our current directors, director nominees and executive officers. In addition, the table contains information about the specific and particular experience, qualifications, attributes or skills of each current director and each nominee for director at the annual meeting that led the corporate governance and nominating committee to believe that such current director was appropriate for nomination at a previous annual meeting of stockholders and, in the case of each nominee for director at the annual meeting, that such nominee should serve on the board following election at the annual meeting.

<p>Scott Tarriff <i>Lead Director</i> <i>Current Director</i></p>	<p>Mr. Tarriff has been one of our directors since September 2015 and has served as the board's non-executive Lead Director since August 2018. Mr. Tarriff has served as the Chief Executive Officer and as a member of the Board of Directors of Eagle Pharmaceuticals, Inc. since its inception in January 2007. Prior to joining Eagle, Mr. Tarriff held various executive positions at Par Pharmaceutical Companies, Inc., a publicly-traded developer, manufacturer and marketer of specialty pharmaceuticals, including as President and Chief Executive Officer from September 2003 to September 2006, after joining Par in 1998. Prior to that, Mr. Tarriff held various positions with Bristol-Meyers Squibb, a publicly-traded biopharmaceutical company, including senior director-marketing. Mr. Tarriff has served as a member of the board of directors of Synthetic Biologics, Inc., a publicly-traded biotechnology company, since February 2012 and previously served on the board of directors of Clinical Data, Inc., a publicly-traded pharmaceutical company, from September 2009 until its acquisition by Forest Laboratories, Inc. in April 2011. Mr. Tarriff holds a B.S. in marketing from Pennsylvania State University and an M.B.A. from Rider College. Mr. Tarriff is 58 years old.</p> <p>Mr. Tarriff has demonstrated an ability to dedicate sufficient time and focus on his duties as a director of Ziopharm. The board believes that Mr. Tarriff's long-term record of achievement and extensive experience as a board member and senior executive in the pharmaceutical and biotechnology industries, coupled with his extensive expertise in company operations and management, including his knowledge of the clinical development and regulatory process, qualifies him to serve as the board's non-executive Lead Director.</p>
<p>James A. Cannon <i>Current Director</i></p>	<p>Mr. Cannon has been one of our directors since our September 2005 acquisition of Ziopharm, Inc. and previously served as a director of Ziopharm, Inc. since December 2004. Mr. Cannon is currently Vice Chairman, Chief Financial Officer and a member of the board of directors of BBDO Worldwide, an advertising agency. In these capacities, he oversees the financial management of BBDO operations in 77 countries. Mr. Cannon joined BBDO in 1967, was promoted to Chief Financial Officer of the agency in 1984, and was elected to its board of directors one year later. An integral member of the team that formed Omnicom via a unique three-agency merger of BBDO, DDB and Needham Harper & Steers, Mr. Cannon became Comptroller of the new group and a member of its board of directors in 1986, a position he held through 2002. In 1987, he was appointed Director of Financial Operations of the Omnicom Group, serving in this capacity until early 1989 when he rejoined BBDO Worldwide as Executive Vice President and Chief Financial Officer. His</p>

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return was concurrent with that of Allen Rosenshine who became Chairman and Chief Executive Officer of BBDO after heading Omnicom. Mr. Cannon was promoted to Vice Chairman of the agency in 1990. Mr. Cannon is a graduate of Pace University and served in the U.S. Marine Corps. Mr. Cannon is 79 years old.

The board believes that Mr. Cannon is qualified to serve as one of our directors based on his financial skills and overall business judgment. In addition, the role played by Mr. Cannon at BBDO, where he oversees the financial management of that company's international operations, uniquely qualifies him to serve as Chair of our audit committee.

Randal J. Kirk
Current Director

Mr. Kirk has been one of our directors since January 2011. Mr. Kirk is the Senior Managing Director and Chief Executive Officer of Third Security, LLC, an investment management firm founded by Mr. Kirk. Additionally, Mr. Kirk founded and became Chairman of the board of directors of New River Pharmaceuticals Inc. (previously traded on Nasdaq prior to its acquisition by Shire plc in 2007) in 1996, and was President and Chief Executive Officer between October 2001 and April 2007. Mr. Kirk began his professional career in the private practice of law. Previously, Mr. Kirk served as a member of the board of directors of Scios, Inc. (previously traded on Nasdaq prior to its acquisition by Johnson & Johnson) between February 2000 and May 2002, and as a member of the board of directors of Clinical Data, Inc. (previously traded on Nasdaq prior to its acquisition by Forest Laboratories, Inc. in April 2011) from September 2002 to April 2011, and was Chairman of the board from December 2004 to April 2011. Mr. Kirk currently serves in a number of additional capacities, including as a member of the board of directors of Halozyme Therapeutics, Inc., since May 2007 and as Chairman of the board of directors of Intrexon Corporation since February 2008 and Chief Executive Officer since April 2009. Mr. Kirk served on the Board of Visitors of Radford University from July 2003 to June 2009, was Rector of the board from September 2006 to September 2008, and has served on the board of directors of the Radford University Foundation, Inc. from September 1998 to May 2011. He served on the Board of Visitors of the University of Virginia and Affiliated Schools from July 2009 to October 2012, on the Virginia Advisory Council on Revenue Estimates from July 2006 to October 2012, and on the Governor's Economic Development and Jobs Creation Commission from April 2010 to October 2012. Mr. Kirk received a B.A. in business from Radford University and a J.D. from the University of Virginia. Mr. Kirk is 64 years old.

Mr. Kirk has demonstrated an ability to dedicate sufficient time and focus on his duties as a director of Ziopharm. The board believes that Mr. Kirk's extensive experience and long-term record of achievement as an entrepreneur, investor, top executive and board member of numerous leading pharmaceutical and other health care companies qualifies him to serve on the board.

Elan Z. Ezickson
Director Nominee

Mr. Ezickson currently serves as Chief Operating Officer & Head of Corporate Development for Scholar Rock Holding Corporation, a position he has held since August 2014. Prior to Scholar Rock, Mr. Ezickson served as Executive Vice President and Chief Operating Officer of Aveo Pharmaceuticals, Inc., where he worked from 2003 to July 2013.

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Previously, Mr. Ezickson worked at Biogen Inc. in roles that included President of Biogen Canada, Program Executive and Associate General Counsel. Mr. Ezickson holds a B.A. in Political Science from Yale University and a J.D. from the Columbia University School of Law. Mr. Ezickson is 54 years old.

The board believes that Mr. Ezickson's deep operating and management experience at several leading life science companies, as well as his legal training, qualifies him to serve on the board.

Douglas W. Pagán
Director Nominee

Mr. Pagán currently serves as Chief Financial Officer of Paratek Pharmaceuticals, Inc., a position he has held since December 2014, where he is responsible for fundraising, financial reporting, investor relations, and strategic planning. Prior to that, Mr. Pagán served as Vice President, Finance at Acceleron Pharma Inc., which he joined in 2008. There, he was responsible for strategic and financial planning, accounting, SEC reporting, treasury and financial operations, including undertaking a significant role in the company's initial public offering. Prior to working at Acceleron, Mr. Pagán served in strategic and financial management roles at Biogen Idec and Bristol-Myers Squibb. Previously, Mr. Pagán worked in healthcare investment banking at J.P. Morgan, as well as pharmaceutical operational roles at Johnson & Johnson. Mr. Pagán received his B.S.E. in Chemical Engineering from Princeton University and his M.B.A. from Columbia Business School. Mr. Pagán is 46 years old.

The board believes that Mr. Pagán's experience as a financial executive in life science and pharmaceutical companies, as well as his prior investment banking experience, will allow Mr. Pagán to provide financial and strategic guidance to the Company and qualifies him to serve on the board.

Sir Murray Brennan, M.D., GNZM
Current Director

Dr. Brennan, who is currently a director and served as the board's non-executive Lead Director until August 2018, has been one of our directors since our September 2005 acquisition of Ziopharm, Inc. and previously served as a director of Ziopharm, Inc. since December 2004. Dr. Brennan is Emeritus Chairman of Memorial Sloan-Kettering's Department of Surgery and previously served as its Chairman from 1985 to 2007. Dr. Brennan is the Benno C. Schmidt Chair in Clinical Oncology at the Memorial Sloan Kettering Cancer Center, and currently serves as its Vice President for International Programs. Dr. Brennan also is a member of the Institute of Medicine of The National Academy of Sciences. He actively lectures at major institutions throughout the world and has authored or co-authored more than 1,000 scientific papers. He previously served as a director of the American Board of Surgery, Chairman of the American College of Surgeons Commission on Cancer, President of the Society of Surgical Oncology, President of the American Surgical Association, President of the Society of Clinical Surgery and Vice President of the American College of Surgeons. He is the recipient of numerous honors, honorary degrees and fellowships for his leadership role in surgery and oncology worldwide. He serves on the board of directors of the de Beaumont Foundation, a charitable foundation designed to support public health in the United States and elsewhere. He received a knighthood from her Majesty the Queen of England in January 2015. Dr. Brennan is 78 years old.

Although Dr. Brennan has not been nominated for re-election and his term will expire at the annual meeting, Dr. Brennan's credentials and standing in the medical community worldwide, and the oncology community specifically, along with the leadership roles in which he has served at various esteemed organizations, provided experience and credibility that the board believes made him well suited to serve on the board and as its non-executive Lead Director. The board would like to thank Dr. Brennan for his service to the Company.

Senator Wyche Fowler, Jr.
Current Director

Senator Fowler has been one of our directors since our September 2005 acquisition of Ziopharm, Inc. and previously served as a director of Ziopharm, Inc. since December 2004. Senator Fowler served for 16 years in the United States Congress representing the state of Georgia, from April 1977 to January 1993. In the U.S. Senate he served as assistant floor leader, helping mold a bipartisan consensus for major public policy issues. Senator Fowler was a member of the U.S. Senate Appropriations, Budget, Energy and Agriculture Committees. First elected to the U.S. House of Representatives, he was a member of the Ways and Means and Foreign Affairs Committees, as well as the Select Committee on Intelligence. Following his service in the United States Congress, Senator Fowler served as U.S. Ambassador to the Kingdom of Saudi Arabia from 1996 through 2001. On his return, the FBI awarded him its highest civilian honor, The Jefferson Cup, for his assistance in combating terrorism and for helping solve terrorism crimes against the U.S. military in Saudi Arabia. He was named Lion of Judah by the State of Israel for successfully freeing Soviet Jew Yakov Gluzman. Senator Fowler is currently engaged in an international business and law practice, and serves as Chairman Emeritus of the Board of the Middle East Institute, a non-profit foundation in Washington, D.C. Senator Fowler also serves on the board of directors of Shubert Theaters, the Shubert Foundation and Brandywine Realty Trust. Senator Fowler holds an A.B. in English from Davidson College and a J.D. from Emory University School of Law. Senator Fowler is 77 years old.

Although Senator Fowler was not nominated for re-election and his term will expire at the annual meeting, Senator Fowler's background and experience in the United States Congress, and the leadership qualities exemplified during and since his tenure in Congress, are attributes that the board believes benefited our overall board operations. The board would like to thank Senator Fowler for his service to the Company.

Laurence James Neil Cooper, M.D., Ph.D.
Chief Executive Officer

Dr. Cooper has served as our Chief Executive Officer since May 2015. Prior to joining us, Dr. Cooper led the Pediatric Cell Therapy service (formally named the BMT program) as a tenured professor at the University of Texas M.D. Anderson Cancer Center, or MD Anderson, where he had worked since 2006. In addition to caring for children, adolescents and young adults undergoing autologous and allogeneic hematopoietic stem-cell transplantation, referred to as HSCT, at MD Anderson, he ran a laboratory translating immunology into clinical practice. His program had multiple investigator-initiated trials that infuse T cells and NK cells to target malignancies. Dr. Cooper also holds an appointment as a Visiting Scientist at MD Anderson and as Adjunct Professor of Pathology & Laboratory Medicine at the Perelman School of Medicine at the University of Pennsylvania. Dr. Cooper obtained his B.A. at Kenyon College in Gambier, Ohio and M.D. and Ph.D. degrees at Case

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Western Reserve University in Cleveland before training in Pediatric Oncology and Bone Marrow Transplantation at the Fred Hutchinson Cancer Research Center in Seattle. Dr. Cooper is 53 years old.

David M. Mauney, M.D.

Executive Vice President, Chief Business Officer and Interim Chief Operating Officer

Dr. Mauney has served as our Executive Vice President and Chief Business Officer since September 2017 and as our Interim Chief Operating Officer since November 2017. Prior to joining the Company, he served as managing director of Harvest Capital Strategies LLC, where he had worked since 2015. From 2000 to 2015, Dr. Mauney served as managing director of De Novo Ventures, a health care investment firm he co-founded. Dr. Mauney holds a B.A. from Duke University and an M.D. from Dartmouth Medical School. Dr. Mauney is 50 years old.

Francois Lebel, M.D.

Executive Vice President, Research and Development and Chief Medical Officer

Dr. Lebel has served as our Executive Vice President, Research and Development and Chief Medical Officer since February 2015. Previously, Dr. Lebel served as our Vice President, Medical Operations from February 2013 until February 2015. From 2011 to July 2012, Dr. Lebel served as Vice President, Research & Development at Baxter Healthcare International, a global healthcare company with expertise in medical devices, pharmaceuticals and biotechnology, and from April 2007 to July 2011, Dr. Lebel served as Vice President, Global Clinical and Medical Affairs for Baxter, Medication Delivery. From October 2004 to September 2006 Dr. Lebel was Vice President, Medical & Scientific Affairs for Medimmune, Inc., a biotechnology company that was acquired by AstraZeneca plc in 2007. Prior to Medimmune, Dr. Lebel gained leadership experience in development, medical affairs, regulatory and pharmacovigilance in various roles of increasing responsibilities at Chiron, Warner-Lambert and Burroughs Wellcome. Dr. Lebel holds an M.D. and B.S. from the University of Ottawa and is Board Certified in Internal Medicine and an Infectious Diseases specialist trained at McGill University and Harvard Medical School. Dr. Lebel is 66 years old.

Kevin G. Lafond

Sr. Vice President – Finance, Chief Accounting Officer and Treasurer

Mr. Lafond has served as our Sr. Vice President Finance, Chief Accounting Officer and Treasurer since June 2013 and is our principal financial and accounting officer. Previously, Mr. Lafond served as our Corporate Controller since he joined us in February 2009 until June 2013. Prior to joining us, Mr. Lafond served as Controller of Helicos Biosciences Corporation, a public life sciences equipment manufacturer, from February 2007 to October 2008. Mr. Lafond holds a bachelor's degree from Plymouth State University, master's degrees in both accounting and taxation from Bentley University and is a Certified Public Accountant. Mr. Lafond is 62 years old.

There are no family relationships among any of our current directors, director nominees or executive officers. None of the executive officers is related by blood, marriage or adoption to any of our other directors, director nominees or executive officers.

EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Overview

This Compensation Discussion and Analysis explains our executive compensation philosophy and objectives, programs and practices, compensation setting process and the 2017 compensation of our named executive officers. As discussed in Proposal No. 3 of this proxy statement, we are conducting our annual advisory vote on executive compensation, or “say-on-pay” vote, that requests your approval of the compensation of our named executive officers, as described in this subsection titled “—Compensation Discussion and Analysis” and in the tables and accompanying narrative contained below under this section “Executive Compensation.” To assist you with this vote, please review our compensation philosophies, the design of our executive compensation programs and how, we believe, these programs have met our objectives.

For 2017, our named executive officers were:

- Dr. Laurence James Neil Cooper, our Chief Executive Officer
- Dr. David Mauney, our Executive Vice President, Chief Business Officer and Interim Chief Operating Officer⁽¹⁾
- Dr. Francois Lebel, our Executive Vice President, Research and Development and Chief Medical Officer
- Kevin G. Lafond, our Senior Vice President — Finance, Chief Accounting Officer and Treasurer
- Caesar J. Belbel, our former Executive Vice President, Chief Legal Officer and Secretary⁽²⁾

⁽¹⁾ Dr. Mauney joined us on September 28, 2017.

⁽²⁾ Mr. Belbel’s employment with us terminated effective February 15, 2018.

Executive Summary — Key Objectives and Compensation Elements

We believe that our executive compensation programs should:

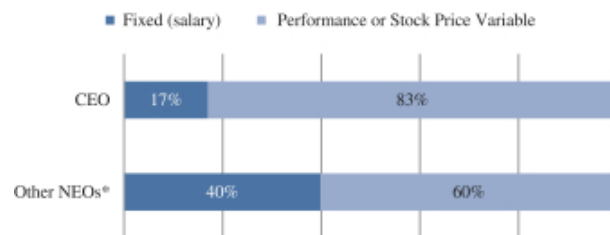
- (i) be tied to overall Company performance;
- (ii) reflect each executive’s level of responsibility, performance and contributions;
- (iii) include a significant equity component to ensure alignment with our stockholders; and
- (iv) provide fully competitive total compensation opportunities, consistent with our performance, that allow us to attract, retain and motivate talented employees, including our named executive officers.

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We believe that by structuring the executive compensation program so that a significant portion of each of our named executive officers' pay is at risk, including a significant equity-based component, we can best ensure our named executive officers are incentivized to maximize our performance and increase value for our stockholders. To this end, our program is comprised of three primary elements:

<u>Compensation Element</u>	<u>Fixed or Variable</u>	<u>Description</u>
Base Salary	Fixed	To attract and retain executives by offering fixed compensation that is competitive with market opportunities and that recognizes each executive's position, role, responsibility and experience.
Annual Performance Bonus	Variable	To motivate and reward the achievement of our annual performance, including objectives related to our strategic development, research and clinical development programs and stockholder return.
Equity Awards	Variable	To align executives' interests with the interests of stockholders through equity-based compensation and promote the long-term retention of our executives and key management personnel.

Our executive compensation program places a significant percentage of our executive's target pay at risk and ties to achievement of our corporate performance goals and/or is dependent upon our stock price performance.



* Excludes Dr. Mauney who joined us in late September 2017 and received an inducement equity award at the time of his hire.

2017 Company Performance Highlights

The highlights of our performance for 2017 include:

- In January 2017, we and Intrexon Corporation, or Intrexon, announced the signing of a Cooperative Research and Development Agreement with the National Cancer Institute for the development of adoptive cell transfer-based immunotherapies genetically modified using the Sleeping Beauty transposon/transposase system to express T-cell receptors for the treatment of solid tumors.
- In January 2017, we announced treating the first patient with genetically modified CAR⁺ T cells manufactured in two weeks using the non-viral *Sleeping Beauty* platform.
- In June 2017, we presented data showing median overall survival of 12.5 months at 9.2 months mean follow-up time for patients treated with 20 mg of veledimex in our phase 1 study of Ad-RTS-hIL-12 plus veledimex in patients with recurrent or progressive glioblastoma, or rGBM, at the annual meeting of the American Society of Clinical Oncology.
- In June 2017, we announced the initiation of enrollment in the stereotactic arm of our Phase 1 multicenter study of Ad-RTS-hIL-12 plus veledimex, a gene therapy for controlled expression of IL-12, in patients with rGBM.

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- In October 2017, we announced that the first patient had been dosed in our new Phase 1 Study of Ad-RTS-hIL-12 plus veledimex for the treatment of pediatric brain tumors.
- In November 2017, we delivered four presentations at the 22nd Annual Meeting and Education Day of the Society for Neuro-Oncology showing that Controlled IL-12 gene therapy turns cold tumors hot, decreased the size of brain tumor lesions in several patients based on MRI evidence and showed that median overall survival for patients with rGBM treated with Ad-RTS-hIL-12 plus veledimex was maintained at 12.5 months in 20mg cohort with longer follow-up time.
- In November 2017, we made four presentations at the 59th American Society of Hematology (ASH) Annual Meeting; clinical data from our first- and second-generation trials showed *Sleeping Beauty* modified CAR⁺ T cells had demonstrated safety, tolerability, disease response, long-term survival, and persistence; preclinical data showed that CAR⁺ T cells co-expressing membrane-bound interleukin-15 (mbIL15) and a control switch manufactured within two days under point-of-care do not require *ex vivo* activation or propagation to achieve anti-tumor effects and prolonged T-cell survival.

Compensation Highlights

- A substantial portion of our executive pay is structured to be “at risk” and dependent upon our performance, in the form of performance-based bonuses and equity incentive awards. For 2017, approximately 70% of our Chief Executive Officer’s actual total compensation was paid in the form of such “at-risk” compensation, as reported in our Summary Compensation Table.
- Our annual bonuses are based on two variously-weighted corporate goals related to key operational objectives and stockholder return. For 2017, because we met a substantial portion of our operational objectives, our named executive officers were, accordingly, awarded 87.5% of their target bonuses.
- Our compensation committee retains an outside compensation consultant for guidance in making executive compensation decisions, annually evaluates our compensation against market practices and develops a peer group of companies each year who are comparable to our company and appropriate reference points in evaluating the appropriateness of our executive compensation program.
- Our severance payments are reasonable in amount and we do not provide our named executive officers with any 280G tax gross ups in connection with a change in control.

Stockholder Advisory Vote

At the 2017 annual meeting of stockholders, approximately 84.9% of the votes cast on the “say-on-pay” vote were in favor of our named executive officer compensation as disclosed in our 2017 proxy statement and, as a result, our named executive officer compensation was approved. The compensation committee carefully considered the final vote results as well as the proxy advisory firm analyses of our executive pay program to evaluate whether changes to the program were advisable for 2017. The compensation committee did not make any specific changes to our 2017 executive compensation policies and decisions as a result of the vote. We aim to continue to maintain clear and concise executive compensation disclosures to promote transparency and understanding of our executive compensation programs.

