

INTREXON CORP
Form DEF 14A
April 29, 2016
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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

Filed by the Registrant

Filed by a party other than the Registrant

Check the appropriate box:

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

INTREXON CORPORATION

(Name of Registrant as Specified In Its Charter)

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

Payment of Filing Fee (Check the appropriate box):

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

 - (2) Aggregate number of securities to which transaction applies:

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

 - (4) Proposed maximum aggregate value of transaction:

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

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

(3) Filing party:

(4) Date Filed:

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INTREXON CORPORATION

20374 Seneca Meadows Parkway

Germantown, Maryland 20876

NOTICE OF 2016 ANNUAL MEETING OF SHAREHOLDERS

To Be Held On June 9, 2016

To Our Shareholders:

You are cordially invited to attend the Annual Meeting of Shareholders (the Annual Meeting) of Intrexon Corporation (the Company) to be held at 9:00 a.m., Eastern Time, Thursday, June 9, 2016, at the Esperante Conference Center, 222 Lakeview Avenue, West Palm Beach, Florida 33401, for the following purposes:

1. To elect the seven nominees named in the accompanying Proxy Statement to the Board of Directors, each to serve a one-year term expiring at the earlier of the next Annual Meeting or until his or her successor is duly elected and qualified;
2. To ratify the appointment by the Audit Committee of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016;
3. To approve a non-binding advisory resolution approving the compensation of the named executive officers;
4. To approve the Amendment to the Amended and Restated Intrexon Corporation 2013 Omnibus Incentive Plan, which provides for the issuance of an additional three million shares of Common Stock under the plan; and
5. To transact any other business that may properly be brought before the Annual Meeting or any adjournments or postponements thereof.

As of the date of this notice, the Company has received no notice of any matters, other than those set forth above, that may properly be presented at the Annual Meeting. If any other matters are properly presented for consideration at the meeting, the persons named as proxies on the enclosed proxy card, or their duly constituted substitutes, will be deemed authorized to receive notice on behalf of and to vote the shares represented by proxy or otherwise act on those matters in accordance with their business judgment.

The Board of Directors has fixed the close of business on April 18, 2016, as the record date for determining those shareholders entitled to notice of and to vote at the Annual Meeting. As permitted by rules adopted by the Securities and Exchange Commission, we are furnishing our proxy statement, 2015 Annual Report to Shareholders and proxy card over the Internet to our shareholders. This means that our shareholders will initially receive only a notice

containing instructions on how to access the proxy materials over the Internet. If you would like to receive a paper copy of the proxy materials, the notice contains instructions on how you can request copies of these documents.

Your vote is very important to us. Please read the proxy statement and then, regardless of whether you plan to attend the Annual Meeting, vote your shares as promptly as possible. Please see pages 2-3 for information about voting by internet, telephone, mail or in person at the Annual Meeting. Please note that in the absence of specific instructions as to how to vote, brokers may not vote your shares on the election of directors, the non-binding proposal regarding the compensation of the named executive officers or the proposal to approve the Amendment to the Amended and Restated Intrexon Corporation 2013 Omnibus Incentive Plan. You may revoke your proxy at any time before the vote is taken by delivering to the company's Corporate Secretary a written revocation, submitting a proxy with a later date or by voting your shares in person at the meeting, in which case your prior proxy will be disregarded. Please note that voting in advance in any of the ways described will not prevent you from attending the Annual Meeting should you choose to do so. I hope that you will attend the Annual Meeting, but even if you cannot, please vote your shares as promptly as possible.

By Order of the Board of Directors,
DONALD P. LEHR
Corporate Secretary

Germantown, Maryland

April 29, 2016

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**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE
ANNUAL MEETING OF SHAREHOLDERS TO BE HELD ON JUNE 9, 2016**

This Proxy Statement and our Annual Report are available online at <https://materials.proxyvote.com/46122T>. To obtain directions to the Esperante Conference Center to attend the annual meeting in person, please visit the Investors section of our website at www.dna.com or contact Investor Relations in writing at 20374 Seneca Meadows Parkway, Germantown, Maryland 20876.

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INTREXON CORPORATION

20374 Seneca Meadows Parkway

Germantown, Maryland 20876

PROXY STATEMENT

2016 Annual Meeting of Shareholders

This Proxy Statement and the accompanying proxy card are being furnished to you by the Board of Directors (the Board) of Intrexon Corporation to solicit your proxy to vote your shares at our 2016 Annual Meeting of Shareholders (the Annual Meeting), or at any adjournments or postponements thereof. The Board has designated the Esperante Conference Center, 222 Lakeview Avenue, West Palm Beach, Florida 33401 as the place of the Annual Meeting. The Annual Meeting will be called to order at 9:00 a.m., Eastern Time, on Thursday, June 9, 2016. To obtain directions to the Esperante Conference Center to attend the Annual Meeting in person, please visit the Investors section of our website at www.dna.com or contact Investor Relations in writing at 20374 Seneca Meadows Parkway, Germantown, Maryland 20876. Unless the context otherwise indicates, reference to Intrexon, we, us, our or the Company means Intrexon Corporation.