Role of our Compensation Committee, Management and Consultant

Compensation Committee

Our compensation committee is responsible for reviewing, evaluating, approving, administering and interpreting our executive compensation and benefits policies, programs and plans, including our equity compensation plans. In particular, with respect to the compensation of our named executive officers, our compensation committee is responsible for reviewing and recommending to the outside, independent and non-employee members of the board of directors the compensation levels and performance goals relevant to the

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compensation of these officers, and for evaluating the officers' performance in light of those goals and objectives. The outside, independent and non-employee members of the board of directors approved the compensation committee's recommendations for the 2017 compensation of our named executive officers.

Management

Our human resources, finance and legal departments work with our Chief Executive Officer to design and develop new executive compensation programs, to recommend changes to existing compensation programs, to recommend financial and other performance targets to be achieved under those programs, to prepare analyses of financial data, to prepare peer group data comparisons and other briefing materials for consideration by the compensation committee and ultimately, to implement the decisions of the compensation committee.

The Chief Executive Officer recommends to the compensation committee for its discussion and ultimately, approval, proposed corporate performance and strategic goals and their relative weighting for the upcoming fiscal year, and provides input on the level of attainment of the prior year's strategic goals, for purposes of determining awards under the annual performance bonus plan for all our executives, including the Chief Executive Officer. For executives other than the Chief Executive Officer, the compensation committee considers the individual performance of the executives, as assessed by the Chief Executive Officer, and the compensation recommendations submitted to the compensation committee by the Chief Executive Officer. Our Chief Executive Officer and other members of management generally attend our compensation committee meetings for a portion of the meeting. No executive officer was present or voted in the compensation committee or the board of directors' final determinations regarding the amount of any component of his own 2017 compensation package.

Consultant

In the fourth quarter of 2016 and again during the fourth quarter of 2017, the compensation committee re-engaged W.T Haigh and Company, or Haigh, as an independent compensation consultant. The compensation committee originally retained Haigh in 2012 after considering a number of other national compensation consulting firms because of Haigh's strong reputation and record in advising similarly situated biopharmaceutical and biotechnology companies in the Greater Boston/Cambridge, Massachusetts area. Haigh is engaged by and reports directly to the compensation committee.

As part of its duties, Haigh provided the compensation committee with the following services:

- completed a competitive analysis of our executive compensation program;
- prepared a competitive analysis of the board of directors' compensation program, including observations and recommendations;
- reviewed and updated our peer group for use in determining executive compensation; and
- reviewed our 2017 proxy statement and CD&A.

During 2017, the compensation committee conducted a performance and independence assessment of Haigh with respect to Haigh's role in recommending or determining the amount and form of executive compensation during the fiscal year ended December 31, 2017, and to determine whether it would continue to serve as the compensation committee's independent advisor for 2018. Other than providing limited advice to our management regarding competitive salary data and broad-based stock plan share reserve modeling, Haigh did not provide any other services to us in 2017. The compensation committee also considered that the individual representative of Haigh who works directly with the compensation committee has no other business relationships with the board, management or the Company, Haigh's own policies on ethics, stock ownership and conflicts of interest, and the total revenue that Haigh received from us in 2017 and how this amount compared to Haigh's 2017 total gross revenues. As a result, the compensation committee concluded that Haigh's services to the compensation committee during 2017 did not raise any conflict of interest.

Peer Group, Survey Sources and Market Benchmarking

Peer Group

In November 2016, in consultation with Haigh, the compensation committee reviewed the list of companies that should be included in the peer group used as a reference point for setting base salary and target annual incentive recommendations for 2017, which we refer to as the Early 2017 peer group. This Early 2017 peer group consisted of U.S.-headquartered, public biopharmaceutical companies that were similar in size and development stage to us based upon the following selection criteria:

- companies with 20 to 100 employees with a median of 67 employees;
- companies with market values between \$200 million to \$2 billion with a median of \$509.9 million;
- companies with R&D expense greater than \$50 million annually with a median of \$64.4 million; and
- companies with accumulated deficits from operations between \$100 million and \$500 million with a median of \$486.2 million.

The compensation committee determined that the foregoing selection criteria were appropriate in selecting the Early 2017 peer group because at such time we had approximately 28 employees, a market value of approximately \$1.0 billion, an R&D expense forecast of approximately \$164.5 million and accumulated deficits from operations of approximately \$635.9 million. The following 20 companies were approved by the compensation committee as the Early 2017 peer group for purposes of making its recommendations for the 2017 base salary and target annual incentive compensation:

Acceleron Pharma Inc.	Geron Corporation
Achillion Pharmaceuticals, Inc.	Heron Therapeutics, Inc.
Agenus Inc.	Idera Pharmaceuticals, Inc.
Akebia Therapeutics, Inc.	Intra-Cellular Therapies, Inc.
Biocryst Pharmaceuticals, Inc.	Lexicon Pharmaceuticals, Inc.
Celldex Therapeutics, Inc.	Mirati Therapeutics, Inc.
Concert Pharmaceuticals, Inc.	Molecular Templates, Inc.
Curis, Inc.	Portola Pharmaceuticals, Inc.
Dicerna Pharmaceuticals, Inc.	Sage Therapeutics, Inc.
Flexion Therapeutics, Inc.	Spark Therapeutics, Inc.

In November 2017, in consultation with Haigh, the compensation committee reevaluated the list of companies that should be included in the peer group used as a reference point in determining the levels of December 2017 equity compensation grants, which we refer to as the Late 2017 peer group. Similar to the Early 2017 peer group, the Late 2017 peer group considered many of the same scope measures, location and stage of development characteristics as listed above. The selected Late 2017 peer group companies were chosen upon the following selection criteria:

- companies with 20 to 100 employees with a median of 74 employees;
- companies with market values between \$200 million to \$2 billion with a median of \$635.6 million;
- companies with R&D expense greater than \$50 million annually with a median of \$59.1 million; and
- companies with accumulated deficits from operations between \$100 million and \$500 million with a median of \$391.4 million.

The compensation committee determined that the foregoing selection criteria were appropriate in selecting the Late 2017 peer group because at such time we had approximately 40 employees, a market value of approximately \$917.0 million, an R&D expense forecast of approximately \$41.2 million and accumulated

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deficits from operations of approximately \$686.5 million. The following 18 companies were approved by the compensation committee as the Late 2017 peer group for purposes of determining December 2017 equity grants:

Accelaron Pharma Inc.	CytomX Therapeutics, Inc.
Achillion Pharmaceuticals, Inc.	Editas Medicine, Inc.
Akebia Therapeutics, Inc.	Geron Corporation
Biocryst Pharmaceuticals, Inc.	Heron Therapeutics, Inc.
Blueprint Medicines Corporation	Idera Pharmaceuticals, Inc.
Calithera Biosciences, Inc.	Selecta Biosciences, Inc.
Celldex Therapeutics, Inc.	Syros Pharmaceuticals, Inc.
Concert Pharmaceuticals, Inc.	Xencor, Inc.
Curis, Inc.	Zogenix, Inc.

Other Survey Sources

In making its decisions for recommended 2017 compensation levels, the compensation committee also reviewed Radford survey data as an additional market frame of reference.

2017 Compensation Decisions

Base Salary

Our compensation committee generally reviews base salaries in the fourth quarter of the preceding fiscal year with adjusted salaries becoming effective January 1 of the following fiscal year. As a general approach, the compensation committee references approximately the 50th percentile of our peer group in setting base salary compensation. In addition to considering the peer group and/or other survey market data, the compensation committee also considers, among other factors, the Company's performance; stock price appreciation; individual performance; experience; and breadth of each position's role.

In December 2016, our compensation committee recommended for approval, and the board of directors approved, 2017 base salaries for our named executive officers, as described in the table below. In making its determination, the compensation committee considered the Chief Executive Officer's review of and recommendation for Dr. Lebel and Messrs. Belbel and Lafond as well as a competitive analysis prepared by Haigh for all executive officers. The compensation committee determined Dr. Mauney's base salary as the result of negotiations in connection with his recruitment in September 2017. The compensation committee believed that the 2017 base salary levels set forth below were appropriate in light of our performance during fiscal year 2016 and in order to maintain or make our named executive officer's base salaries competitive versus mid-market salary levels of the early 2017 peer group. Based on these considerations, the compensation committee determined that no increase to the base salaries of Dr. Cooper or Mr. Belbel were necessary, in part because their base salary levels were already at or above mid-market levels. The compensation committee determined to increase Mr. Lafond's 2017 base salary by 12.2% and Dr. Lebel's 2017 base salary by 3.0% in order to position their respective salaries in line with the mid-market salary levels of the early 2017 peer group and Radford survey data.

<u>Executive Officer</u>	<u>2016 Base Salary</u>	<u>2017 Base Salary</u>	<u>% Increase</u>
Dr. Laurence James Neil Cooper	\$ 500,000	\$ 500,000	N/A
Dr. David Mauney ⁽¹⁾	N/A	\$ 400,000	N/A
Dr. Francois Lebel	\$ 410,000	\$ 422,300	3.0%
Kevin G. Lafond	\$ 245,000	\$ 275,000	12.2%
Caesar J. Belbel	\$ 375,000	\$ 375,000	N/A

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- (1) Represents Dr. Mauney's annual base salary rate. Dr. Mauney's actual 2017 base salary was pro-rated based on his September 28, 2017 hire date.

Annual Incentive Compensation

An important component of our total compensation program is the annual cash incentive, which is based on the achievement of annual company performance objectives, stock price appreciation as measured by the absolute increase in market capitalization on a year-over-year basis, and individual executive performance. Our compensation committee recognizes the important role that variable cash compensation plays in attracting and retaining executives, as well as focusing executives (and all other employees) on the achievement of key annual financial, research, clinical, business development and individual goals.

2017 Annual Performance Bonus Target Levels

The compensation committee generally provides annual cash incentive compensation at levels well above the 50th percentile of our peer group in order to provide additional incentives for our executives to achieve our short-term corporate goals and put a greater percentage of their target cash compensation at risk and tied to achievement of our performance goals. This also serves as an important incentive and retention purpose in the highly competitive Greater Boston/Cambridge, Massachusetts area and national and international biopharmaceutical and biotechnology employment marketplace within which we compete for top executive talent. The 2017 target bonus amounts for Drs. Cooper and Lebel and Mr. Belbel, as a percentage of base salary, remained unchanged from 2016 levels as the compensation committee determined that such levels continued to be appropriate to provide adequate performance incentives and were consistent with external benchmarks and reflective of the executive's level of responsibility for attaining our corporate performance objectives. Mr. Lafond's target bonus was increased from 30% of his base salary to 35% of his base salary, consistent with internal and external benchmarks. In connection with his commencement of employment in September 2017 and consistent with internal and external benchmarks, Dr. Mauney's target bonus was set at 35% of his base salary.

2017 Annual Performance Objectives

The annual incentive bonus plan for our named executive officers and our other senior executives was determined by variously weighted components. Our 2017 performance objectives, which we refer to collectively as the Objective Component, included regulatory goals relating to our pivotal trial programs, progress across several of our ongoing and planned clinical trials and studies, advancement of our pre-clinical programs and the success of our fundraising efforts. In addition to these objective performance measures, the board's discretionary evaluation of our executive officer's performance was included as a significant component of the bonus plan. The compensation committee believes that the performance objectives reviewed under the Objective Component were appropriate objectives for 2017 as the core focus for the year was the advancement of both our pre-clinical and clinical immuno-oncology programs, while giving the board of directors the discretion to evaluate our executive officer's performance based on changes in our business.

For 2017, the compensation committee also considered our stock price performance as compared to our peer group, which we refer to as the Stockholder Return Component, as a modifying factor of our performance. The compensation committee believes this is an appropriate measure to use as a modifier to our Objective Component as it reinforces alignment with stockholders and ensures that creating stockholder value significantly impacts annual variable compensation.

The year-end cash bonus award for executives was developed by determining the percent achievement versus the Objective Component. We then used the Stockholder Return Component to modify the percent achievement of the Objective Component. This approach yielded overall performance versus target at a level of 87.5% for 2017.

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The compensation committee determined that 2017 annual incentive payout levels of 87.5% of the targeted cash bonus were appropriate for each of Drs. Cooper, Lebel and Maoney (prorated for his start date) and Messrs. Belbel and Lafond as a result of our agreement on protocol design for a pivotal trial following discussions with regulatory agencies in the United States and Europe, advancements in our pediatric trial using our Ad-RTS-IL-12 + vedolimex platform, progress in our CD19 and CD33 clinical studies, the success of our early pre-clinical efforts in TCR and the completion of our financing in May 2017. The compensation committee also reviewed our stock price performance during 2017. Finally, the compensation committee considered that certain programs and strategic initiatives were poised to contribute value to the Company in 2018.

The target short-term incentive compensation amounts for 2017, expressed as a percentage of 2017 base salaries, for each of our named executive officers, are set forth in the following table. In addition, the compensation committee recommended, and the board of directors approved the following cash bonuses for 2017 performance:

Name	2017 Target Bonus		% Salary	2017 Actual Bonus		% Target
	% Salary	\$ Amount		\$ Amount		
Dr. Laurence James Neil Cooper	200%	\$1,000,000	175.0%	\$875,000	87.5%	
Dr. David Maoney ⁽¹⁾	35%	\$ 140,000	30.6%	\$ 36,158	87.5%	
Dr. Francois Lebel	40%	\$ 168,920	35.0%	\$147,805	87.5%	
Kevin G. Lafond	35%	\$ 96,250	30.6%	\$ 84,219	87.5%	
Caesar J. Belbel	100%	\$ 375,000	87.5%	\$328,125	87.5%	

(1) Dr. Maoney's actual 2017 bonus represents a pro-rated amount based on his September 28, 2017 hire date.

Long-Term Incentive Compensation

We award equity incentives in order to directly link the interests of our named executive officers with those of our stockholders and create incentives for them to maximize the long-term value of our stock. In 2017, we granted our named executive officers restricted stock that vests annually over three years. In determining the aggregate size of equity grants, the compensation committee may consider, in any given year, the peer group or survey data and one or more other factors, including the internal pay equity among our named executive officers other than our Chief Executive Officer, and ensuring that the Chief Executive Officer's award appropriately reflects the importance of his or her responsibilities for our success. The compensation committee has historically referenced equity awards at the 50th to 75th percentile level of those granted by the peer group in determining annual equity grant levels for our executive officers.

Equity Grants during 2017

In December 2017, as part of our annual equity grant program, the compensation committee granted restricted stock to certain members of our senior management team, including Drs. Cooper and Lebel and Messrs. Belbel and Lafond. The equity awards granted in December 2017 were approximate to the 50th percentile of our peer group, and believed to be at a reasonable level to continue to align our executives' interests with those of our stockholders and to motivate their performance to increase our share value, while effectively managing our burn rate and dilution. The use of restricted stock is consistent with our annual equity award grant practices starting in 2015 and is less dilutive to our stockholders than stock options, as fewer shares of our common stock are granted to achieve an equivalent value relative to stock options.

Dr. Maoney joined us in September 2017. As part of our negotiations with Dr. Maoney and as an inducement to have him join the Company, we granted him a stock option to purchase 500,000 shares of our common stock outside of the terms of our 2012 Equity Plan. We determined to grant Dr. Maoney a stock option instead of restricted stock because our general practice is to grant stock options to our newly hired employees.

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For 2017, the following equity incentive grants were made to our named executive officers:

<u>Name</u>	<u>Restricted Stock</u>	<u>Stock Options</u>
Dr. Laurence James Neil Cooper	348,000	—
Dr. David Mauney	—	500,000
Dr. Francois Lebel	116,000	—
Kevin G. Lafond	53,000	—
Caesar J. Belbel	87,000	—

The restricted stock and stock options granted to our named executive officers vest in three annual installments. Vesting of all awards is subject to continued service. These vesting schedules are designed to promote retention and encourage executives to consider the long-term stock price effects of their decisions.

Equity Compensation Policies

Our policy is to generally make annual, new-hire and promotion equity grants as follows:

- annual equity grants are generally recommended by the compensation committee and approved by the board of directors, or approved by the compensation committee on a regularly scheduled meeting of the compensation committee and/or the board of directors preceding the first quarter of each year; and
- new-hire and promotion grants are generally approved by the compensation committee; our Chief Executive Officer has been granted authority to grant stock options and other equity awards to our non-executive employees at a certain level, which grants are reviewed by the board of directors on a regular basis at a subsequent meeting.

In the event that the equity award is in the form of options, as is the case with new hires and grants made to our non-executive employees, the exercise price is not less than the closing price of our common stock on the Nasdaq Capital Market on the grant date of the option. It is our policy not to purposely accelerate or delay the public release of material information in consideration of a pending equity grant to allow the grantee to benefit from a more favorable stock price. To avoid our release of information in close proximity to an equity grant, which may appear to be an effort to time the announcement to a grantee's benefit (even if no such benefit was intended), it is our policy for our management to make a good faith effort to advise the compensation committee whenever it is aware that material non-public information is planned to be released to the public in close proximity to the grant of equity awards.

We encourage our executive officers to hold a significant equity interest in us, but we have not set specific share ownership guidelines. Because our executive officers already have a significant equity stake in us, we have not found it necessary to adopt such guidelines. As of December 29, 2017, our executives had beneficial ownership of our equity values equal to the following multiples of their 2017 annual base salaries, based on our stock price as of December 29, 2017:

<u>Executive Officer</u>	<u>Beneficial Ownership Value as 2017 Base Salary Multiple</u>
Dr. Laurence James Neil Cooper	11.5x
Dr. David Mauney	0.61x
Dr. Francois Lebel	2.0x
Kevin G. Lafond	1.3x
Caesar J. Belbel	2.3x

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We have a policy that prohibits our executive officers, directors and other members of management from engaging in short sales, transactions in put or call options, hedging transactions or other inherently speculative transactions with respect to our stock.

Severance and Change in Control Benefits

We have agreements with each of our named executive officers providing them with severance benefits, as further described in “*Employment and Change in Control Agreements*” below. The amounts and terms and conditions of these severance rights reflect the negotiations between each of our named executive officers and us at the time these documents were entered into, the benefits provided by our peer companies to similarly situated executives at the time they were negotiated, as well as our desire for internal pay equity among our executive officers. We believe that these existing arrangements are consistent with market practices and are critical to attracting and retaining high quality executives. We also believe the involuntary termination benefits allow our executives to focus on normal business operations rather than worrying about how business decisions that may be in our best interest will impact their own financial security. We do not provide golden parachute excise tax gross ups.

401(k) Plan

Our employees, including our named executive officers, are eligible to participate in our 401(k) plan. Our 401(k) plan is intended to qualify as a tax qualified plan under Section 401 of the Internal Revenue Code of 1986, as amended, or the Code. Our 401(k) plan provides that each participant may contribute a portion of his or her pretax compensation, up to a statutory limit, which for most employees was \$18,000 in 2017, with an additional “catch up” contribution of up to \$6,000 permitted for employees age 50 and older, to the 401(k) plan. Employee contributions are held and invested by the 401(k) plan’s trustee. In 2017, we matched employee contributions at a rate of 100% up to 4% of an employee’s base salary contributed to the plan, capped at \$2,000 matching contributions annually. We believe that this benefit is consistent with the practices of our peer companies, and therefore helps us to recruit and retain key talent at a minimal cost to us.

Other Benefits and Perquisites

We provide medical insurance, dental insurance, life insurance and disability insurance benefits to our U.S. employees, including our named executive officers based in the United States. These benefits are available to all employees on the same terms and conditions and are subject to applicable laws.

Our executive officers generally do not receive any perquisites, except for limited perquisites provided on a case by case basis. In considering potential perquisites, the compensation committee reviews our cost of such benefits, as compared to the perceived value we receive. We provided certain transportation and housing perquisites to Dr. Cooper under the terms of his employment agreement which reflects the terms of the individual negotiations with Dr. Cooper at the time the agreement was entered into. We view the overall cost of these benefits to be minimal in light of the benefit of continuing to retain Dr. Cooper’s services and focus his efforts on attaining our performance objectives.

We do not sponsor any defined benefit pension plan or nonqualified deferred compensation plan or arrangement for our employees.

Tax Deductibility of Executive Compensation

Prior to December 22, 2017, when the Tax Cuts and Jobs Act of 2017, or TCJA, was signed into law, Section 162(m) of the Code limited our deduction for federal income tax purposes to not more than \$1 million of compensation paid to certain executive officers in a calendar year. Compensation above \$1 million could be

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deducted if it was “performance-based compensation.” Under the TCJA, the performance-based exception has been repealed and the \$1 million deduction limit now applies to anyone serving as the Chief Executive Officer or the chief financial officer at any time during the taxable year and the top three other highest compensated executive officers serving at fiscal year-end. The new rules generally apply to taxable years beginning after December 31, 2017.

The TCJA also provides for transitional guidance that will allow certain payments made under written and binding agreements entered into prior to November 2, 2017, to be treated as if they were made under the provisions of Section 162(m) that were in effect prior to enactment of the TCJA. We are in the process of gathering information on our existing compensation arrangements for covered employees as well as assessing the impact of transitional guidance. Prior to the TCJA, we had not adopted a policy requiring all compensation to be deductible, in order to maintain flexibility in compensating our executive officers in a manner designed to promote our objectives. Going forward, while we intend to evaluate the effects of the revised compensation limits of Section 162(m), we intend to continue to provide future compensation in a manner consistent with our best interests and those of our stockholders, including compensation that is potentially not deductible.

Accounting Considerations

We account for equity compensation paid to our employees under the Financial Accounting Standards Board Accounting Standards Codification Topic 718, or ASC 718, which requires us to estimate and record an expense over the service period of the equity award. Our cash compensation is recorded as an expense over the period the bonus is earned. The accounting impact of our compensation programs are one of many factors that the compensation committee considers in determining the structure and size of our executive compensation programs.

Compensation Recovery Policy

As a public company subject to the provisions of Section 304 of the Sarbanes-Oxley Act of 2002, if we are required as a result of misconduct to restate our financial results due to our material noncompliance with any financial reporting requirements under the federal securities laws, our Chief Executive Officer and chief financial officer may be legally required to reimburse us for any bonus or other incentive-based or equity-based compensation they receive. We have considered, and are aware that some companies, a small portion of our peer companies, have voluntarily adopted clawback policies to attempt to recover cash bonus payments to executive officers if performance objectives that led to the determination of such payments are restated or found not to have been met to the extent the compensation committee originally believed. We have not currently adopted such a policy but we will comply with the requirements of the Dodd-Frank Act and will adopt a compensation recovery policy once the SEC adopts final regulations on the subject.

Risk Analysis of Our Compensation Program

Our compensation committee has reviewed our compensation policies as generally applicable to our employees and believes that our policies do not encourage excessive or inappropriate risk taking and that the level of risk that they do encourage is not reasonably likely to have a material adverse effect on us. As part of its assessment, the compensation committee considered, among other factors, the allocation of compensation among base salary and short- and long-term compensation, our approach to establishing company-wide and individual financial, operational and other performance targets, our bonus structure of payouts at multiple levels of performance (including maximum payout caps and payments for performance below target levels), and the nature of our key performance metrics.

Compensation Committee Report

The compensation committee has reviewed and discussed with management the Compensation Discussion and Analysis portion contained in this proxy statement. Based on this review and discussion, the compensation

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committee has recommended to the board of directors, and the board has agreed, that the section titled “Compensation Discussion and Analysis” as it appears above be included in this proxy statement.

COMPENSATION COMMITTEE

Scott Tariff, Chairman
Murray Brennan
James Cannon

This report is not “soliciting material,” is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference in any of our filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether before or after the date hereof and irrespective of any general incorporation language in any such filing.

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Executive Compensation Tables

Summary Compensation Table

The following table sets forth information regarding compensation awarded to or earned by our named executive officers, who consist of our principal executive officer, our principal financial officer and three other executive officers who were serving as of December 31, 2017, for the years covered in the table:

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$) ⁽¹⁾	Option Awards (\$) ⁽¹⁾	All Other Compensation (\$)	Total (\$)
Laurence James Neil Cooper, M.D., Ph.D. ⁽²⁾ <i>Chief Executive Officer</i>	2017	\$500,000	\$ 875,000	1,140,720	\$ —	\$ 78,524 ⁽³⁾	\$ 2,894,244
	2016	\$500,000	\$ 700,000	1,135,538	\$ —	\$ 77,071 ⁽⁴⁾	\$ 2,412,609
	2015	\$328,605	\$1,657,533	10,438,610	\$ —	\$ 40,611 ⁽⁵⁾	\$12,465,359
David M. Mauney, M.D. ⁽⁶⁾ <i>Executive Vice President, Chief Business Officer and Interim Chief Operating Officer</i>	2017	\$103,077	\$ 36,158	—	\$2,156,550	\$ 2,189 ⁽⁷⁾	\$ 2,297,974
Francois Lebel, M.D. <i>Executive Vice President, Research and Development and Chief Medical Officer</i>	2017	\$422,300	\$ 147,805	480,240	\$ —	\$ 2,745 ⁽⁸⁾	\$ 1,053,090
	2016	\$410,000	\$ 114,800	504,773	\$ —	\$ 2,713 ⁽⁹⁾	\$ 1,032,286
	2015	\$378,219	\$ 114,000	540,150	\$ —	\$ 2,685 ⁽¹⁰⁾	\$ 1,035,054
Kevin G. Lafond <i>Sr. Vice President – Finance, Chief Accounting Officer and Treasurer</i>	2017	\$275,000	\$ 84,219	219,420	\$ —	\$ 2,585 ⁽¹¹⁾	\$ 581,224
	2016	\$245,000	\$ 51,450	210,255	\$ —	\$ 2,469 ⁽¹²⁾	\$ 509,174
	2015	\$225,000	\$ 56,250	232,680	\$ —	\$ 2,440 ⁽¹³⁾	\$ 516,370
Caesar J. Belbel ⁽¹⁴⁾ <i>Former Executive Vice President, Chief Legal Officer and Secretary</i>	2017	\$375,000	\$ 328,125	360,180	\$ —	\$ 2,745 ⁽¹⁵⁾	\$ 1,066,050
	2016	\$375,000	\$ 262,500	504,773	\$ —	\$ 2,713 ⁽¹⁶⁾	\$ 1,144,986
	2015	\$364,583	\$ 375,000	1,011,650	\$ —	\$ 2,685 ⁽¹⁷⁾	\$ 1,753,918

- (1) These amounts have been calculated in accordance with ASC Topic 718. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. For a discussion of the assumptions relating to our valuations of these restricted stock awards and stock options, please see Note 3 to the financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the SEC on March 1, 2018, as amended. These amounts reflect our accounting expense for these restricted stock awards and stock options and do not correspond to the actual value that may be recognized by our named executive officers.
- (2) Dr. Cooper joined us in May 2015.
- (3) Of such amount, (i) \$756 represents the dollar value of group term life insurance premiums we paid for the benefit of Dr. Cooper during 2017, (ii) \$75,768 represents taxable perquisites, including \$71,990 for housing expenses, \$3,118 for commuting expenses and \$660 for parking, and (iii) \$2,000 represents the amount we contributed to Dr. Cooper's 401(k) pursuant to our matching program.
- (4) Of such amount, (i) \$421 represents the dollar value of group term life insurance premiums we paid for the benefit of Dr. Cooper during 2016, (ii) \$72,915 represents taxable perquisites, including \$65,577 for housing expenses, \$6,538 for commuting expenses and \$800 for parking, (iii) \$1,735 represents "gross up" amounts reimbursed to Dr. Cooper for the payment of taxes on such perquisites, and (iv) \$2,000 represents the amount we contributed to Dr. Cooper's 401(k) pursuant to our matching program.
- (5) Of such amount, (i) \$404 represents the dollar value of group term life insurance premiums we paid for the benefit of Dr. Cooper during 2015, (ii) \$29,710 represents taxable perquisites, including \$18,000 for legal fees, \$11,320 for relocation costs and \$390 for parking, and (iii) \$8,497 represents "gross up" amounts reimbursed to Dr. Cooper for the payment of taxes on such perquisites.
- (6) Dr. Mauney joined us as Chief Business Officer in September 2017 and was appointed our Interim Chief Operating Officer in November 2017.
- (7) Of such amount, (i) \$189 represents the dollar value of group term life insurance premiums we paid for the benefit of Dr. Mauney during 2017 and (ii) \$2,000 represents the amount we contributed to Dr. Mauney's 401(k) pursuant to our matching program.

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- (8) Of such amount, (i) \$745 represents the dollar value of group term life insurance premiums we paid for the benefit of Dr. Lebel during 2017 and (ii) \$2,000 represents the amount we contributed to Dr. Lebel's 401(k) pursuant to our matching program.
- (9) Of such amount, (i) \$713 represents the dollar value of group term life insurance premiums we paid for the benefit of Dr. Lebel during 2016 and (ii) \$2,000 represents the amount we contributed to Dr. Lebel's 401(k) pursuant to our matching program.
- (10) Of such amount, (i) \$685 represents the dollar value of group term life insurance premiums we paid for the benefit of Dr. Lebel during 2015 and (ii) \$2,000 represents the amount we contributed to Dr. Lebel's 401(k) pursuant to our matching program.
- (11) Of such amount, (i) \$585 represents the dollar value of group term life insurance premiums we paid for the benefit of Mr. Lafond during 2017 and (ii) \$2,000 represents the amount we contributed to Mr. Lafond's 401(k) pursuant to our matching program.
- (12) Of such amount, (i) \$469 represents the dollar value of group term life insurance premiums we paid for the benefit of Mr. Lafond during 2016 and (ii) \$2,000 represents the amount we contributed to Mr. Lafond's 401(k) pursuant to our matching program.
- (13) Of such amount, (i) \$440 represents the dollar value of group term life insurance premiums we paid for the benefit of Mr. Lafond during 2015 and (ii) \$2,000 represents the amount we contributed to Mr. Lafond's 401(k) pursuant to our matching program.
- (14) Mr. Belbel's employment with us terminated effective February 15, 2018.
- (15) Of such amount, (i) \$745 represents the dollar value of group term life insurance premiums we paid for the benefit of Mr. Belbel during 2017 and (ii) \$2,000 represents the amount we contributed to Mr. Belbel's 401(k) pursuant to our matching program.
- (16) Of such amount, (i) \$713 represents the dollar value of group term life insurance premiums we paid for the benefit of Mr. Belbel during 2016 and (ii) \$2,000 represents the amount we contributed to Mr. Belbel's 401(k) pursuant to our matching program.
- (17) Of such amount, (i) \$685 represents the dollar value of group term life insurance premiums we paid for the benefit of Mr. Belbel during 2015 and (ii) \$2,000 represents the amount we contributed to Mr. Belbel's 401(k) pursuant to our matching program.

Grants of Plan-Based Awards for Fiscal 2017

The following table sets forth information regarding grants of compensation in the form of plan-based awards made during 2017 to our named executive officers. The equity awards granted in 2017 identified in the table below are also reported in the table titled "Outstanding Equity Awards at 2017 Fiscal Year-End":

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Award(s) ⁽¹⁾			All Other Stock Awards: Number of Shares of Stock or Units (#)	All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards (\$/Sh)	Grant Date Fair Value of Stock and Option Awards (\$) ⁽²⁾
		Threshold (\$)	Target (\$)	Maximum (\$)				
Laurence James Neil Cooper, M.D., Ph.D	N/A	—	1,000,000	—	—	—	—	
	12/29/17	—	—	—	348,000	—	1,440,720	
David M. Mauney, M.D.	N/A	—	140,000	—	—	—	—	
	9/28/17	—	—	—	—	500,000	6.19 2,156,550	
Francois Lebel, M.D.	N/A	—	164,000	—	—	—	—	
	12/29/17	—	—	—	116,000	—	480,240	
Kevin G. Lafond	N/A	—	96,250	—	—	—	—	
	12/29/17	—	—	—	53,000	—	219,420	
Caesar J. Belbel	N/A	—	375,000	—	—	—	—	
	12/29/17	—	—	—	87,000	—	360,180	

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- (1) Reflects performance-based cash bonuses that our named executive officers were eligible to earn in 2017 if certain performance metrics were achieved whether pursuant to an employment agreement with us or otherwise. See “—Employment and Change in Control Agreements” for a description of our performance-based compensation arrangements with our named executive officers. For amounts actually earned and paid for 2017 performance, see the Bonus column of the Summary Compensation Table above.
- (2) The amounts shown represent compensation expense recognized for financial statement purposes under ASC Topic 718. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. For a discussion of the assumptions relating to our valuations of restricted stock awards and option awards, see Note 3 to the financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the SEC on March 1, 2018, as amended. These amounts reflect our accounting expense for these restricted stock awards and do not correspond to the actual value that may be recognized by our named executive officers.

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Outstanding Equity Awards at 2017 Fiscal Year-End

The following table sets forth information regarding option awards and restricted stock awards held as of December 31, 2017 by our named executive officers.

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options		Option Exercise Price (\$) ⁽¹⁾	Option Expiration Date	Shares or Units of Stock That Have Not Vested	
	Exercisable (#)	Unexercisable (#)			Number (#)	Market Value (\$) ⁽²⁾
Laurence James Neil Cooper, M.D., Ph.D.	—	—	—	—	333,333 ⁽³⁾	1,379,999
	—	—	—	—	43,667 ⁽⁴⁾	180,782
	—	—	—	—	141,500 ⁽⁵⁾	586,845
	—	—	—	—	348,000 ⁽⁶⁾	1,440,720
David M. Mauney, M.D.	—	500,000 ⁽⁷⁾	6.19	9/28/27	—	—
Francois Lebel, M.D.	45,000	—	5.71	3/17/23	—	—
	110,000	—	2.30	6/26/23	—	—
	100,000	—	4.34	12/30/23	—	—
	175,000	—	5.07	12/30/24	—	—
	—	—	—	—	21,667 ⁽⁸⁾	89,702
	—	—	—	—	62,900 ⁽⁹⁾	260,406
	—	—	—	—	116,000 ⁽¹⁰⁾	480,240
Kevin G. Lafond	11,667	—	2.85	12/31/19	—	—
	25,000	—	4.77	12/31/20	—	—
	20,000	—	4.16	12/31/22	—	—
	55,000	—	2.30	6/27/23	—	—
	35,000	—	4.34	12/31/23	—	—
	75,000	—	5.07	12/31/24	—	—
	—	—	—	—	9,333 ⁽¹¹⁾	38,639
	—	—	—	—	26,200 ⁽¹²⁾	108,468
	—	—	—	—	53,000 ⁽¹³⁾	219,420
Caesar J. Belbel	200,000	—	5.17	9/6/21	—	—
	150,000	—	4.16	12/31/22	—	—
	76,666	—	2.30	6/27/23	—	—
	150,000	—	4.34	12/31/23	—	—
	175,000	—	5.07	12/31/24	—	—
	—	—	—	—	16,666 ⁽¹⁴⁾	68,998
	—	—	—	—	21,667 ⁽¹⁵⁾	89,702
	—	—	—	—	62,900 ⁽¹⁶⁾	260,406
	—	—	—	—	87,000 ⁽¹⁷⁾	360,180

- (1) Each stock option was granted with an exercise price equal to the fair market value of our common stock on the grant date.
- (2) Market values are calculated based on the closing market price of our common stock as reported on the Nasdaq Capital Market on December 29, 2017, the last trading day of 2017, which was \$4.14 per share.
- (3) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 333,333 shares on May 5, 2018.
- (4) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 43,667 shares on December 31, 2018.
- (5) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 70,750 shares on each of December 30, 2018 and December 30, 2019.
- (6) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 116,000 shares on each of December 29, 2018, December 29, 2019 and December 29, 2020.
- (7) Vests with respect to 166,667 shares on each of September 28, 2018 and September 28, 2019, and with respect to 166,666 shares on September 28, 2020.

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- (8) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 21,667 shares on December 31, 2018.
- (9) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 31,450 shares on each of December 30, 2018 and December 30, 2019.
- (10) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 38,667 shares on each of December 29, 2018 and December 29, 2019, and with respect to 38,666 shares on December 29, 2020.
- (11) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 9,333 shares on December 31, 2018.
- (12) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 13,100 shares on each of December 30, 2018 and December 30, 2019.
- (13) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 17,667 shares on each of December 29, 2018 and December 29, 2019, and with respect to 17,666 shares on December 29, 2020.
- (14) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 16,666 shares on June 1, 2018.
- (15) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 21,667 shares on December 31, 2018.
- (16) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 31,450 shares on each of December 30, 2018 and December 30, 2019.
- (17) Such shares are subject to transfer and forfeiture restrictions that lapse with respect to 29,000 shares on each of December 29, 2018, December 29, 2019 and December 29, 2020.

Option Exercises and Stock Awards Vested during Fiscal 2017

None of our named executive officers exercised stock options during 2017.

The following table provides certain information regarding restricted stock that vested during the fiscal year ended December 31, 2017 with respect to our named executive officers.

<u>Name</u>	<u>Stock Awards</u>	
	<u>Number of Shares Acquired on Vesting(#)⁽¹⁾</u>	<u>Value Realized on Vesting(\$)⁽²⁾</u>
Laurence James Neil Cooper	447,750	\$ 2,847,018
David M. Mauney	—	—
Francois Lebel	53,117	\$ 219,905
Kevin G. Lafond	22,433	\$ 92,873
Caesar J. Belbel	69,784	\$ 321,740

- (1) Each of the named executive officers in the table above, other than Dr. Mauney, elected to have shares withheld to pay associated income taxes. The number of shares reported represents the gross number prior to withholding of such shares.
- (2) Value realized is calculated by multiplying the number of shares vested on the applicable date during 2017 by the closing market price of our common stock as reported on the Nasdaq Capital Market on such date. These amounts do not correspond to the actual value that may be recognized by our named executive officers.

Employment and Change in Control Agreements

Employment Agreement with Laurence James Neil Cooper, M.D., Ph.D.

Dr. Laurence James Neil Cooper has served as our Chief Executive Officer since May 5, 2015, the date of his written employment agreement. Dr. Cooper has an at-will employment relationship with us.

Base Salary. In 2017, Dr. Cooper received a base salary of \$500,000. Under his employment agreement, his base salary is subject to review by the board of directors or the compensation committee at least annually. The board did not increase Dr. Cooper's base salary for 2018.

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Annual Performance Bonus. Under his employment agreement, Dr. Cooper is eligible to receive an annual bonus based on his performance as determined by the board or the compensation committee. The target amount of the annual performance bonus is 200% of his base salary, with the actual amount to be received determined by the board or the compensation committee. Dr. Cooper is also eligible to receive an additional annual discretionary bonus in such amount as may be determined by the board. Effective as of December 29, 2017, the board adopted the compensation committee's recommendations for end-of-year cash bonuses pursuant to which Dr. Cooper received a cash bonus of \$875,000.

Equity Incentive Grants. Dr. Cooper is eligible under his employment agreement to receive equity awards as determined by the board in its discretion from time to time. Effective as of December 29, 2017, the board adopted the compensation committee's recommendations for 2017 end-of-year awards of restricted stock and grants of stock options under our 2012 Equity Plan pursuant to which Dr. Cooper was awarded 348,000 shares of restricted common stock, which restricted stock vests in equal annual installments over three years commencing on the one-year anniversary of the grant date. Under certain circumstances, the vesting of Dr. Cooper's equity awards may be accelerated in the event of a change in control or if Dr. Cooper's employment with us is terminated. See "Severance Provisions" and "Potential Payments Upon Termination or Change in Control" below for further discussion on Dr. Cooper's severance benefits.

Expense Reimbursement. Under his agreement, Dr. Cooper is eligible for reimbursement of normal, usual and necessary expenses incurred by him in furtherance of our business and affairs, including reasonable travel and entertainment expenses and the ordinary and necessary expenses incurred in connection with his commute and relocation from Houston, Texas to the Philadelphia or Boston metropolitan area (as applicable).

Severance Provisions. If (i) we terminate Dr. Cooper for a reason other than death, disability or "Cause" (as that term is defined in his employment agreement), or (ii) Dr. Cooper resigns for "Good Reason" (as that term is defined in his employment agreement), Dr. Cooper will be entitled to receive continuing payments of his then-current base salary for a period of twelve months, plus a portion of the target amount of his annual performance bonus for the calendar year in which such termination occurs (which portion will be determined pro rata based on the number of days in such calendar year during which we employed Dr. Cooper), plus payment of our portion of the contributions for medical and dental insurance coverage for twelve months, subject to Dr. Cooper's execution and delivery of a general release in favor of the Company. In this situation, Dr. Cooper's stock options that have vested as of the date of termination shall remain exercisable for a period of 90 days, the restricted stock award of 1,000,000 shares granted to Dr. Cooper in connection with his employment shall vest through the next scheduled vesting date immediately following the effective date of termination, and any other unvested stock options and unvested awards of restricted stock held by Dr. Cooper shall be deemed to have expired as of the date of termination. In the case of either (i) a termination by us for a reason other than death, disability or "Cause," or (ii) a resignation for "Good Reason," in each case that occurs within 90 days prior to and in connection with a "Change in Control" (as that term is defined in his employment agreement), or within 18 months after the occurrence of a "Change in Control," all unvested stock options and unvested awards of restricted stock held by Dr. Cooper at the time that such termination occurs will be accelerated and deemed to have vested as of his employment termination date, and in lieu of the pro-rata bonus described above, Dr. Cooper will be entitled to full target amount of his annual performance bonus for the calendar year in which such termination occurs.

Non-competition and Non-solicitation. Dr. Cooper has entered into an Invention, Non-Disclosure and Non-Competition Agreement, which provides that he will not compete with us or solicit our clients or customers for a year after the termination or cessation of his employment with us, and further provides that he will not solicit our employees for one year after the termination or cessation of his employment with us.

Offer Letter with David M. Mauney, M.D.

Dr. David M. Mauney has served as our Executive Vice President and Chief Business Officer since September 28, 2017, the date of his offer letter, and as our Interim Chief Operating Officer since November 6, 2017. Dr. Mauney has an at-will employment relationship with us.

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Base Salary. Pursuant to his offer letter, Dr. Mauney's initial annual base salary is \$400,000, subject to review by the board of directors or the compensation committee at least annually. The board did not increase Dr. Mauney's base salary for 2018.

Annual Performance Bonus. Pursuant to his offer letter, Dr. Mauney is eligible to receive an annual bonus based on his performance as determined by the board or the compensation committee. The target amount of the annual performance bonus is 35% of his base salary, with the actual amount to be received determined by the board or the compensation committee. For 2017, the board adopted the compensation committee's recommendations for end-of-year cash bonuses pursuant to which Dr. Mauney received a cash bonus of \$36,158, which represented 87.5% of his target bonus, pro-rated for the number of days worked in 2017.

Equity Incentive Grants. Dr. Mauney is eligible to receive equity awards as determined by the board in its sole discretion from time to time. In connection with his appointment as our Chief Business Officer and pursuant to his offer letter, on September 28, 2017, the board granted to Dr. Mauney an inducement award consisting of an option to purchase 500,000 shares of our common stock, which option vests in equal annual installments over three years and will fully vest in the event of a change in control in which Dr. Mauney's employment is subsequently terminated without cause. See "Severance Provisions" and "Potential Payments Upon Termination or Change in Control" below for further information on Dr. Mauney's severance benefits.

Severance Provisions. If Dr. Mauney is terminated by us for a reason other than for Cause (as defined in Dr. Mauney's severance agreement), Dr. Mauney will be entitled to receive a lump-sum severance payment equal to six months of his then-current annualized base salary plus payment of our portion of the contributions for medical and dental insurance coverage for six months, subject to Dr. Mauney's execution and delivery of a general release in favor of us.

Non-competition and Non-solicitation. Dr. Mauney has entered into an Invention, Non-Disclosure and Non-Competition Agreement, which provides that he will not compete with us or solicit our clients or customers for a year after the termination or cessation of his employment with us, and further provides that he will not solicit our employees for one year after the termination or cessation of his employment with us.

Employment Relationship with Francois Lebel, M.D.

Base Salary. In 2017, Dr. Lebel received an annual base salary of \$422,300, which is subject to review by the board of directors or the compensation committee at least annually. The board did not increase Dr. Lebel's base salary for 2018.

Annual Performance Bonus. Dr. Lebel is eligible to receive an annual bonus based on his performance as determined by the board or the compensation committee. For 2017, the board adopted the compensation committee's recommendations for end-of-year cash bonuses pursuant to which Dr. Lebel received a cash bonus of \$147,805.

Equity Incentive Grants. Effective as of December 29, 2017, the board adopted the compensation committee's recommendations for 2017 end-of-year awards of restricted stock and grants of stock options under our 2012 Equity Plan pursuant to which Dr. Lebel was awarded 117,000 shares of restricted common stock, which restricted stock vests in equal annual installments over three years commencing on the one-year anniversary of the grant date. The vesting of certain of Dr. Lebel's equity awards may be accelerated if Dr. Lebel's employment with us is terminated under certain circumstances. See "Severance Provisions" and "Potential Payments Upon Termination or Change in Control" below for further information regarding Dr. Lebel's severance benefits.

Severance Provisions. If Dr. Lebel is terminated by us for a reason other than for "Cause" (as that term is defined in his severance agreement), or other than for retirement, death or disability, Dr. Lebel will be entitled to receive a severance payment in a single lump sum equal to six months of his then-current annualized base salary, subject to Dr. Lebel's execution and delivery of a general release in favor of us.

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Employment Relationship with Kevin G. Lafond

Base Salary. In 2017, Mr. Lafond received an annual base salary of \$275,000, which is subject to review by the board of directors or the compensation committee at least annually. The board increased Mr. Lafond's base salary to \$283,250 for 2018.

Annual Performance Bonus. Mr. Lafond is eligible to receive an annual bonus based on his performance as determined by the board or the compensation committee. For 2017, the board adopted the compensation committee's recommendations for end-of-year cash bonuses pursuant to which Mr. Lafond received a cash bonus of \$84,219.

Equity Incentive Grants. Mr. Lafond is eligible to receive equity awards as determined by the board in its sole discretion from time to time. Effective as of December 29, 2017, the board adopted the compensation committee's recommendations for 2017 end-of-year awards of restricted stock and grants of stock options under our 2012 Equity Plan pursuant to which Mr. Lafond was awarded 53,000 shares of restricted common stock, which restricted stock vests in equal annual installments over three years commencing on the one-year anniversary of the grant date. The vesting of certain of Mr. Lafond's equity awards may be accelerated if Mr. Lafond's employment with us is terminated under certain circumstances. See "Severance Provisions" and "Potential Payments Upon Termination or Change in Control" below for further information regarding Mr. Lafond's severance benefits.

Severance Provisions. If Mr. Lafond is terminated by us for a reason other than for "Cause" (as that term is defined in his severance agreement), or other than for retirement, death or disability, Mr. Lafond will be entitled to receive a severance payment in a single lump sum equal to six months of his then-current annualized base salary, subject to Mr. Lafond's execution and delivery of a general release in favor of us.

Amended and Restated Employment Agreement and Separation Agreement with Caesar J. Belbel

Mr. Belbel served as our Executive Vice President, Chief Legal Officer and Secretary from September 6, 2011 to February 15, 2018, and as our Chief Operating Officer from June 1, 2015 to November 6, 2017. We entered into an employment agreement with Mr. Belbel on September 6, 2011, which was amended and restated on June 1, 2015, in connection with his appointment as our Chief Operating Officer. In connection with his departure from us on February 15, 2018, we entered into a separation agreement with Mr. Belbel, as discussed further below under "Separation Agreement."

Base Salary. Under his amended and restated employment agreement, Mr. Belbel received an initial annual base salary of \$375,000, subject to review of the board of directors or the compensation committee at least annually, provided that the base salary would not be subject to reduction. The board did not increase Mr. Belbel's base salary for 2018.

Annual Performance Bonus. While he served as our Executive Vice President, Chief Legal Officer and Secretary, Mr. Belbel was eligible under his amended and restated employment agreement to receive an annual bonus based on his performance as determined by the board or the compensation committee. The target amount of the annual performance bonus was 100% of his base salary, with the actual amount to be received determined by the board or the compensation committee. Mr. Belbel was also eligible to receive an additional annual discretionary bonus in such amount as may be determined by the board. For 2017, the board adopted the compensation committee's recommendations for end-of-year cash bonuses pursuant to which Mr. Belbel received a cash bonus of \$328,125.

Equity Incentive Grants. While he served as our Executive Vice President, Chief Legal Officer and Secretary, Mr. Belbel was eligible under his amended and restated employment agreement to receive equity awards as determined by the board in its sole discretion from time to time. Effective as of December 29, 2017,

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the board adopted the compensation committee's recommendations for 2017 end-of-year awards of restricted stock and grants of stock options under our 2012 Equity Plan pursuant to which Mr. Belbel was awarded 87,000 shares of restricted stock.

Non-competition and Non-solicitation. Mr. Belbel entered into an Invention, Non-Disclosure and Non-Competition Agreement, which provided that he would not compete with us or solicit our clients or customers for a year after the termination or cessation of his employment with us, and further provided that he would not solicit our employees for two years after the termination or cessation of his employment with us.

Separation Agreement. In connection with his departure from the Company on February 15, 2018, we entered into a separation agreement with Mr. Belbel. Pursuant to the terms of the separation agreement, among other things, (i) we agreed to pay to Mr. Belbel a severance payment of \$375,000, which is equal to 100% of his annual base salary at the time of his departure, (ii) we agreed to pay to Mr. Belbel an additional severance payment of \$47,260.27, which is equal to his 2018 target bonus amount, prorated based upon the number of days he worked in 2018, (iii) we agreed to pay the employer portion of the premium cost of COBRA continuation coverage for Mr. Belbel and his dependents for twelve months following his separation, if he so elects, (iv) all unvested shares of restricted stock and all unvested stock options held by Mr. Belbel as of February 15, 2018 were accelerated and deemed to have fully vested as of such date and (v) the post-separation exercise period of all vested stock options held by Mr. Belbel was extended to twelve months following his separation date.

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Potential Payments Upon Termination or Change in Control

The following table sets forth estimated compensation that would have been payable to each of our named executive officers as severance or upon a change in control of the Company under three alternative scenarios, assuming the termination triggering severance payments or a change in control took place on December 29, 2017, the last business day of our fiscal year ended December 31, 2017.

Name and Principal Position	Cash Payment (\$)⁽¹⁾	Accelerated Vesting of Stock Options (\$)⁽²⁾	Accelerated Vesting of Restricted Stock Awards (\$)⁽³⁾	Welfare Benefits (\$)⁽⁴⁾	Total (\$)
Laurence James Neil Cooper, M.D., Ph.D.					
Termination without cause or with good reason prior to change in control	1,500,000	—	3,587,306	20,438	5,107,744
Change in control only	—	—	—	—	—
Change in control with termination without cause or good reason	1,500,000	—	3,587,306	20,438	5,107,744
David M. Mauney, M.D.					
Termination without cause or with good reason prior to change in control	200,000	—	—	10,359	210,359
Change in control only	—	—	—	—	—
Change in control with termination without cause or good reason	200,000	—	—	10,359	210,359
Francois Lebel, M.D.					
Termination without cause or with good reason prior to change in control	211,150	—	830,343	10,359	1,051,852
Change in control only	—	—	830,343	—	830,343
Change in control with termination without cause or good reason	211,150	—	830,343	10,359	1,051,852
Kevin G. Lafond					
Termination without cause or with good reason prior to change in control	137,500	—	—	10,359	150,331
Change in control only	—	—	—	—	—
Change in control with termination without cause or good reason	137,500	—	473,657	10,359	623,998
Caesar J. Belbel⁽⁵⁾					
Termination without cause or with good reason prior to change in control	750,000	—	779,285	14,562	1,543,847
Change in control only	—	—	779,285	—	779,285
Change in control with termination without cause or good reason	750,000	—	779,285	14,562	1,543,847

- (1) Amounts shown reflect payments based on salary and bonus as well as payment of estimated cost of life, disability and accident insurance benefits during the agreement period.
- (2) Amounts shown represent the value of stock options upon the applicable triggering event described in the first column. The value of stock options is based on the difference between the exercise price of the options and \$4.14, which was the closing price of our common stock on the Nasdaq Capital Market on December 29, 2017, the last trading day of 2017.

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- (3) Amounts shown represent the value of restricted stock awards upon the applicable triggering event described in the first column, based on the closing price of our common stock on the Nasdaq Capital Market on December 29, 2017, the last trading day of 2017.
- (4) Amounts shown represent the estimated cost of providing employment-related benefits during the agreement period.
- (5) As described above, amounts shown represent the value that would have been payable to Mr. Belbel assuming the applicable trigger event took place on December 29, 2017. Mr. Belbel ceased serving as an employee of the Company as of February 15, 2017 and received severance payments pursuant to his separation agreement, as described in more detail in the section entitled "Employment and Change in Control Agreements."

Pay Ratio Disclosure

Under SEC rules, we are required to calculate and disclose the annual total compensation of our median employee, as well as the ratio of the annual total compensation of our median employee as compared to the annual total compensation of our Chief Executive Officer, Laurence J.N. Cooper, M.D., Ph.D., for our last fiscal year. To identify our median employee, as permitted under SEC rules, we used the following methodology:

- To determine our total population of employees, we included all our employees as of December 29, 2017 regardless of their FTE schedule or anticipated employment duration and all individuals classified by us as independent contractors for tax reporting and employee benefits eligibility purposes but whose compensation we arguably control.
- To identify our median employee from our employee population, excluding our Chief Executive Officer, we calculated the total direct compensation paid as of December 29, 2017. Total direct compensation included 2017 base salary, actual annual bonus paid for 2017 performance (paid in December) and the fair value of stock options and/or restricted stock awards granted during 2017 (using the same methodology we use for estimating the value of the equity awards granted to our named executive officers and reported in our Summary Compensation Table). For part-time employees and/or independent contractors, we used actual compensation paid as of December 29, 2017.
- Using this approach to determine the median employee, we then calculated the annual total compensation of this employee for 2017 using the same methodology we used for calculation of annual total compensation of our named executive officers in accordance with the requirements of the Summary Compensation Table.

For the fiscal year ended December 31, 2017, the median of the annual total compensation of our employees (other than our Chief Executive Officer) was \$177,922 and the annual total compensation of our Chief Executive Officer, as reported in the Summary Compensation Table included in this proxy statement, was \$2,894,244. Based on this information, the ratio of the annual total compensation of our Chief Executive Officer to the median of the annual total compensation of all our employees was 16.3 to 1. We believe this ratio is a reasonable estimate calculated in a manner consistent with Item 402(u) of Regulation S-K under the Exchange Act.

INFORMATION REGARDING THE BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

This section provides further information regarding the board of directors and the independence of our directors and describes key corporate governance guidelines and practices that we have adopted.

Independence of the Board of Directors

The board of directors uses the definition of independence established by The Nasdaq Stock Market. Under applicable Nasdaq rules, a director qualifies as an “independent director” if, in the opinion of the board, he or she does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. The board has determined that Dr. Murray Brennan, Mr. James A. Cannon, Senator Wyche Fowler, Jr. and Mr. Scott Tarriff, who are each current directors, are “independent directors,” as such term is defined in Nasdaq Rule 5605(a)(2). Dr. Brennan and Senator Fowler were not nominated for re-election and their terms will expire at the annual meeting. The board has determined that Douglas W. Pagán and Elan Z. Ezickson, who are each director nominees, are “independent directors,” as such term is defined in Nasdaq Rule 5605(a)(2). The board previously determined that Dr. Michael Weiser, who resigned from the board of directors in March 2018, was an “independent director,” as such term is defined in Nasdaq Rule 5605(a)(2), during the time he served on the board of directors.

Board Leadership Structure

The board of directors has appointed an independent director, Scott Tarriff, to serve as its non-executive Lead Director. Previously, Dr. Murray Brennan served as our non-executive Lead Director. Dr. Brennan’s term as a director will expire at the annual meeting, and on August 2, 2018 the board of directors appointed Mr. Tarriff, effective immediately, to serve as the non-executive Lead Director. The board has elected to separate the Lead Director function from that of the Chief Executive Officer, who serves as our principal executive officer, due to a belief that separating these functions, and empowering an independent director to chair the board meetings, will result in increased board oversight of management activities.

Director Attendance at Board and Stockholder Meetings

The board of directors met eight times during 2017, either in person or by teleconference. During 2017, each director attended at least 75% of the aggregate number of meetings of the board and of the committees on which he served, held during the last fiscal year or portion thereof of which he was a director or committee member, other than Dr. Brennan, who attended one of the two corporate governance and nominating committee meetings held in 2017.

Although we have no formal policy regarding directors’ attendance at our annual stockholders meetings, we encourage such attendance by members of the board. All of our then-current directors attended our 2017 annual stockholders meeting either in person or by teleconference.

Board Committees

The board of directors has established three standing committees: an audit committee, a compensation committee and a corporate governance and nominating committee. Each committee operates under a charter that has been approved by the board. Current copies of each committee’s charter are posted on the “Investors—Corporate Governance” section of our website, www.ziopharm.com. Our website and its contents are not incorporated into this proxy statement.

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The current members of the committees are as follows:

	<u>Audit</u>	<u>Compensation</u>	<u>Nominating</u>
Murray Brennan, M.D.	●	●	●
James A. Cannon	●	●	●
Senator Wyche Fowler, Jr., J.D.	●	●	●
Randal J. Kirk	●	●	●
Scott Tarriff*	●	●	●

* = Lead Director ● = Chair ● = Member

Audit Committee

The current members of the audit committee are Mr. James A. Cannon, who serves as the committee’s Chairman, Senator Wyche Fowler, Jr., who was not nominated for re-election, and Mr. Scott Tarriff. Dr. Michael Weiser previously served on the audit committee until his resignation on March 12, 2018. The board plans to appoint a new member to the audit committee to replace Senator Fowler immediately following the annual meeting. As set forth in the audit committee charter, the primary responsibility of the audit committee is to oversee our financial reporting processes and internal control system on behalf of the board. In that regard, the audit committee is responsible for, among other things, the appointment, compensation, retention and oversight of the work performed by the independent registered public accounting firm employed by us.

Each member of the audit committee is an “independent director,” as such term is defined in Nasdaq Rule 5605(a)(2), and meets the criteria for independence set forth in Rule 10A-3(b)(1) under the Exchange Act. The board of directors has also determined that each of the audit committee members is able to read and understand fundamental financial statements and that at least one member of the audit committee has past employment experience in finance or accounting. The board has determined that at least one member of the audit committee, Mr. James A. Cannon, is an “audit committee financial expert,” as that term is defined in Item 407(d)(5)(ii) of Regulation S-K promulgated under the Exchange Act. Mr. Cannon’s relevant experience includes his current service as the Chief Financial Officer of BBDO Worldwide, a position he has held for the past 20 years, and his past service as director of financial operations of the Omnicom Group.

The audit committee held four meetings during 2017, during which the audit committee held discussions with financial management and representatives from the independent registered public accounting firm prior to the filing of each quarterly report on Form 10-Q and its annual report on Form 10-K with the SEC.

Compensation Committee

The current members of the compensation committee are Mr. Scott Tarriff, who serves as the committee’s Chairman, Dr. Murray Brennan, who was not nominated for re-election, and Mr. James A. Cannon. Dr. Michael Weiser previously served as the Chairman of the compensation committee until his resignation on March 12, 2018. Upon his resignation, the board of directors appointed Mr. Cannon to the compensation committee and appointed Mr. Tarriff as the Chairman. The board plans to appoint a new member to the compensation committee to replace Dr. Brennan immediately following the annual meeting. As set forth in the compensation committee charter, the compensation committee reviews our compensation policies and practices and makes recommendations to the board of directors in connection with all compensation matters affecting our executive officers.

Each member of the compensation committee is an “independent director,” as such term is defined in Nasdaq Rule 5605(a)(2), and meets the criteria for independence set forth in Rule 10A-3(b)(1) under the Exchange Act.

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The compensation committee held four meetings during 2017.

Corporate Governance and Nominating Committee

The current members of the corporate governance and nominating committee are Dr. Murray Brennan, who currently serves as the committee's Chairman, and Senator Wyche Fowler, Jr. Dr. Michael Weiser previously served on the corporate governance and nominating committee until his resignation on March 12, 2018. Dr. Brennan and Senator Fowler were not nominated for re-election, and the board plans to appoint new members to the corporate governance and nominating committee to replace Dr. Brennan and Senator Fowler immediately following the annual meeting. As set forth in the corporate governance and nominating committee charter, the primary responsibility of the corporate governance and nominating committee is to consider and make recommendations to the board of directors concerning the appropriate size, function and needs of the board and its committees. In that regard, the corporate governance and nominating committee is, among other things, responsible for establishing criteria for membership on board, recruiting and recommending candidates to fill newly created or vacant positions on the board and reviewing any candidates recommended by stockholders. In addition, the corporate governance and nominating committee evaluates and assesses the performance of the board as a whole and its committees.

Each member of the corporate governance and nominating committee is an "independent director," as such term is defined in Nasdaq Rule 5605(a)(2), and meets the criteria for independence set forth in Rule 10A-3(b)(1) under the Exchange Act. The corporate governance and nominating committee held two meetings during 2017.

Director Nomination Process

The corporate governance and nominating committee (or a subcommittee thereof) recruits and considers director candidates and presents qualified candidates to the full board of directors for consideration. There is no fixed process for identifying and evaluating potential candidates to be nominees for directors, and there is no fixed set of qualifications that must be satisfied before a candidate will be considered. Rather, the corporate governance and nominating committee has the flexibility to consider such factors as it deems appropriate. These factors may include education, general business and industry experience, ability to act on behalf of stockholders, potential concerns regarding independence or conflicts of interest and other factors relevant in evaluating board nominees. Although the corporate governance and nominating committee does not have a policy with regard to the consideration of diversity in identifying director candidates, overall board diversity of industry background, race and gender is generally among the factors considered. The corporate governance and nominating committee believes that a board comprised of directors with diverse skills and experiences relevant to our industry and operations will result in efficient and competent oversight of our various core competencies, which include pharmaceutical development, strategic partnering, commercialization activities, regulatory compliance, corporate finance and accounting. As such, the corporate governance and nominating committee gives consideration to the interplay of a director candidate's experience with that of other members of the board and the evolving needs of our business.

From time to time we may engage third party search firms to assist in our director candidate search. The search firm recommends potential candidates to the corporate governance and nominating committee or the full board, which then meet and independently evaluate the candidates. In May 2018, our board engaged a third party search firm to assist the corporate governance and nominating committee in identifying qualified potential candidates to fill the two vacancies on our board.

Qualified candidates will be considered without regard to race, color, religion, sex, ancestry, national origin or disability, and the corporate governance and nominating committee will consider director candidates recommended by security holders. If the corporate governance and nominating committee approves a candidate for further review following an initial screening, the corporate governance and nominating committee will establish an interview process for the candidate. Generally, the candidate will meet with at least one member of

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the corporate governance and nominating committee, along with other members of the board, and management, including our Chief Executive Officer. Contemporaneously with the interview process, the corporate governance and nominating committee will conduct a comprehensive conflicts-of-interest assessment of the candidate. The corporate governance and nominating committee will consider reports of the interviews and the conflicts-of-interest assessment to determine whether to recommend the candidate to the full board. The corporate governance and nominating committee will also take into consideration the candidate's personal attributes, including, without limitation, personal integrity, loyalty to us and concern for our success and welfare, willingness to apply sound and independent business judgment, awareness of a director's vital part in our good corporate citizenship and image, time available for meetings and consultation on our matters and willingness to assume broad, fiduciary responsibility.

Recommendations for candidates to be considered for election to the board of directors at our annual stockholders' meeting may be submitted to the corporate governance and nominating committee by our stockholders. In order to make such a recommendation, a stockholder must submit the recommendation in writing to the Chairperson of the corporate governance and nominating committee, in care of our Secretary at our principal executive offices at One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor, Boston, Massachusetts 02129, at least 120 days prior to the mailing date of the previous year's annual meeting proxy statement. To enable the corporate governance and nominating committee to evaluate the candidate's qualifications, stockholder recommendations must include the following information:

- The name and address of the nominating stockholder and of the director candidate;
- A representation that the nominating stockholder is a holder of record of ours entitled to vote at the current year's annual meeting;
- A description of any arrangements or understandings between the nominating stockholder and the director candidate or candidates being recommended pursuant to which the nomination or nominations are to be made by the stockholder;
- A resume detailing the educational, professional and other information necessary to determine if the nominee is qualified to become a director of ours;
- Such other information regarding each nominee proposed by such stockholder as would have been required to be included in a proxy statement filed pursuant to the proxy rules of the SEC had each nominee been nominated by the board; and
- The consent of each nominee to serve as a director of ours if so elected.

Each of the individuals nominated for re-election to the board of directors pursuant to Proposal No. 1 were approved for such nomination by the corporate governance and nominating committee.

Risk Management and Oversight

One of the board's key functions is informed oversight of the Company's risk management process. The board does not have a standing risk management committee, but rather administers this oversight function directly through the board as a whole, as well as through various Board standing committees that address risks inherent in their respective areas of oversight. In particular, our board is responsible for monitoring and assessing strategic risk exposure, including a determination of the nature and level of risk appropriate for the Company. Our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. Our corporate governance and nominating committee monitors the effectiveness of our corporate governance guidelines. Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking. The board has delegated to the board's lead independent director the responsibility of coordinating between the board and management with regard to the determination and implementation of responses to any problematic risk management issues.

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Communicating with Directors

We have established means for stockholders and others to communicate with the board of directors. If a stockholder wishes to address a matter regarding our financial statements, accounting practices or internal controls, the matter should be submitted in writing addressed to the chairperson of the audit committee in care of the Secretary at our principal executive offices at One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor, Boston, Massachusetts 02129. If the matter relates to our governance practices, business ethics or corporate conduct, it should be submitted in writing addressed to the Chairperson of the corporate governance and nominating committee in care of the principal financial officer at our principal executive offices. If a stockholder is unsure where to direct a communication, the stockholder may direct it in writing to the chairperson of the audit committee, or to any one of our independent directors, in care of the principal financial officer at our principal executive offices. All of these stockholder communications will be forwarded by the principal financial officer to the addressee.

Compensation Committee Interlocks and Insider Participation

The current members of the compensation committee are Mr. Scott Tarriff, Dr. Murray Brennan, who was not nominated for re-election, and Mr. James Cannon. The board plans to appoint a new member to the compensation committee to replace Dr. Brennan immediately following the annual meeting. No member of the compensation committee has ever been an officer or employee of the Company or any subsidiary of ours and no member of the compensation committee had any relationship with us during 2017 requiring disclosure under Item 404 of Regulation S-K of the SEC.

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

Code of Ethics and Business Conduct

The board of directors adopted a Code of Ethics and Business Conduct to be applicable to all officers, directors and employees. The Code of Ethics and Business Conduct is intended to be designed to deter wrong-doing and promote honest and ethical behavior, full, fair, timely, accurate and understandable disclosure, and compliance with applicable laws. In addition to provisions that are applicable to officers, directors and employees generally, the Code of Ethics and Business Conduct contains provisions that are specifically applicable to our Chief Executive Officer and senior financial officer(s). The Code of Ethics and Business Conduct is available on our website at www.ziopharm.com and a copy may be obtained without charge upon written request to our Legal Affairs department at our principal executive offices at One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor, Boston, Massachusetts 02129. Our website and its contents are not incorporated into this proxy statement.

Audit Committee Report

The audit committee has reviewed our audited financial statements for the last fiscal year, and has discussed them with management and our independent registered public accounting firm.

Specifically, the audit committee has discussed with our independent registered public accounting firm the matters required to be discussed by the applicable requirements of the SEC and the Public Company Accounting Oversight Board.

The audit committee has received and reviewed the written disclosures and the letter from our independent registered public accounting firm required by applicable requirements of the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the audit committee concerning independence, and has discussed with our independent registered public accounting firm their independence.

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The audit committee, based on the review and discussions described above with management and our independent registered public accounting firm, has recommended to the board of directors that the audited financial statements for the fiscal year ended December 31, 2017 be included in our Annual Report on Form 10-K for such fiscal year for filing with the Securities and Exchange Commission.

AUDIT COMMITTEE

James A. Cannon, Chairman

Wyche Fowler, Jr.

Scott Tarriff

This report is not “soliciting material,” is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference in any of our filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, whether before or after the date hereof and irrespective of any general incorporation language in any such filing.

DIRECTOR COMPENSATION

Compensatory Arrangements with Outside Directors

Under our director compensation policy, each non-employee director is entitled to the following:

- an annual retainer fee of \$40,000 for service on the board; and
- additional annual retainer fees for board committee service as follows:

	<u>Chair</u>	<u>Other Member</u>
Audit Committee	\$15,000	\$ 8,000
Compensation Committee	12,500	7,000
Corporate Governance and Nominating Committee	8,500	5,000

The non-executive Lead Director also receives further annualized cash compensation of \$15,000. All cash retainers are paid on a quarterly basis in arrears to non-employee directors who continue to serve as members of the board on the last business day of each calendar quarter.

At the end of each calendar year, each non-employee director receives annual equity incentive grants comprised of restricted shares of our common stock and/or options to purchase shares of our common stock. The number of restricted shares and options comprising each grant is determined by the board prior to the end of each calendar year upon recommendation from the compensation committee. On December 29, 2017, the board determined to make an annual equity incentive grant to each non-employee director of, at each director's election, either options to purchase 25,000 shares of our common stock with an exercise price of \$4.14 per share, the fair market value of our common stock on the grant date, or such number of restricted shares of our common stock with a value equal to the foregoing options to purchase 25,000 shares of our common stock using the Black-Scholes methodology. Mr. Tarriff and Mr. Kirk elected to receive an option to purchase 25,000 shares of our common stock. Drs. Brennan and Weiser, Senator Fowler and Mr. Cannon each elected to receive 17,258 shares of restricted stock. The stock options vest on the one-year anniversary of the grant date and the restricted stock is subject to transfer and forfeiture restrictions that lapse on the one-year anniversary of the grant date.

In addition, effective upon a director's initial election to the board, he or she receives, at the director's option, either an option to purchase 25,000 shares of our common stock (pro-rated for partial years of service) with an exercise price equal to the fair market value of the common stock on the grant date, or such number of restricted shares of our common stock with a value equal to the foregoing option to purchase 25,000 shares of our common stock (or such pro-rated amount) using the Black-Scholes methodology. The restricted stock are subject to transfer and forfeiture restrictions that lapse on December 31 of the year in which such restricted stock is granted and the stock option vests according to the same schedule.

As set forth in its written charter, the compensation committee annually reviews director compensation practices in consultation with the Company's compensation consultant and recommends any changes for adoption by the full board. As such, the director compensation described above is subject to change at the discretion of the board.

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2017 Non-Employee Director Compensation

The following table provides information regarding non-employee director compensation for 2017.

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Option Awards⁽¹⁾ (\$)</u>	<u>Stock Awards⁽¹⁾ (\$)</u>	<u>Total (\$)</u>
Murray Brennan, M.D.	\$ 70,500	\$ —	\$71,448	\$ 141,948
James A. Cannon	\$ 58,000	\$ —	\$71,448	\$ 129,448
Wyche Fowler, Jr.	\$ 54,000	\$ —	\$71,448	\$ 125,448
Randal J. Kirk	\$ 40,000	\$72,178	\$ —	\$ 112,178
Michael Weiser, M.D., Ph.D. ⁽²⁾	\$ 66,500	\$ —	\$71,448	\$ 137,948
Scott Tarriff	\$ 56,000	\$72,178	\$ —	\$ 128,178

(1) The amounts shown represent compensation expense recognized for financial statement purposes under ASC Topic 718. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. For a discussion of the assumptions relating to our valuations of these restricted stock awards and stock options, please see Note 3 to the financial statements included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2017 filed with the SEC on March 1, 2018, as amended. These amounts reflect our accounting expense for these restricted stock awards and stock options and do not correspond to the actual value that may be recognized by the directors. As of December 31, 2017:

- Dr. Brennan held options to purchase 167,500 shares at a weighted average exercise price of \$4.18 per share, of which 167,500 shares had vested. In addition, Dr. Brennan held 56,252 shares of restricted stock, of which 38,994 shares have had transfer and forfeiture restrictions lapse.
- Mr. Cannon held options to purchase 67,500 shares at a weighted average exercise price of \$3.72 per share, of which 67,500 shares had vested. In addition, Mr. Cannon held 170,642 shares of restricted stock, of which 153,384 shares have had transfer and forfeiture restrictions lapse.
- Senator Fowler held options to purchase 92,500 shares at a weighted average exercise price of \$3.91 per share, of which 92,500 shares had vested. In addition, Senator Fowler held 142,920 shares of restricted stock, of which 125,662 shares have had transfer and forfeiture restrictions lapse.
- Mr. Kirk held options to purchase 50,000 shares at a weighted average exercise price of \$4.68 per share, of which 25,000 shares had vested. In addition, Mr. Kirk held 139,513 shares of restricted stock, of which 139,513 shares have had transfer and forfeiture restrictions lapse.
- Dr. Weiser held options to purchase 117,500 shares at a weighted average exercise price of \$4.14 per share, of which 117,500 shares had vested. In addition, Dr. Weiser held 119,941 shares of restricted stock, of which 102,233 shares have had transfer and forfeiture restrictions lapse.
- Mr. Tarriff held options to purchase 90,000 shares at a weighted average exercise price of \$6.33 per share, of which 65,000 shares had vested. In addition, Mr. Tarriff held 4,186 shares of restricted stock, of which 4,186 shares have had transfer and forfeiture restrictions lapse.

(2) Dr. Weiser resigned from the board of directors and all committees thereof on March 12, 2018.

LIMITATION OF LIABILITY AND INDEMNIFICATION

Our charter limits the personal liability of directors for breach of fiduciary duty to the maximum extent permitted by the Delaware corporation law. The charter provides that no director will have personal liability to us or to stockholders for monetary damages for breach of fiduciary duty as a director. These provisions do not, however, eliminate or limit the liability of any of the directors for:

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

Any amendment, repeal or modification of these provisions will not adversely affect any right or protection of a director in respect of any act or omission occurring prior to such amendment, repeal or modification. If the Delaware corporation law is amended to provide for further limitations on the personal liability of directors of corporations, then the personal liability of the directors will be further limited to the greatest extent permitted by the Delaware corporation law.

The charter also provides that we must indemnify directors and officers in certain circumstances. We believe this provision is important in attracting and retaining qualified individuals to serve as directors and executive officers.

We maintain director and officer insurance providing for indemnification of our directors and officers for certain liabilities, including certain liabilities under the Securities Act. We also maintain a general liability insurance policy that covers certain liabilities of directors and officers arising out of claims based on acts or omissions in their capacities as directors or officers. We have also entered into indemnification agreements with each of our directors and named executive officers.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The following discussion relates to certain transactions that involve both the Company and one of our executive officers, directors, director nominees or five-percent stockholders, each of whom we refer to as a “related party.” For purposes of this discussion, a “related-party transaction” is a transaction, arrangement or relationship:

- in which we participate;
- that involves an amount in excess of \$120,000; and
- in which a related party has a direct or indirect material interest.

Related-Party Transaction Policy

In April 2012, the board of directors adopted our initial written policies and procedures for the review of any related-party transaction. If a related party proposes to enter into a related-party transaction, the related party must report the proposed related-party transaction to the chief legal officer. The policy calls for the proposed related-party transaction to be reviewed and, if deemed appropriate, approved by the audit committee. Whenever practicable, the review and approval by the audit committee will occur prior to entry into the related-party transaction. If advance review and approval is not practicable, the audit committee will review, and, in its discretion, may ratify the related-party transaction. The policy also permits the chair of the audit committee to review and, if deemed appropriate, approve proposed related-party transactions that arise between audit committee meetings, subject to ratification by the audit committee at its next meeting. Any related-party transactions that are ongoing in nature will be reviewed annually.

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

- the related party’s interest in the related-party transaction;
- the approximate dollar value of the amount involved in the related-party transaction;
- the approximate dollar value of the amount of the related party’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-party transaction or the related party in the context of the proposed transaction that would be material to investors in light of the circumstances of the particular transaction.

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

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

- interests arising solely from the related party’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

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(a) the related party and all other related parties own in the aggregate less than a 10% equity interest in such entity, (b) the related party and his or her 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, and (c) the amount involved in the transaction is less than the greater of \$200,000 and 5% of the annual gross revenues of the Company receiving payment in the transaction; and

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

The policy provides that transactions involving compensation of executive officers shall be reviewed and approved by the compensation committee.

Certain Related-Party Transactions

Transactions with MD Anderson

On January 13, 2015, we, together with Intrexon (now Precigen, a wholly owned subsidiary of Intrexon), entered into a license agreement with MD Anderson, which we refer to as the MD Anderson License. Pursuant to the MD Anderson License, we and Precigen hold an exclusive, worldwide license to certain technologies owned and licensed by MD Anderson including technologies relating to novel CAR-T cell therapies arising from the laboratory of Laurence Cooper, M.D., Ph.D., our Chief Executive Officer and was formerly a tenured professor of pediatrics at MD Anderson and now currently a visiting scientist under the institution's policies, as well as either co-exclusive or non-exclusive licenses under certain related technologies.

Pursuant to the terms of the MD Anderson License, MD Anderson received consideration of \$50 million in shares of our common stock (or 10,124,561 shares) and \$50 million in shares of Intrexon's common stock, in each case based on a trailing 20-day volume-weighted average of the closing price of our and Intrexon's common stock, respectively, ending on the date prior to the announcement of the entry into the MD Anderson License, collectively referred to as the License Shares. On January 9, 2015, in order to induce MD Anderson to enter into the MD Anderson License on an accelerated schedule, we and Intrexon entered into our previously disclosed letter agreement, or the MD Anderson Letter Agreement, pursuant to which MD Anderson received consideration of \$7.5 million in shares of our common stock (or 1,597,602 shares) and \$7.5 million in shares of Intrexon's common stock, in each case based on a trailing 20-day volume-weighted average of the closing price of our and Intrexon's common stock, respectively, ending on the date prior to the MD Anderson Letter Agreement, collectively referred to as the Incentive Shares, if the MD Anderson License was entered into on or prior to 8:00 am Pacific time on January 14, 2015. In partial consideration for and in furtherance of the foregoing transactions, we also entered into a Securities Issuance Agreement, which we refer to as the License Shares Securities Issuance Agreement, another Securities Issuance Agreement, which we refer to as the Incentive Shares Securities Issuance Agreement, and a Registration Rights Agreement, which we refer to as the MD Anderson Registration Rights Agreement, with MD Anderson on January 13, 2015, each of which have been previously disclosed.

MD Anderson had a pre-existing policy of splitting the net proceeds of certain transactions involving the transfer of intellectual property of MD Anderson with the creators of such intellectual property. In accordance with such policy, upon the sale by MD Anderson of all or any portion of the License Shares or the Incentive Shares, a portion of the proceeds of such sale will be first used to pay third party contractual commitments and expenses of MD Anderson, and the remainder of such proceeds shall be allocated 50% to MD Anderson and 50% to the creators of the intellectual property underlying the MD Anderson License, which we refer to as the Creators, one of whom is our Chief Executive Officer, Dr. Cooper. Pursuant to a memorandum among MD Anderson and the Creators dated March 13, 2015, Dr. Cooper is entitled to approximately 64.8% of such aggregate proceeds allocated to the Creators. Pursuant to an Investment Management Services Agreement with MD Anderson, the University of Texas Investment Management Co., or UTIMCO, an institutional investment advisor, is authorized to exercise investment discretion and voting power with respect to such shares on behalf of MD Anderson. Accordingly, Dr. Cooper has no voting power, investment power or control over if or when the

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License Shares or the Incentive Shares will be sold, if ever, or the timing of the receipt of the proceeds, if any, from the sale of such shares.

Transactions with Ares Trading

On March 27, 2015, we, together with Intrexon (now Precigen), entered into a worldwide License and Collaboration Agreement with ARES Trading S.A., a company within the pharmaceutical business of Merck KGaA, Darmstadt, Germany, through which the parties established a collaboration for the research and development and commercialization of products for the prophylactic, therapeutic, palliative or diagnostic use for cancer in humans. Pursuant to the agreement and the Second Amendment to Exclusive Channel Partner Agreement with Precigen described below, we and Precigen will receive an aggregate of \$115 million in cash in upfront consideration, potential payments for development and commercial milestones on products produced under the agreement (up to \$826 million of such milestones for the first two products), and potential royalty payments based on net sales of products produced under the agreement.

Transactions with Intrexon

On January 12, 2011, Mr. Randal Kirk was appointed to our board of directors and is currently one of our principal stockholders, beneficially owning approximately 6.8% of our common stock as of the Record Date. Mr. Kirk serves as Chief Executive Officer of Intrexon, with which we entered into an Exclusive Channel Partner Agreement, or the Channel Agreement, on January 6, 2011. In partial consideration for entering into the Channel Agreement, we also entered into a Stock Purchase Agreement and Registration Rights Agreement with Intrexon on January 6, 2011.

Channel Agreement

The Channel Agreement governs a “channel partnering” arrangement in which we will use Intrexon’s (now Precigen’s) technology directed towards in vivo expression of effectors in connection with the development of clinical-stage product candidates and generally to research, develop and commercialize products, in each case in which DNA is administered to humans for expression of anti-cancer effectors for the purpose of treatment or prophylaxis of cancer. The Channel Agreement grants us a worldwide license to use specified patents and other intellectual property of Precigen in connection with the research, development, use, importing, manufacture, sale, and offer for sale of products involving DNA administered to humans for expression of anti-cancer effectors for the purpose of treatment or prophylaxis of cancer, or the Ziopharm Products. Such license is exclusive with respect to any clinical development, selling, offering for sale or other commercialization of Ziopharm Products, and otherwise is non-exclusive. Subject to limited exceptions, we may not sublicense the rights described without Precigen’s written consent.

Subject to certain expense allocations and other offsets provided in the Channel Agreement, we were originally required pay to Intrexon (now Precigen) 50% of the cumulative net quarterly profits derived from the sale of Ziopharm Products, calculated on a Ziopharm Product-by-Ziopharm Product basis, and are now required to pay to Precigen 20% (which such percentage was originally 50%) of such net quarterly profits per the terms of an amendment described below. We have also agreed to pay Precigen 50% of quarterly revenue obtained from a sublicensor in the event of a sublicensing arrangement.

During the years ended December 31, 2017, 2016, and 2015, we expensed \$21.4 million, \$22.2 million, and \$16.3 million, respectively, for services performed by Intrexon. As of December 31, 2017 and 2016, we recorded \$6.8 million and \$3.4 million, respectively, in current liabilities on its balance sheet for amounts due to Intrexon.

On March 27, 2015, we and Intrexon (now Precigen) entered into a Second Amendment to Exclusive Channel Partner Agreement amending the Channel Agreement. The amendment modified the scope of the parties’ collaboration under the Channel Agreement in connection with the license and collaboration agreement

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with Ares Trading, described above. The amendment provided that Intrexon (now Precigen) will pay to us fifty percent of all payments that Precigen receives for upfronts, milestones and royalties under the Ares Trading License and Collaboration Agreement, described above.

On June 29, 2016, we and Intrexon (now Precigen) entered into a Third Amendment to Exclusive Channel Partner Agreement, or the Third Amendment, further amending the Channel Agreement. The Third Amendment reduced the royalty percentage that we will pay Precigen on a quarterly basis from fifty percent to twenty percent of net profits derived in that quarter from the sale of products developed under the Channel Agreement, calculated on a Ziopharm Product-by-Ziopharm Product basis, subject to certain expense allocations and other offsets provided in the Channel Agreement.

Channel Agreement for Graft-Versus-Host Disease

In September 2015, we entered into an agreement with Intrexon (now Precigen) to pursue, through collaboration, the potential treatment and prevention of graft versus host disease, or GvHD. As a result of an in-depth review of our research and development portfolio, we determined that the pursuit of GvHD as an indication was not a material part of our corporate strategy and therefore have decided to stop pursuing the development of engineered cell therapy strategies, used either separately or in combination, for targeted treatment of GvHD. We have reverted our rights under the GvHD program back to Precigen and are in the process of winding down the related activities. We made this decision to focus our efforts and resources on the development of our Controlled IL-12 and Sleeping Beauty platforms for the treatment of oncology indications.

Preferred Shares Securities Issuance Agreement

On June 29, 2016, in consideration for the execution and delivery of the Third Amendment and the Collaboration Amendment, we and Intrexon entered into a Securities Issuance Agreement, or the Preferred Shares Securities Issuance Agreement, pursuant to which we agreed to issue and sell 100,000 shares of our newly designated Series 1 Preferred Stock. Each share of Series 1 Preferred Stock, which we refer to as the Preferred Shares, has a stated value of \$1,200, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other recapitalization with respect to the Preferred Shares. As the holder of the Preferred Shares, Intrexon receives a monthly dividend, payable in additional Preferred Shares, equal to \$12.00 per Preferred Share held by Intrexon per month divided by the stated value of the Preferred Shares, rounded down to the nearest whole share. The rights, preferences, privileges, restrictions and other matters relating to the Preferred Shares are set forth in a Certificate of Designation, Preferences and Rights of Series 1 Preferred Stock which we filed with the Secretary of State of the State of Delaware on June 29, 2016.

We and Intrexon agreed pursuant to the terms of the Preferred Shares Securities Issuance Agreement that the holders of common stock issued upon the conversion of the Issued Shares shall be entitled to piggy-back registration rights with respect to any common stock registered by us following such conversion.

Stock Purchase Agreement and Registration Rights Agreement

On January 12, 2011, and pursuant to the Stock Purchase Agreement, Intrexon purchased 2,426,235 shares of our common stock in a private placement for a total purchase price of \$11,645,928. We simultaneously issued to Intrexon for no additional consideration an additional 3,636,926 shares of our common stock. Under the terms of the Stock Purchase Agreement, we agreed to issue to Intrexon an additional 3,636,926 shares of our common stock for no additional consideration under certain conditions upon dosing of the first patient in a Ziopharm-conducted U.S. Phase 2 clinical trial of a product candidate created, produced or developed by us using Intrexon technology. These shares were issued on November 7, 2012, and when issued, the purchase price for such shares was equal to the \$0.001 par value of such shares, which price was deemed paid in partial consideration for the execution and delivery of the Channel Agreement, in accordance with the terms of the Stock Purchase Agreement. Pursuant to the Registration Rights Agreement, on May 18, 2011 we filed a registration statement

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with the SEC registering the resale of the shares that we have issued or may issue to Intrexon under the Stock Purchase Agreement.

Also under the Stock Purchase Agreement, Intrexon has agreed that, subject to certain conditions and restrictions and limitations, it will purchase our securities in conjunction with “qualified” securities offerings that we conduct while the Channel Agreement remains in effect. In conjunction with a particular qualified offering, Intrexon has committed to purchase up to 19.99% of the securities offered and sold therein (exclusive of Intrexon’s purchase) if requested to do so by us. However, Intrexon will not be obligated to purchase securities in a “qualified” securities offering unless we are then in substantial compliance with our obligations under the Channel Agreement and, with respect to a “qualified” securities offering that is completed following January 6, 2012, we confirm our intent that 40% of the offering’s net proceeds shall have been spent, or in the next year will be spent, by us under the Channel Agreement. In the case of a “qualified” securities offering that is completed after January 6, 2013, Intrexon’s purchase commitment is further limited to an amount equal to one-half of the proceeds spent or to be spent by us under the Channel Agreement. Intrexon’s aggregate purchase commitment for all future qualified offerings was initially capped at \$50.0 million. We and Intrexon subsequently amended the Stock Purchase Agreement to clarify that gross proceeds from the sale of our securities to Intrexon in a qualified offering will apply against Intrexon’s \$50.0 million purchase commitment regardless of whether Intrexon participates voluntarily or at our request. Intrexon’s aggregate commitment under the Stock Purchase Agreement was subsequently reduced from \$50.0 million to \$43.5 million pursuant to the Second Amendment to Exclusive Channel Partner Agreement that the parties entered into on March 27, 2015 described above. As of the date of the amendment, Intrexon had purchased the full \$43.5 million of our common stock and has satisfied its purchase commitment to us in full.

Public Offering Participation

In February 2011, we completed a registered public offering of common stock in which Intrexon purchased 1,190,000 shares at a purchase price of \$5.57 per share, for an aggregate purchase price of approximately \$10.6 million. In February 2012, we completed a registered public offering of common stock in which Intrexon purchased 1,923,075 shares at a purchase price of \$5.20 per share, for an aggregate purchase price of approximately \$10.0 million. In October 2013, we completed a registered public offering of common stock in which Intrexon purchased 2,857,143 shares at a purchase price of \$3.50 per share, for an aggregate purchase price of approximately \$10.0 million. In February 2015, we completed a registered public offering of common stock in which Intrexon purchased 1,440,000 shares at a purchase price of \$8.75 per share, for an aggregate purchase price of \$12.2 million. As a result of these purchases, and following the entry into the Second Amendment to Exclusive Channel Partner Agreement in March 2015, Intrexon’s equity purchase commitment under the Stock Purchase Agreement has been satisfied in full.

Employment and Indemnification Agreements

Employment Agreements

We have entered into employment agreements with certain of our executive officers. See “*Executive Compensation — Employment and Change in Control Agreements.*”

Stock Option Grants to Executive Officers and Directors

We have granted stock options to our executive officers and non-employee directors. See “*Executive Compensation*” and “*Director Compensation.*”

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Indemnification Agreements with Executive Officers and Directors

We have entered into an indemnification agreement with each of our directors and executive officers. These indemnification agreements and our certificate of incorporation and our bylaws indemnify each of our directors and officers to the fullest extent permitted by the Delaware General Corporation Law. See “*Limitation of Liability and Indemnification.*”

STOCK OWNERSHIP

Directors, Officers and Principal Stockholders

The following table sets forth information with respect to the beneficial ownership of common stock as of July 23, 2018 for:

- each beneficial owner of more than five percent of our outstanding common stock;
- each of our current directors, director nominees and named executive officers; and
- all of our current directors and executive officers as a group.

Beneficial ownership is determined in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities, or have the right to acquire such powers within 60 days. Common stock subject to options that are currently exercisable or exercisable within 60 days of July 23, 2018 are deemed to be outstanding and beneficially owned by the person holding the options. These shares, however, are not deemed outstanding for the purposes of computing the percentage ownership of any other person. Except as otherwise indicated, all persons listed below have sole voting and investment power with respect to the shares beneficially owned by them, subject to applicable community property laws. Percentage ownership calculations are based on 142,379,770 shares outstanding as of July 23, 2018. Addresses of individuals are in care of Ziopharm Oncology, Inc., One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor, Boston, Massachusetts 02129.

<u>Name and Address of Beneficial Owner</u>	<u>Outstanding Shares Beneficially Owned</u>	<u>Right to Acquire Within 60 Days of July 23, 2018</u>	<u>Total Shares Beneficially Owned</u>	<u>Percentage</u>
5% Stockholders:				
BlackRock, Inc. ⁽¹⁾	8,499,209	—	8,499,209	6.0
The Vanguard Group ⁽²⁾	8,492,365	—	8,492,365	6.0
Directors, Director Nominees and Named Executive Officers:				
Randal J. Kirk	9,709,607 ⁽³⁾	25,000	9,734,607	6.8
Murray Brennan	72,620	167,500	240,120	*
James A. Cannon	387,365	67,500	454,865	*
Wyche Fowler, Jr.	156,446	92,500	248,946	*
Scott Tarriff	4,186	65,000	69,186	*
Douglas W. Pagán	—	—	—	*
Elan Z. Ezickson	—	—	—	*
Laurence James Neil Cooper, M.D., Ph.D.	1,266,063	—	1,266,063	*
David M. Mauney, M.D.	58,662	—	58,662	*
Francois Lebel, M.D.	200,566	430,000	630,566	*
Kevin G. Lafond	88,534	221,667	310,201	*
Caesar J. Belbel ⁽⁴⁾	19,201	751,667	770,868	*
All of our current directors and executive officers as a group (9 persons) ⁽⁵⁾	11,944,049	1,069,167	13,013,216	9.1

* Less than one percent.

(1) Based solely on the Schedule 13G/A filed with the SEC on January 23, 2018, BlackRock, Inc., as a parent holding company, is the beneficial owner of 8,499,209 shares and has sole voting power with respect to

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8,245,887 shares and sole investment power with respect to 8,499,209 shares. Aggregate beneficial ownership reported by BlackRock, Inc. is on a consolidated basis and includes beneficial ownership of its subsidiaries BlackRock (Netherlands) B.V., BlackRock Advisors, LLC, BlackRock Asset Management Canada Limited, BlackRock Asset Management Ireland Limited, BlackRock Asset Management Schweiz AG, BlackRock Financial Management, Inc., BlackRock Fund Advisors, BlackRock Institutional Trust Company, N.A., BlackRock Investment Management (Australia) Limited, BlackRock Investment Management (UK) Ltd., BlackRock Investment Management, LLC, BlackRock Japan Co Ltd and FutureAdvisor, Inc.

- (2) Based solely on the Schedule 13G/A filed with the SEC on February 9, 2018, The Vanguard Group, Inc., an investment adviser, is the beneficial owner of 8,492,365 shares and has sole voting power with respect to 257,262 shares, shared voting power with respect to 6,295 shares, sole investment power with respect to 8,241,120 shares and shared investment power with respect to 251,245 shares. Vanguard Fiduciary Trust Company, or VFTC, a wholly-owned subsidiary of The Vanguard Group, Inc., is the beneficial owner of 244,950 shares as a result of its serving as investment manager of collective trust accounts. VFTC directs the voting power of these shares. Vanguard Investments Australia, Ltd., or VIA, a wholly-owned subsidiary of The Vanguard Group, Inc., is the beneficial owner of 18,607 shares as a result of its serving as investment manager of Australian investment offerings. VIA directs the voting power of these shares.
- (3) Consists of (i) 139,513 shares over which Randal J. Kirk has sole voting and dispositive power and (ii) 9,570,094 shares held by the following entities (collectively, the "Entities"): R.J. Kirk Declaration of Trust (3,479,685 shares), JPK 2008, LLC (23,349 shares), MGK 2008, LLC (23,504 shares), ZSK 2008, LLC (40,954 shares), Lotus Capital (2000) Company Inc. (240 shares), JPK 2009, LLC (337,333 shares), MGK 2009, LLC (358,386 shares), ZSK 2009, LLC (34,318 shares), ADC 2010, LLC (29,066 shares), MGK 2011, LLC (154,181 shares), JPK 2012, LLC (138,975 shares), Kellie L. Banks (2009) Long Term Trust (61,262 shares), Kapital Joe, LLC (2,359,608 shares), Mascara Kaboom, LLC (889,513 shares), Third Security Staff 2001 LLC (53,245 shares), Third Security Senior Staff LLC (9,537 shares), Third Security Senior Staff 2007 LLC (352,477 shares), Third Security Staff 2007 LLC (176,238 shares), Third Security Incentive 2007 LLC (58,746 shares), Third Security Senior Staff 2008 LLC (395,791 shares), Third Security Staff 2009 LLC (173,111 shares), Third Security Incentive 2009 LLC (86,556 shares), Third Security Staff 2010 LLC (222,680 shares) and Third Security Incentive 2010 LLC (111,339 shares). Mr. Kirk could be deemed to have indirect beneficial ownership of the shares directly beneficially owned by the Entities.
- (4) Mr. Belbel's employment with us terminated on February 15, 2018.
- (5) Consists of shares beneficially owned by our current directors and current executive officers, which does not include shares beneficially owned by Mr. Belbel.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Exchange Act requires our directors and executive officers, as well as stockholders beneficially owning more than ten percent of the outstanding common stock, to file with the SEC initial reports of ownership and reports of changes in ownership with respect to common stock. All of these reporting persons are required by SEC regulations to furnish us with copies of all reports they file with the SEC pursuant to Section 16(a).

Based solely on our review of the copies of such forms received by us and written representations of our directors and executive officers received by us, we believe each reporting person filed on a timely basis all of the reports required to be filed pursuant to Section 16(a) in 2017.

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FEES AND OTHER MATTERS

Audit and Related Fees

RSM US LLP served as our independent registered public accounting firm for the years ended December 31, 2017 and 2016. The following table presents the collective fees billed by RSM US LLP during such years. These audit fees relate to professional services rendered for (a) audits of our financial statements, (b) reviews of our quarterly financial statements and (c) services related to other regulatory filings.

<u>Fee Category</u>	<u>2017</u>	<u>2016</u>
Audit fees	\$ 186,400	\$ 180,500
All other fees	\$ 134,769 ⁽¹⁾	\$ 96,500 ⁽²⁾

- (1) \$41,250 of such fees were incurred in connection with the preparation of a registration statement and an annual report by Intrexon that incorporated our financial statements. Intrexon reimbursed us for all such costs. \$93,519 of such fees were incurred in connection with our May 2017 financing and other filings and special accounting services.
- (2) \$19,500 of such fees were incurred in connection with the preparation of a registration statement and an annual report by Intrexon that incorporated our financial statements. Intrexon reimbursed us for all such costs. \$77,000 of such fees were incurred in connection with other filings and special accounting services.

We did not incur any fees of RSM US LLP for audit-related, tax or other services in 2017 or 2016.

Audit Committee Pre-Approval Policy and Procedures

The audit committee charter provides that all audit and non-audit accounting services that are permitted to be performed by our independent registered public accounting firm under applicable rules and regulations must be pre-approved by the audit committee or by designated independent members of the audit committee, other than with respect to de minimis exceptions permitted under Section 202 of the Sarbanes-Oxley Act of 2002. All services performed by RSM US LLP in 2017 and 2016 have been pre-approved in accordance with the charter.

Prior to or as soon as practicable following the beginning of each fiscal year, a description of audit, audit-related, tax, and other services expected to be performed by the independent registered public accounting firm in the following fiscal year is presented to the audit committee for approval. Following such approval, any requests for audit, audit-related, tax, and other services not presented and pre-approved must be submitted to the audit committee for specific pre-approval and cannot commence until such approval has been granted. Normally, pre-approval is provided at regularly scheduled meetings. However, the authority to grant specific pre-approval between meetings, as necessary, may be delegated to one or more members of the audit committee who are independent directors. In the event such authority is so delegated, the full audit committee must be updated at the next regularly scheduled meeting with respect to any services that were granted specific pre-approval by delegation. During 2017, the audit committee functioned in conformance with these procedures.

HOUSEHOLDING OF PROXY MATERIALS

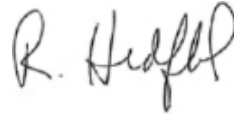
The SEC has adopted rules that permit companies and intermediaries (such as brokers) to satisfy the delivery requirements for Notices of Internet Availability of Proxy Materials or other annual meeting materials with respect to two or more stockholders sharing the same address by delivering a single Notice of Internet Availability of Proxy Materials or other annual meeting materials addressed to those stockholders. This process, which is commonly referred to as “householding,” potentially means extra convenience for stockholders and cost savings for companies.

This year, a number of brokers with account holders who are our stockholders will be “householding” our proxy materials. A single Notice of Internet Availability of Proxy Materials or other annual meeting materials will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your broker that they will be “householding” communications to your address, “householding” will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in “householding” and would prefer to receive a separate Notice of Internet Availability of Proxy Materials or other Annual Meeting materials, please notify your broker. Direct your written request to Ziopharm Oncology, Inc., One First Avenue, Parris Building 34, Navy Yard Plaza, Third Floor, Boston, Massachusetts 02129, Attention: Legal Affairs Department or contact us at (617) 259-1970. Stockholders who currently receive multiple copies of the Notice of Internet Availability of Proxy Materials or other Annual Meeting materials at their addresses and would like to request “householding” of their communications should contact their brokers.

OTHER MATTERS

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

By Order of the Board of Directors

A handwritten signature in black ink, appearing to read "R. Hadfield". The signature is written in a cursive style with a large, looped initial "R".

Robert Hadfield
Secretary and General Counsel

APPENDIX A

ZIOPHARM ONCOLOGY, INC.

2012 EQUITY INCENTIVE PLAN
(As amended effective _____ 2018)

1. GENERAL.

(a) Status of Prior Plan. The Plan is intended as a new equity incentive plan that is separate from the ZIOPHARM Oncology, Inc. Amended and Restated 2003 Stock Option Plan (the "**Prior Plan**"). Following the Effective Date, no additional stock awards may be granted under the Prior Plan. From and after the Effective Date, all outstanding stock awards granted under the Prior Plan will remain subject to the terms of the Prior Plan. All Awards granted on or after the Effective Date of this Plan will be subject to the terms of this Plan.

(b) Eligible Award Recipients. Employees, Directors and Consultants are eligible to receive Awards.

(c) Available Awards. The Plan provides for the grant of the following types of Awards: (i) Incentive Stock Options; (ii) Nonstatutory Stock Options; (iii) Stock Appreciation Rights; (iv) Restricted Stock Awards; (v) Restricted Stock Unit Awards; (vi) Performance Stock Awards, (vii) Performance Cash Awards; and (viii) Other Stock Awards.

(d) Purpose. The Plan, through the granting of Awards, is intended to help the Company secure and retain the services of eligible award recipients, provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate and provide a means by which the eligible recipients may benefit from increases in value of the Common Stock.

2. ADMINISTRATION.

(a) Administration by Board. The Board will administer the Plan. The Board may delegate administration of the Plan to a Committee or Committees, as provided in Section 2(c).

(b) Powers of Board. The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine: (A) who will be granted Awards; (B) when and how each Award will be granted; (C) what type of Award will be granted; (D) the provisions of each Award (which need not be identical), including when a person will be permitted to exercise or otherwise receive cash or Common Stock under the Award; (E) the number of shares of Common Stock subject to, or the cash value of, an Award; and (F) the Fair Market Value applicable to a Stock Award.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for administration of the Plan and Awards. The Board, in the exercise of these powers, may correct any defect, omission or inconsistency in the Plan or in any Award Agreement or in the written terms of a Performance Cash Award, in a manner and to the extent it will deem necessary or expedient to make the Plan or Award fully effective.

(iii) To settle all controversies regarding the Plan and Awards granted under it.

(iv) To accelerate, in whole or in part, the time at which an Award may be exercised or vest (or at which cash or shares of Common Stock may be issued).

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(v) To suspend or terminate the Plan at any time. Except as otherwise provided in the Plan or an Award Agreement, suspension or termination of the Plan will not materially impair a Participant's rights under his or her then-outstanding Award without his or her written consent except as provided in subsection (viii) below.

(vi) To amend the Plan in any respect the Board deems necessary or advisable, including, without limitation, by adopting amendments relating to Incentive Stock Options and certain nonqualified deferred compensation under Section 409A and/or to make the Plan or Awards granted under the Plan exempt from or compliant therewith, subject to the limitations, if any, of applicable law. However, if required by applicable law or listing requirements, and except as provided in Section 9(a) relating to Capitalization Adjustments, the Company will seek stockholder approval of any amendment of the Plan that (A) materially increases the number of shares of Common Stock available for issuance under the Plan, (B) materially expands the class of individuals eligible to receive Awards under the Plan, (C) materially increases the benefits accruing to Participants under the Plan, (D) materially reduces the price at which shares of Common Stock may be issued or purchased under the Plan, (E) materially extends the term of the Plan, or (F) materially expands the types of Awards available for issuance under the Plan. Except as provided in the Plan (including subsection (viii) below) or an Award Agreement, no amendment of the Plan will materially impair a Participant's rights under an outstanding Award without his or her written consent.

(vii) To submit any amendment to the Plan for stockholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of (A) Section 162(m) of the Code regarding the exclusion of performance-based compensation from the limit on corporate deductibility of compensation paid to Covered Employees, (B) Section 422 of the Code regarding incentive stock options, or (C) Rule 16b-3.

(viii) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; *provided, however*, that a Participant's rights under any Award will not be impaired by any such amendment unless (A) the Company requests the consent of the affected Participant, and (B) such Participant consents in writing. Notwithstanding the foregoing, (1) a Participant's rights will not be deemed to have been impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights, and (2) subject to the limitations of applicable law, if any, the Board may amend the terms of any one or more Awards without the affected Participant's consent: (A) to maintain the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (B) to change the terms of an Incentive Stock Option, if such change results in impairment of the Award solely because it impairs the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (C) to clarify the manner of exemption from, or to bring the Award into compliance with, Section 409A; or (D) to comply with other applicable laws or listing requirements.

(ix) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Awards.

(x) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees, Directors or Consultants who are foreign nationals or employed outside the United States (provided that Board approval will not be necessary for immaterial modifications to the Plan or any Award Agreement that are required for compliance with the laws of the relevant foreign jurisdiction).

(c) Delegation to Committee.

(i) **General.** The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee will have, in connection

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with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee). Any delegation of administrative powers will be reflected in resolutions, not inconsistent with the provisions of the Plan, adopted from time to time by the Board or Committee (as applicable). The Committee may, at any time, abolish the subcommittee and/or revert in the Committee any powers delegated to the subcommittee. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revert in the Board some or all of the powers previously delegated.

(ii) Section 162(m) and Rule 16b-3 Compliance. The Committee may consist solely of two (2) or more Outside Directors, in accordance with Section 162(m) of the Code, or solely of two (2) or more Non-Employee Directors, in accordance with Rule 16b-3.

(d) Delegation to an Officer. The Board may delegate to one (1) or more Officers the authority to do one or both of the following (i) designate Employees who are not Officers to be recipients of Options and SARs (and, to the extent permitted by applicable law, other Stock Awards) and, to the extent permitted by applicable law, the terms of such rights and options, and (ii) determine the number of shares of Common Stock to be subject to such Stock Awards granted to such Employees; *provided, however*, that the Board resolutions regarding such delegation will specify the total number of shares of Common Stock that may be subject to the Stock Awards granted by such Officer and that such Officer may not grant a Stock Award to himself or herself. Any such Stock Awards will be granted on the form of Award Agreement most recently approved for use by the Committee or the Board, unless otherwise provided in the resolutions approving the delegation authority. The Board may not delegate authority to an Officer who is acting solely in the capacity of an Officer (and not also as a Director) to determine the Fair Market Value pursuant to Section 13(y)(iii) below.

(e) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

(f) Cancellation and Re-Grant of Stock Awards. Neither the Board nor any Committee will have the authority to: (i) reduce the exercise, purchase or strike price of any outstanding Options or SAR under the Plan; or (ii) cancel any outstanding Options or SARs that have an exercise price or strike price greater than the current Fair Market Value of the Common Stock in exchange for cash or other Stock Awards under the Plan, unless the stockholders of the Company have approved such an action within twelve (12) months prior to such an event.

3. SHARES SUBJECT TO THE PLAN.

(a) Share Reserve.

(i) Subject to Section 9(a) relating to Capitalization Adjustments, the aggregate number of shares of Common Stock that may be issued pursuant to Stock Awards from and after the Effective Date will not exceed (A) 14,000,000 shares (which number is the sum of (1) the 4,000,000 shares approved in connection with the initial adoption of the Plan at the 2012 annual meeting of stockholders, (3) the additional 5,000,000 shares approved at the 2014 annual meeting of stockholders, and (4) the additional 5,000,000 shares approved at the 2018 annual meeting of stockholders (collectively, the "**Share Reserve**").

(ii) For clarity, the Share Reserve in this Section 3(a) is a limitation on the number of shares of Common Stock that may be issued pursuant to the Plan. Accordingly, this Section 3(a) does not limit the granting of Stock Awards except as provided in Section 7(a). Shares may be issued in connection with a merger or acquisition as permitted by NASDAQ Listing Rule 5635(c) or, if applicable, NYSE Listed Company Manual Section 303A.08, AMEX Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

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(b) Reversion of Shares to the Share Reserve. If a Stock Award or any portion thereof (i) expires or otherwise terminates without all of the shares covered by such Stock Award having been issued or (ii) is settled in cash (*i.e.*, the Participant receives cash rather than stock), such expiration, termination or settlement will not reduce (or otherwise offset) the number of shares of Common Stock that may be available for issuance under the Plan. If any shares of Common Stock issued pursuant to a Stock Award are forfeited back to or repurchased by the Company because of the failure to meet a contingency or condition required to vest such shares in the Participant, then the shares that are forfeited or repurchased will revert to and again become available for issuance under the Plan. Any shares reacquired by the Company in satisfaction of tax withholding obligations on a Stock Award or as consideration for the exercise or purchase price of a Stock Award will again become available for issuance under the Plan.

(c) Incentive Stock Option Limit. Subject to Section 9(a) relating to Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options will be 14,000,000 shares of Common Stock.

(d) Section 162(m) Limitations. Subject to Section 9(a) relating to Capitalization Adjustments, at such time as the Company may be subject to the applicable provisions of Section 162(m) of the Code, the following limitations shall apply.

(i) A maximum of 2,000,000 shares of Common Stock subject to Options, SARs and Other Stock Awards whose value is determined by reference to an increase over an exercise or strike price of at least one hundred percent (100%) of the Fair Market Value on the date any such Stock Award is granted may be granted to any Participant during any calendar year. Notwithstanding the foregoing, if any additional Options, SARs or Other Stock Awards whose value is determined by reference to an increase over an exercise or strike price of at least one hundred percent (100%) of the Fair Market Value on the date the Stock Award are granted to any Participant during any calendar year, compensation attributable to the exercise of such additional Stock Awards will not satisfy the requirements to be considered “qualified performance-based compensation” under Section 162(m) of the Code unless such additional Stock Award is approved by the Company’s stockholders.

(ii) A maximum of 2,000,000 shares of Common Stock subject to Performance Stock Awards may be granted to any one Participant during any one calendar year (whether the grant, vesting or exercise is contingent upon the attainment during the Performance Period of the Performance Goals).

(iii) A maximum of \$2,000,000 may be granted as a Performance Cash Award to any one Participant during any one calendar year.

If a Performance Stock Award is in the form of an Option, it will count only against the Performance Stock Award limit. If a Performance Stock Award could be paid out in cash, it will count only against the Performance Stock Award limit.

(e) Source of Shares. The stock issuable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise.

4. ELIGIBILITY.

(a) Eligibility for Specific Stock Awards. Incentive Stock Options may be granted only to employees of the Company or a “parent corporation” or “subsidiary corporation” thereof (as such terms are defined in Sections 424(e) and 424(f) of the Code). Stock Awards other than Incentive Stock Options may be granted to Employees, Directors and Consultants; *provided, however*, that Stock Awards may not be granted to Employees, Directors and Consultants who are providing Continuous Service only to any “parent” of the Company, as such term is defined in Rule 405, unless (i) the stock underlying such Stock Awards is treated as “service recipient stock” under Section 409A (for example, because the Stock Awards are granted pursuant to a corporate transaction such as a spin off transaction) or (ii) the Company, in consultation with its legal counsel, has

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determined that such Stock Awards are otherwise exempt from or alternatively comply with the distribution requirements of Section 409A.

(b) Ten Percent Stockholders. A Ten Percent Stockholder will not be granted an Incentive Stock Option unless the exercise price of such Option is at least one hundred ten percent (110%) of the Fair Market Value on the date of grant and the Option is not exercisable after the expiration of five (5) years from the date of grant.

5. PROVISIONS RELATING TO OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option or SAR will be in such form and will contain such terms and conditions as the Board deems appropriate. All Options will be separately designated Incentive Stock Options or Nonstatutory Stock Options at the time of grant, and, if certificates are issued, a separate certificate or certificates will be issued for shares of Common Stock purchased on exercise of each type of Option. If an Option is not specifically designated as an Incentive Stock Option, or if an Option is designated as an Incentive Stock Option but some portion or all of the Option fails to qualify as an Incentive Stock Option under the applicable rules, then the Option (or portion thereof) will be a Nonstatutory Stock Option. The provisions of separate Options or SARs need not be identical; *provided, however*, that each Award Agreement will conform to (through incorporation of provisions hereof by reference in the applicable Award Agreement or otherwise) the substance of each of the following provisions:

(a) Term. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, no Option or SAR will be exercisable after the expiration of ten (10) years from the date of its grant or such shorter period specified in the Award Agreement.

(b) Exercise Price. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, the exercise or strike price of each Option or SAR will be not less than one hundred percent (100%) of the Fair Market Value of the Common Stock subject to the Option or SAR on the date the Award is granted. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than one hundred percent (100%) of the Fair Market Value of the Common Stock subject to the Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a Corporate Transaction and in a manner consistent with the provisions of Section 409A and, if applicable, Section 424(a) of the Code. Each SAR will be denominated in shares of Common Stock equivalents.

(c) Purchase Price for Options. The purchase price of Common Stock acquired pursuant to the exercise of an Option may be paid, to the extent permitted by applicable law and as determined by the Board in its sole discretion, by any combination of the methods of payment set forth below. The Board will have the authority to grant Options that do not permit all of the following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to use a particular method of payment. The permitted methods of payment are as follows:

(i) by cash, check, bank draft or money order payable to the Company;

(ii) pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock;

(iv) if an Option is a Nonstatutory Stock Option, by a “net exercise” arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest

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whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price; *provided, however*, that the Company will accept a cash or other payment from the Participant to the extent of any remaining balance of the aggregate exercise price not satisfied by such reduction in the number of whole shares to be issued. Shares of Common Stock will no longer be subject to an Option and will not be exercisable thereafter to the extent that (A) shares issuable upon exercise are used to pay the exercise price pursuant to the “net exercise,” (B) shares are delivered to the Participant as a result of such exercise, and (C) shares are withheld to satisfy tax withholding obligations; or

(v) in any other form of legal consideration that may be acceptable to the Board and specified in the applicable Award Agreement.

(d) Exercise and Payment of a SAR. To exercise any outstanding SAR, the Participant must provide written notice of exercise to the Company in compliance with the provisions of the Award Agreement evidencing such SAR. The appreciation distribution payable on the exercise of a SAR will be not greater than an amount equal to the excess of (A) the aggregate Fair Market Value (on the date of the exercise of the SAR) of a number of shares of Common Stock equal to the number of Common Stock equivalents in which the Participant is vested under such SAR, and with respect to which the Participant is exercising the SAR on such date, over (B) the aggregate strike price of the number of Common Stock equivalents with respect to which the Participant is exercising the SAR on such date. The appreciation distribution may be paid in Common Stock, in cash, in any combination of the two or in any other form of consideration, as determined by the Board and contained in the Award Agreement evidencing such SAR.

(e) Transferability of Options and SARs. The Board may, in its sole discretion, impose such limitations on the transferability of Options and SARs as the Board will determine. In the absence of such a determination by the Board to the contrary, the following restrictions on the transferability of Options and SARs will apply:

(i) Restrictions on Transfer. An Option or SAR will not be transferable except by will or by the laws of descent and distribution (or pursuant to subsections (ii) and (iii) below), and will be exercisable during the lifetime of the Participant only by the Participant. The Board may permit transfer of the Option or SAR in a manner that is not prohibited by applicable tax and securities laws. Except as explicitly provided herein, neither an Option nor a SAR may be transferred for consideration.

(ii) Domestic Relations Orders. Subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation 1.421-1(b)(2). If an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

(iii) Beneficiary Designation. Subject to the approval of the Board or a duly authorized Officer, a Participant may, by delivering written notice to the Company, in a form approved by the Company (or the designated broker), designate a third party who, on the death of the Participant, will thereafter be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, the executor or administrator of the Participant’s estate will be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. However, the Company may prohibit designation of a beneficiary at any time, including due to any conclusion by the Company that such designation would be inconsistent with the provisions of applicable laws.

(f) Vesting Generally. The total number of shares of Common Stock subject to an Option or SAR may vest and therefore become exercisable in periodic installments that may or may not be equal. The Option or SAR may be subject to such other terms and conditions on the time or times when it may or may not be exercised (which may be based on the satisfaction of Performance Goals or other criteria) as the Board may deem appropriate. The vesting provisions of individual Options or SARs may vary. The provisions of this Section 5(f)

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are subject to any Option or SAR provisions governing the minimum number of shares of Common Stock as to which an Option or SAR may be exercised.

(g) Termination of Continuous Service. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates (other than for Cause and other than upon the Participant's death or Disability), the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Award as of the date of termination of Continuous Service) within the period of time ending on the earlier of (i) the date three (3) months following the termination of the Participant's Continuous Service (or such longer or shorter period specified in the applicable Award Agreement), and (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the applicable time frame, the Option or SAR will terminate.

(h) Extension of Termination Date. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if the exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause and other than upon the Participant's death or Disability) would be prohibited at any time solely because the issuance of shares of Common Stock would violate the registration requirements under the Securities Act, then the Option or SAR will terminate on the earlier of (i) the expiration of a total period of three (3) months (that need not be consecutive) after the termination of the Participant's Continuous Service during which the exercise of the Option or SAR would not be in violation of such registration requirements, or (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement. In addition, unless otherwise provided in a Participant's Award Agreement, if the sale of any Common Stock received upon exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause) would violate the Company's insider trading policy, then the Option or SAR will terminate on the earlier of (i) the expiration of a period of months (that need not be consecutive) equal to the applicable post-termination exercise period after the termination of the Participant's Continuous Service during which the sale of the Common Stock received upon exercise of the Option or SAR would not be in violation of the Company's insider trading policy, or (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement.

(i) Disability of Participant. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates as a result of the Participant's Disability, the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Option or SAR as of the date of termination of Continuous Service), but only within such period of time ending on the earlier of (i) the date twelve (12) months following such termination of Continuous Service (or such longer or shorter period specified in the Award Agreement), and (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the applicable time frame, the Option or SAR (as applicable) will terminate.

(j) Death of Participant. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if (i) a Participant's Continuous Service terminates as a result of the Participant's death, or (ii) the Participant dies within the period (if any) specified in the Award Agreement for exercisability after the termination of the Participant's Continuous Service (for a reason other than death), then the Option or SAR may be exercised (to the extent the Participant was entitled to exercise such Option or SAR as of the date of death) by the Participant's estate, by a person who acquired the right to exercise the Option or SAR by bequest or inheritance or by a person designated to exercise the Option or SAR upon the Participant's death, but only within the period ending on the earlier of (i) the date eighteen (18) months following the date of death (or such longer or shorter period specified in the Award Agreement), and (ii) the expiration of the term of such Option or SAR as set forth in the Award Agreement. If, after the Participant's death, the Option or SAR is not exercised within the applicable time frame, the Option or SAR will terminate.

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(k) Termination for Cause. Except as explicitly provided otherwise in a Participant's Award Agreement or other individual written agreement between the Company or any Affiliate and the Participant, if a Participant's Continuous Service is terminated for Cause, the Option or SAR will terminate immediately upon such Participant's termination of Continuous Service, and the Participant will be prohibited from exercising his or her Option or SAR from and after the time of such termination of Continuous Service.

(l) Non-Exempt Employees. If an Option or SAR is granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, the Option or SAR will not be first exercisable for any shares of Common Stock until at least six (6) months following the date of grant of the Option or SAR (although the Award may vest prior to such date). Consistent with the provisions of the Worker Economic Opportunity Act, (i) if such non-exempt Employee dies or suffers a Disability, (ii) upon a Corporate Transaction in which such Option or SAR is not assumed, continued, or substituted, (iii) upon a Change in Control, or (iv) upon the Participant's retirement (as such term may be defined in the Participant's Award Agreement, in another agreement between the Participant and the Company, or, if no such definition, in accordance with the Company's then current employment policies and guidelines), the vested portion of any Options and SARs may be exercised earlier than six (6) months following the date of grant. The foregoing provision is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay. To the extent permitted and/or required for compliance with the Worker Economic Opportunity Act to ensure that any income derived by a non-exempt employee in connection with the exercise, vesting or issuance of any shares under any other Stock Award will be exempt from the employee's regular rate of pay, the provisions of this Section 5(l) will apply to all Stock Awards and are hereby incorporated by reference into such Stock Award Agreements.

6. PROVISIONS OF STOCK AWARDS OTHER THAN OPTIONS AND SARS.

(a) Restricted Stock Awards. Each Restricted Stock Award Agreement will be in such form and will contain such terms and conditions as the Board deems appropriate. To the extent consistent with the Company's bylaws, at the Board's election, shares of Common Stock may be (i) held in book entry form subject to the Company's instructions until any restrictions relating to the Restricted Stock Award lapse, or (ii) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. The terms and conditions of Restricted Stock Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Award Agreements need not be identical. Each Restricted Stock Award Agreement will conform to (through incorporation of the provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. A Restricted Stock Award may be awarded in consideration for (A) cash, check, bank draft or money order payable to the Company, (B) past services to the Company or an Affiliate, or (C) any other form of legal consideration (including future services) that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. Shares of Common Stock awarded under the Restricted Stock Award Agreement may be subject to forfeiture to the Company in accordance with a vesting schedule to be determined by the Board.

(iii) Termination of Participant's Continuous Service. If a Participant's Continuous Service terminates, the Company may receive through a forfeiture condition or a repurchase right any or all of the shares of Common Stock held by the Participant that have not vested as of the date of termination of Continuous Service under the terms of the Restricted Stock Award Agreement.

(iv) Transferability. Rights to acquire shares of Common Stock under the Restricted Stock Award Agreement will be transferable by the Participant only upon such terms and conditions as are set forth in the Restricted Stock Award Agreement, as the Board will determine in its sole discretion, so long as Common Stock awarded under the Restricted Stock Award Agreement remains subject to the terms of the Restricted Stock Award Agreement.

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(v) Dividends. A Restricted Stock Award Agreement may provide that any dividends paid on Restricted Stock will be subject to the same vesting and forfeiture restrictions as apply to the shares subject to the Restricted Stock Award to which they relate.

(b) Restricted Stock Unit Awards. Each Restricted Stock Unit Award Agreement will be in such form and will contain such terms and conditions as the Board deems appropriate. The terms and conditions of Restricted Stock Unit Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Unit Award Agreements need not be identical. Each Restricted Stock Unit Award Agreement will conform to (through incorporation of the provisions hereof by reference in the Agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. At the time of grant of a Restricted Stock Unit Award, the Board will determine the consideration, if any, to be paid by the Participant upon delivery of each share of Common Stock subject to the Restricted Stock Unit Award. The consideration to be paid (if any) by the Participant for each share of Common Stock subject to a Restricted Stock Unit Award may be paid in any form of legal consideration that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. At the time of the grant of a Restricted Stock Unit Award, the Board may impose such restrictions on or conditions to the vesting of the Restricted Stock Unit Award as it, in its sole discretion, deems appropriate.

(iii) Payment. A Restricted Stock Unit Award may be settled by the delivery of shares of Common Stock, their cash equivalent, any combination thereof or in any other form of consideration, as determined by the Board and contained in the Restricted Stock Unit Award Agreement.

(iv) Additional Restrictions. At the time of the grant of a Restricted Stock Unit Award, the Board, as it deems appropriate, may impose such restrictions or conditions that delay the delivery of the shares of Common Stock (or their cash equivalent) subject to a Restricted Stock Unit Award to a time after the vesting of such Restricted Stock Unit Award.

(v) Dividend Equivalents. Dividend equivalents may be credited in respect of shares of Common Stock covered by a Restricted Stock Unit Award, as determined by the Board and contained in the Restricted Stock Unit Award Agreement. At the sole discretion of the Board, such dividend equivalents may be converted into additional shares of Common Stock covered by the Restricted Stock Unit Award in such manner as determined by the Board. Any additional shares covered by the Restricted Stock Unit Award credited by reason of such dividend equivalents will be subject to all of the same terms and conditions of the underlying Restricted Stock Unit Award Agreement to which they relate.

(vi) Termination of Participant's Continuous Service. Except as otherwise provided in the applicable Restricted Stock Unit Award Agreement, such portion of the Restricted Stock Unit Award that has not vested will be forfeited upon the Participant's termination of Continuous Service.

(c) Performance Awards.

(i) Performance Stock Awards. A Performance Stock Award is a Stock Award (covering a number of shares not in excess of that set forth in Section 3(d)(ii) above) that is payable (including that may be granted, vest or exercised) contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Stock Award may, but need not, require the completion of a specified period of Continuous Service. The length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained will be conclusively determined by the Committee (or, if not required for compliance with Section 162(m) of the Code, the Board), in its sole discretion. In addition, to the extent permitted by applicable law and the applicable Award Agreement, the Board may determine that cash may be used in payment of Performance Stock Awards.

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(ii) Performance Cash Awards. A Performance Cash Award is a cash award (for a dollar value not in excess of that set forth in Section 3(d) (iii) above) that is payable contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Cash Award may also require the completion of a specified period of Continuous Service. At the time of grant of a Performance Cash Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained will be conclusively determined by the Committee (or, if not required for compliance with Section 162(m) of the Code, the Board), in its sole discretion. The Board may specify the form of payment of Performance Cash Awards, which may be cash or other property, or may provide for a Participant to have the option for his or her Performance Cash Award, or such portion thereof as the Board may specify, to be paid in whole or in part in cash or other property.

(iii) Board Discretion. The Board retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for a Performance Period.

(iv) Section 162(m) Compliance. Unless otherwise permitted in compliance with the requirements of Section 162(m) of the Code with respect to an Award intended to qualify as “performance-based compensation” thereunder, the Committee will establish the Performance Goals applicable to, and the formula for calculating the amount payable under, the Award no later than the earlier of (A) the date ninety (90) days after the commencement of the applicable Performance Period, and (B) the date on which twenty-five percent (25%) of the Performance Period has elapsed, and in any event at a time when the achievement of the applicable Performance Goals remains substantially uncertain. Prior to the payment of any compensation under an Award intended to qualify as “performance-based compensation” under Section 162(m) of the Code, the Committee will certify the extent to which any Performance Goals and any other material terms under such Award have been satisfied (other than in cases where such relate solely to the increase in the value of the Common Stock). Notwithstanding satisfaction of any completion of any Performance Goals, Options, cash or other benefits granted, issued, retainable and/or vested under an Award on account of satisfaction of such Performance Goals may be reduced by the Committee on the basis of such further considerations as the Committee, in its sole discretion, will determine.

(d) Other Stock Awards. Other forms of Stock Awards valued in whole or in part by reference to, or otherwise based on, Common Stock, including the appreciation in value thereof (*e.g.*, options or stock rights with an exercise price or strike price less than 100% of the Fair Market Value of the Common Stock at the time of grant) may be granted either alone or in addition to Stock Awards provided for under Section 5 and the preceding provisions of this Section 6. Subject to the provisions of the Plan, the Board will have sole and complete authority to determine the persons to whom and the time or times at which such Other Stock Awards will be granted, the number of shares of Common Stock (or the cash equivalent thereof) to be granted pursuant to such Other Stock Awards and all other terms and conditions of such Other Stock Awards.

7. COVENANTS OF THE COMPANY.

(a) Availability of Shares. The Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy then-outstanding Stock Awards.

(b) Securities Law Compliance. The Company will seek to obtain from each regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Stock Awards and to issue and sell shares of Common Stock upon exercise of the Stock Awards; *provided, however*, that this undertaking will not require the Company to register under the Securities Act the Plan, any Stock Award or any Common Stock issued or issuable pursuant to any such Stock Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary for the lawful issuance and sale of Common Stock under the Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise of such Stock

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Awards unless and until such authority is obtained. A Participant will not be eligible for the grant of an Award or the subsequent issuance of cash or Common Stock pursuant to the Award if such grant or issuance would be in violation of any applicable securities law.

(c) No Obligation to Notify or Minimize Taxes. The Company will have no duty or obligation to any Participant to advise such holder as to the time or manner of exercising such Stock Award. Furthermore, the Company will have no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to the holder of such Award.

8. MISCELLANEOUS.

(a) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Stock Awards will constitute general funds of the Company.

(b) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action constituting the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement as a result of a clerical error in the papering of the Award Agreement, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement.

(c) Stockholder Rights. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to an Award unless and until (i) such Participant has satisfied all requirements for exercise of, or the issuance of shares of Common Stock under, the Award pursuant to its terms, and (ii) the issuance of the Common Stock subject to such Award has been entered into the books and records of the Company.

(d) No Employment or Other Service Rights. Nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or will affect the right of the Company or an Affiliate to terminate (i) the employment of an Employee with or without notice and with or without cause, including, but not limited to, Cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state in which the Company or the Affiliate is incorporated, as the case may be.

(e) Change in Time Commitment. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company and any Affiliates is reduced (for example, and without limitation, if the Participant is an Employee of the Company and the Employee has a change in status from a full-time Employee to a part-time Employee) after the date of grant of any Award to the Participant, the Board has the right in its sole discretion to (i) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment, and (ii) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(f) Incentive Stock Option Limitations. To the extent that the aggregate Fair Market Value (determined at the time of grant) of Common Stock with respect to which Incentive Stock Options are

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exercisable for the first time by any Participant during any calendar year (under all plans of the Company and any Affiliates) exceeds one hundred thousand dollars (\$100,000) (or such other limit established in the Code) or otherwise does not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or otherwise do not comply with such rules will be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(g) Investment Assurances. The Company may require a Participant, as a condition of exercising or acquiring Common Stock under any Award, (i) to give written assurances satisfactory to the Company as to the Participant's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters and that he or she is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Award; and (ii) to give written assurances satisfactory to the Company stating that the Participant is acquiring Common Stock subject to the Award for the Participant's own account and not with any present intention of selling or otherwise distributing the Common Stock. The foregoing requirements, and any assurances given pursuant to such requirements, will be inoperative if (A) the issuance of the shares upon the exercise or acquisition of Common Stock under the Stock Award has been registered under a then currently effective registration statement under the Securities Act, or (B) as to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under the then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under the Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the Common Stock.

(h) Withholding Obligations. Unless prohibited by the terms of an Award Agreement, the Company may, in its sole discretion, satisfy any federal, state or local tax withholding obligation relating to an Award by any of the following means (in addition to the Company's right to withhold from any compensation paid to the Participant by the Company) or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Stock Award; *provided, however,* that no shares of Common Stock are withheld with a value exceeding the minimum amount of tax required to be withheld by law (or such lesser amount as may be necessary to avoid classification of the Stock Award as a liability for financial accounting purposes); (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant; or (v) by such other method as may be set forth in the Award Agreement.

(i) Electronic Delivery. Any reference herein to a "written" agreement or document will include any agreement or document delivered electronically, filed publicly at www.sec.gov (or any successor website thereto) or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access).

(j) Deferrals. To the extent permitted by applicable law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may establish programs and procedures for deferral elections to be made by Participants. Deferrals by Participants will be made in accordance with Section 409A. Consistent with Section 409A, the Board may provide for distributions while a Participant is still an employee or otherwise providing services to the Company. The Board is authorized to make deferrals of Awards and determine when, and in what annual percentages, Participants may receive payments, including lump sum payments, following the Participant's termination of Continuous Service, and implement such other terms and conditions consistent with the provisions of the Plan and in accordance with applicable law.

(k) Compliance with Section 409A. Unless otherwise expressly provided for in an Award Agreement, the Plan and Award Agreements will be interpreted to the greatest extent possible in a manner that makes the

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Plan and the Awards granted hereunder exempt from Section 409A of the Code, and, to the extent not so exempt, in compliance with Section 409A of the Code. If the Board determines that any Award granted hereunder is not exempt from and is therefore subject to Section 409A of the Code, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code and to the extent an Award Agreement is silent on terms necessary for compliance, such terms are hereby incorporated by reference into the Award Agreement. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes “deferred compensation” under Section 409A of the Code is a “specified employee” for purposes of Section 409A of the Code, no distribution or payment of any amount that is due because of a “separation from service” (as defined in Section 409A of the Code without regard to alternative definitions thereunder) will be issued or paid before the date that is six (6) months following the date of such Participant’s “separation from service” or, if earlier, the date of the Participant’s death, unless such distribution or payment can be made in a manner that complies with Section 409A of the Code, and any amounts so deferred will be paid in a lump sum on the day after such six (6) month period elapses, with the balance paid thereafter on the original schedule.

(l) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company’s securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a right to resign for “good reason” or “constructive termination” (or similar term) under any agreement with the Company.

9. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a); (ii) the class(es) and maximum number of securities that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 3(c); (iii) the class(es) and maximum number of securities that may be awarded to any person pursuant to Sections 3(d); and (iv) the class(es) and number of securities and price per share of stock subject to outstanding Stock Awards. The Board will make such adjustments, and its determination will be final, binding and conclusive.

(b) Dissolution or Liquidation. Except as otherwise provided in the Stock Award Agreement, in the event of a dissolution or liquidation of the Company, all outstanding Stock Awards (other than Stock Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company’s right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company’s repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Stock Award is providing Continuous Service; *provided, however*, that the Board may, in its sole discretion, cause some or all Stock Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Stock Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

(c) Corporate Transaction. The following provisions will apply to Stock Awards in the event of a Corporate Transaction unless otherwise provided in the instrument evidencing the Stock Award or any other written agreement between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board at the time of grant of a Stock Award. In the event of a Corporate Transaction, then,

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notwithstanding any other provision of the Plan, the Board may take one or more of the following actions with respect to Stock Awards, contingent upon the closing or consummation of the Corporate Transaction:

(i) arrange for the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) to assume or continue the Stock Award or to substitute a similar stock award for the Stock Award (including, but not limited to, an award to acquire the same consideration paid to the stockholders of the Company pursuant to the Corporate Transaction);

(ii) arrange for the assignment of any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to the Stock Award to the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company);

(iii) accelerate the vesting, in whole or in part, of the Stock Award (and, if applicable, the time at which the Stock Award may be exercised) to a date prior to the effective time of such Corporate Transaction as the Board determines (or, if the Board does not determine such a date, to the date that is five (5) days prior to the effective date of the Corporate Transaction), with such Stock Award terminating if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction; *provided, however*, that the Board may require Participants to complete and deliver to the Company a notice of exercise before the effective date of a Corporate Transaction, which exercise is contingent upon the effectiveness of such Corporate Transaction;

(iv) arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by the Company with respect to the Stock Award;

(v) cancel or arrange for the cancellation of the Stock Award, to the extent not vested or not exercised prior to the effective time of the Corporate Transaction, in exchange for such cash consideration, if any, as the Board, in its sole discretion, may consider appropriate; and

(vi) make a payment, in such form as may be determined by the Board equal to the excess, if any, of (A) the value of the property the Participant would have received upon the exercise of the Stock Award immediately prior to the effective time of the Corporate Transaction, over (B) any exercise price payable by such holder in connection with such exercise. For clarity, this payment may be zero (\$0) if the value of the property is equal to or less than the exercise price. Payments under this provision may be delayed to the same extent that payment of consideration to the holders of the Company's Common Stock in connection with the Corporate Transaction is delayed as a result of escrows, earn outs, holdbacks or any other contingencies.

The Board need not take the same action or actions with respect to all Stock Awards or portions thereof or with respect to all Participants. The Board may take different actions with respect to the vested and unvested portions of a Stock Award prior to the earlier of (i) the effective time of the Corporate Transaction and (ii) the effectiveness of such action(s) with respect to the Awards.

(d) Change in Control. A Stock Award may be subject to additional acceleration of vesting and exercisability upon or after a Change in Control as may be provided in the Stock Award Agreement for such Stock Award or as may be provided in any other written agreement between the Company or any Affiliate and the Participant, but in the absence of such provision, no such acceleration will occur.

10. PLAN TERM; EARLIER TERMINATION OR SUSPENSION OF THE PLAN.

(a) The Board may suspend or terminate the Plan at any time. No Incentive Stock Option will be granted after the tenth (10th) anniversary of the earlier of (i) the date the Plan is adopted by the Board, or (ii) the date the Plan is approved by the stockholders of the Company. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

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(b) No Impairment of Rights. Suspension or termination of the Plan will not impair rights and obligations under any Award granted while the Plan is in effect except with the written consent of the affected Participant or as otherwise permitted in the Plan.

11. EFFECTIVE DATE OF PLAN.

This Plan will become effective on the Effective Date.

12. CHOICE OF LAW.

The laws of the State of Delaware will govern all questions concerning the construction, validity and interpretation of this Plan, without regard to that state's conflict of laws rules.

13. DEFINITIONS.

As used in the Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "Affiliate" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405. The Board will have the authority to determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(b) "Award" means a Stock Award or a Performance Cash Award.

(c) "Award Agreement" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award.

(d) "Board" means the Board of Directors of the Company.

(e) "Capitalization Adjustment" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Stock Award after the Effective Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or any similar equity restructuring transaction, as that term is used in Statement of Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(f) "Cause" will have the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term means, with respect to a Participant, the occurrence of any of the following events: (i) the willful misconduct, failure, disregard or refusal by such Participant to perform any of the material duties of his or her material duties of employment; *provided, however*, that such Participant will have one opportunity to cure any breach within five (5) business days ("**Cure Period**") of written notice to the Participant; (ii) any willful, intentional or grossly negligent act by such Participant having the effect of injuring, in a material way the business or reputation of the Company or an Affiliate; (iii) such Participant's conviction of any felony or a misdemeanor involving moral turpitude (including entry of a *nolo contendere* plea); (iv) the determination by the Company, after a reasonable and good-faith investigation by the Company following a written allegation by another employee of the Company, that such Participant engaged in some form of harassment prohibited by law (including, without limitation, harassment that constitutes age, sex or race discrimination); any misappropriation or embezzlement of the property of the Company or an Affiliate; (vi) breach by such Participant of any agreement between the Participant and the Company or an Affiliate which is not cured by the Participant within thirty (30) days after notice thereof is given by the Company or an Affiliate.

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(g) “**Change in Control**” means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the combined voting power of the Company’s then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control will not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company, (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company’s securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities, or (C) solely because the level of Ownership held by any Exchange Act Person (the “**Subject Person**”) exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control will be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than fifty percent (50%) of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than fifty percent (50%) of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

(iii) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than fifty percent (50%) of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; or

(iv) individuals who, on the date the Plan is adopted by the Board, are members of the Board (the “**Incumbent Board**”) cease for any reason to constitute at least a majority of the members of the Board; *provided, however*, that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member will, for purposes of this Plan, be considered as a member of the Incumbent Board.

Notwithstanding the foregoing definition or any other provision of this Plan, (A) the term Change in Control will not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company, and (B) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant will supersede the foregoing definition with respect to Awards subject to such agreement; *provided, however*, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition will apply; *provided, further*, that no Change in Control shall be deemed to occur upon announcement or commencement of a tender offer or upon a potential takeover or upon stockholder approval of a merger or other transaction, in each case without a requirement that the Change in Control actually occur. If required for compliance with Section 409A of the Code, in no event will a Change in Control be deemed to have occurred if such transaction is not also a “change in the ownership or effective control of” the Company or “a change in the

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ownership of a substantial portion of the assets of” the Company as determined under Treasury Regulation Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder). The Board may, in its sole discretion and without a Participant’s consent, amend the definition of “Change in Control” to conform to the definition of “Change in Control” under Section 409A of the Code, and the regulations thereunder.

(h) “Code” means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(i) “Committee” means a committee of one (1) or more Directors to whom authority has been delegated by the Board in accordance with Section 2(c).

(j) “Common Stock” means the common stock of the Company.

(k) “Company” means ZIOPHARM Oncology, Inc., a Delaware corporation.

(l) “Consultant” means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a “Consultant” for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company’s securities to such person.

(m) “Continuous Service” means that the Participant’s service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the Entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant’s service with the Company or an Affiliate, will not terminate a Participant’s Continuous Service; *provided, however*, that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, in its sole discretion, such Participant’s Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. For example, a change in status from an Employee of the Company to a Consultant of an Affiliate or to a Director will not constitute an interruption of Continuous Service. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party’s sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in a Stock Award only to such extent as may be provided in the Company’s leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law. In addition, to the extent required for exemption from or compliance with Section 409A of the Code, the determination of whether there has been a termination of Continuous Service will be made, and such term will be construed, in a manner that is consistent with the definition of “separation from service” as defined under Treasury Regulation Section 1.409A-1(h) (without regard to any alternative definition thereunder).

(n) “Corporate Transaction” means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) (i) a sale or other disposition of all or substantially all, as determined by the Board, in its sole discretion, of the consolidated assets of the Company and its Subsidiaries;

(ii) (ii) a sale or other disposition of at least ninety percent (90%) of the outstanding securities of the Company;

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(iii) **(iii)** a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) **(iv)** a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

To the extent required for compliance with Section 409A of the Code, in no event will an event be deemed a Corporate Transaction if such transaction is not also a “change in the ownership or effective control of” the Company or “a change in the ownership of a substantial portion of the assets of” the Company as determined under Treasury Regulation Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder).

(o) **“Covered Employee”** will have the meaning provided in Section 162(m)(3) of the Code.

(p) **“Director”** means a member of the Board.

(q) **“Disability”** means, with respect to a Participant, the inability of such Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last for a continuous period of not less than twelve (12) months, as provided in Sections 22(e)(3) and 409A(a)(2)(C)(i) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(r) **“Effective Date”** means the effective date of this Plan document, which is the date of the annual meeting of stockholders of the Company held in 2012 provided this Plan is approved by the Company’s stockholders at such meeting.

(s) **“Employee”** means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an “Employee” for purposes of the Plan.

(t) **“Entity”** means a corporation, partnership, limited liability company or other entity.

(u) **“Exchange Act”** means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(v) **“Exchange Act Person”** means any natural person, Entity or “group” (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that “Exchange Act Person” will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to an offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or “group” (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than fifty percent (50%) of the combined voting power of the Company’s then outstanding securities.

(w) **“Fair Market Value”** means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be, unless otherwise determined by the Board,

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the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing selling price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(x) “**Incentive Stock Option**” means an option granted pursuant to Section 5 of the Plan that is intended to be, and that qualifies as, an “incentive stock option” within the meaning of Section 422 of the Code.

(y) “**Non-Employee Director**” means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act (“**Regulation S-K**”)), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K; or (ii) is otherwise considered a “non-employee director” for purposes of Rule 16b-3.

(z) “**Nonstatutory Stock Option**” means any option granted pursuant to Section 5 of the Plan that does not qualify as an Incentive Stock Option.

(aa) “**Officer**” means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(bb) “**Option**” means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(cc) “**Option Agreement**” means a written agreement between the Company and an Participant evidencing the terms and conditions of an Option grant. Each Option Agreement will be subject to the terms and conditions of the Plan.

(dd) “**Other Stock Award**” means an award based in whole or in part by reference to the Common Stock which is granted pursuant to the terms and conditions of Section 6(d).

(ee) “**Outside Director**” means a Director who either (i) is not a current employee of the Company or an “affiliated corporation” (within the meaning of Treasury Regulations promulgated under Section 162(m) of the Code), is not a former employee of the Company or an “affiliated corporation” who receives compensation for prior services (other than benefits under a tax-qualified retirement plan) during the taxable year, has not been an officer of the Company or an “affiliated corporation,” and does not receive remuneration from the Company or an “affiliated corporation,” either directly or indirectly, in any capacity other than as a Director, or (ii) is otherwise considered an “outside director” for purposes of Section 162(m) of the Code.

(ff) “**Own,**” “**Owned,**” “**Owner,**” “**Ownership**” means a person or Entity will be deemed to “Own,” to have “Owned,” to be the “Owner” of, or to have acquired “Ownership” of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

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(gg) “Participant” means a person to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Stock Award.

(hh) “Performance Cash Award” means an award of cash granted pursuant to the terms and conditions of Section 6(c)(ii).

(ii) “Performance Criteria” means the one or more criteria that the Board will select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that will be used to establish such Performance Goals may be based on any one of, or combination of, the following as determined by the Board: (i) earnings (including earnings per share and net earnings); (ii) earnings before interest, taxes and depreciation; (iii) earnings before interest, taxes, depreciation and amortization; (iv) total stockholder return; (v) return on equity or average stockholder’s equity; (vi) return on assets, investment, or capital employed; (vii) stock price; (viii) margin (including gross margin); (ix) income (before or after taxes); (x) operating income; (xi) operating income after taxes; (xii) pre-tax profit; (xiii) operating cash flow; (xiv) sales or revenue targets; (xv) increases in revenue or product revenue; (xvi) expenses and cost reduction goals; (xvii) improvement in or attainment of working capital levels; (xviii) economic value added (or an equivalent metric); (xix) market share; (xx) cash flow; (xxi) cash flow per share; (xxii) share price performance; (xxiii) debt reduction; (xxiv) implementation or completion of projects or processes; (xxv) customer satisfaction; (xxvi) stockholders’ equity; (xxvii) capital expenditures; (xxviii) debt levels; (xxix) operating profit or net operating profit; (xxx) workforce diversity; (xxxi) growth of net income or operating income; (xxxii) billings; (xxxiii) achievement of drug development milestones; (xxxiv) regulatory achievements, including approval of a compound; (xxxv) progress of internal research or clinical programs; (xxxvi) progress of partner programs; (xxxvii) implementation or completion of projects and processes; (xxxviii) clinical progress, (xxxix) in-licensing; and (xl) to the extent that an Award is not intended to comply with Section 162(m) of the Code, other measures of performance selected by the Board.

(jj) “Performance Goals” means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. Performance Goals may be based on a Company-wide basis, with respect to one or more business units, divisions, Affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by the Board (i) in the Award Agreement at the time the Award is granted or (ii) in such other document setting forth the Performance Goals at the time the Performance Goals are established, the Board will appropriately make adjustments in the method of calculating the attainment of Performance Goals for a Performance Period as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects, as applicable, for non-U.S. dollar denominated Performance Goals; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; and (5) to exclude the effects of any “extraordinary items” as determined under generally accepted accounting principles.

(kk) “Performance Period” means the period of time selected by the Board over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant’s right to and the payment of a Stock Award or a Performance Cash Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(ll) “Performance Stock Award” means a Stock Award granted under the terms and conditions of Section 6(c)(i).

(mm) “Plan” means this ZIOPHARM Oncology, Inc. 2012 Equity Incentive Plan.

(nn) “Restricted Stock Award” means an award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(a).

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(oo) “Restricted Stock Award Agreement” means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award grant. Each Restricted Stock Award Agreement will be subject to the terms and conditions of the Plan.

(pp) “Restricted Stock Unit Award” means a right to receive shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(b).

(qq) “Restricted Stock Unit Award Agreement” means a written agreement between the Company and a holder of a Restricted Stock Unit Award evidencing the terms and conditions of a Restricted Stock Unit Award grant. Each Restricted Stock Unit Award Agreement will be subject to the terms and conditions of the Plan.

(rr) “Rule 16b-3” means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

(ss) “Rule 405” means Rule 405 promulgated under the Securities Act.

(tt) “Section 409A” means Section 409A of the Code and the regulations and other guidance thereunder and any state law of similar effect.

(uu) “Securities Act” means the Securities Act of 1933, as amended.

(vv) “Stock Appreciation Right” or “SAR” means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 5.

(ww) “Stock Award” means any right to receive Common Stock granted under the Plan, including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a Restricted Stock Unit Award, a Stock Appreciation Right, a Performance Stock Award or any Other Stock Award.

(xx) “Stock Award Agreement” means a written agreement between the Company and a Participant evidencing the terms and conditions of a Stock Award grant. Each Stock Award Agreement will be subject to the terms and conditions of the Plan.

(yy) “Subsidiary” means, with respect to the Company, (i) any corporation of which more than fifty percent (50%) of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and (ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than fifty percent (50%).

(zz) “Ten Percent Stockholder” means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Affiliate.

ZIOPHARM ONCOLOGY, INC.
 ATTN: CORPORATE SECRETARY
 ONE FIRST AVENUE, PARRIS BLDG #34
 THIRD FLOOR, NAVY YARD PLAZA
 BOSTON, MA 02129

VOTE BY INTERNET - www.proxyvote.com

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

ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

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

VOTE BY PHONE - 1-800-690-6903

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

VOTE BY MAIL

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

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

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

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

<p>The Board of Directors recommends you vote FOR the following:</p> <p>1. Election of Directors</p> <p>Nominees</p> <p>01 James A. Cannon 02 Elan Z. Ezickson 03 Randal J. Kirk 04 Douglas W. Pagan 05 Scott Tarriff</p> <p>The Board of Directors recommends you vote FOR proposals 2, 3 and 4.</p> <p>2. To ratify the appointment of RSM US LLP as the Company's independent registered public accounting firm for 2018</p> <p>3. To approve, on an advisory basis, the compensation of the Company's named executive officers as disclosed in the proxy statement</p> <p>4. To approve an amendment to the Company's 2012 Equity Incentive Plan, as amended, to increase the number of shares of common stock reserved for issuance thereunder from 9,000,000 shares to 14,000,000 shares</p> <p>NOTE: To transact any other business as may properly come before the meeting or any adjournments or postponements thereof.</p> <p>For address change/comments, mark here. (see reverse for instructions)</p> <p>Please indicate if you plan to attend this meeting</p> <p>Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.</p>	<p>For All Withhold All For All Except</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>	<p>To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.</p> <p>_____</p>	<p style="text-align: right;">For Against Abstain</p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p> <p><input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/></p>
Signature [PLEASE SIGN WITHIN BOX] Date		Signature (Joint Owners) Date	

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

ZIOPHARM ONCOLOGY, INC.
Annual Meeting of Stockholders
September 18, 2018 10:00 AM EDT
This proxy is solicited by the Board of Directors

The undersigned hereby appoints Laurence James Neil Cooper, M.D., Ph.D. and Robert Hadfield or either of them, as proxies, each with the power to act without the other and to appoint his substitute, and hereby authorizes them to represent and to vote, as designated on the reverse side, all of the shares of common stock of ZIOPHARM ONCOLOGY, INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders of the Company to be held at 10:00 AM EDT on September 18, 2018, at the offices of Cooley LLP located at 1114 Avenue of the Americas, 46th Floor, New York, NY 10036-7798 and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors' recommendations.

Address change/comments:

(If you noted any Address Changes and/or Comments above, please mark corresponding box on the reverse side.)

Continued and to be signed on reverse side