On or about April 29, 2016, we will mail a notice to shareholders containing instructions on how to access the Proxy Statement and Annual Report and how to vote. These materials will be made available to you on the Internet, however, we will deliver printed versions of these materials to you by mail upon your request.

QUESTIONS AND ANSWERS ABOUT THE ANNUAL MEETING

1. Who is asking for my vote and why am I receiving this document?

The Board asks that you vote on the matters listed in the Notice of Annual Meeting, which are more fully described in this Proxy Statement. We are providing this Proxy Statement and related proxy card to our shareholders in connection with the solicitation by the Board of proxies to be voted at the Annual Meeting. A proxy, if duly executed and not revoked, will be voted and, if it contains any specific instructions, will be voted in accordance with those instructions.

2. Who is entitled to vote?

Only holders of record of outstanding shares of our common stock at the close of business on April 18, 2016, are entitled to notice of and to vote at the Annual Meeting. At the close of business on April 18, 2016, there were

118,110,910 outstanding shares of common stock. Each share of common stock is entitled to one vote on each matter properly brought before the 2016 Annual Meeting.

3. What is a proxy?

A proxy is your legal designation of another person to vote the stock you own. If you designate someone as your proxy or proxy holder in a written document, that document is called a proxy or a proxy card. Mr. Randal J. Kirk, Mr. Donald P. Lehr and Mr. Rick Sterling have been designated as proxies or proxy holders for the Annual Meeting. A proxy properly executed and received by our Corporate Secretary prior to the Annual Meeting and not revoked will be voted in accordance with the terms thereof.

4. What is a voting instruction?

A voting instruction is the instruction form you receive from your bank, broker or its nominee if you hold your shares of common stock in street name. The instruction form instructs you how to direct your bank, broker or its nominee, as record holder, to vote your shares of common stock.

5. What am I voting on?

Shareholders are being asked to vote on each of the following items of business:

The election of the seven nominees named in this Proxy Statement to the Board, each to serve a one-year term expiring at the earlier of the next Annual Meeting or until his or her successor is duly elected and qualified;

The ratification of the appointment by the Audit Committee of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016;

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The approval of a non-binding advisory resolution approving the compensation of the named executive officers; and

The approval of the Amendment to the Amended and Restated 2013 Omnibus Incentive Plan, which provides for the issuance of an additional three million shares under the plan.

In addition, any other matters that properly come before the Annual Meeting or any adjournment or postponement thereof will be considered. Management is presently aware of no other business to come before the Annual Meeting.

6. How many votes must be present to hold the Annual Meeting?

A majority of the outstanding shares of common stock as of the record date must be present in person or represented by proxy at the Annual Meeting. This is referred to as a quorum. Abstentions, withheld votes and shares of record held by a broker or its nominee (broker shares) that are voted on any matter are included in determining the existence of a quorum. Broker shares that are not voted on any matter will not be included in determining whether a quorum is present.

7. What are the voting requirements to elect directors and approve the other proposals described in the proxy statement?

The vote required to elect directors and approve each of the matters scheduled for a vote at the annual meeting is set forth below:

| Proposal | Vote Required |
|---|------------------------|
| 1. Election of directors | Majority of votes cast |
| 2. Ratification of appointment of PricewaterhouseCoopers LLP | Majority of votes cast |
| 3. Advisory vote on executive compensation | Majority of votes cast |
| 4. Amendment to 2013 Plan to increase the number of shares issuable under the 2013 Plan | Majority of votes cast |

Votes may be cast by proxy or in person. A majority of votes cast means that more votes were cast for the proposal than against. Abstentions and broker non-votes (described in Question 13 below) are not considered as votes cast and will have no effect on the vote outcome for these matters. As it relates to the election of our directors, our Corporate Governance Guidelines provide that any nominee for director in an uncontested election who receives a greater number of shareholder votes cast against his or her election than votes for his or her election must promptly tender his or her resignation to the Board for consideration. For more details regarding the director resignation policy, please see Election of Directors on page 13.

8. What are the voting recommendations of the Board?

For the reasons set forth in more detail later in this Proxy Statement, THE BOARD RECOMMENDS THAT YOU VOTE:

FOR THE PROPOSED NOMINEES TO THE BOARD NAMED IN THIS PROXY STATEMENT;

FOR THE RATIFICATION OF THE APPOINTMENT OF PRICEWATERHOUSECOOPERS LLP;

FOR THE APPROVAL OF THE NON-BINDING ADVISORY RESOLUTION REGARDING APPROVAL OF THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS; and

FOR THE APPROVAL OF THE AMENDMENT TO THE AMENDED AND RESTATED INTREXON CORPORATION 2013 OMNIBUS INCENTIVE PLAN.

9. How do I vote?

Registered shareholders (shareholders who hold common stock in certificated form or book entry form on the records of our transfer agent as opposed to through a bank, broker or other nominee) may vote in person at the Annual Meeting or by proxy. There are three ways for registered shareholders to vote by proxy:

By Internet: Connect to the Internet at *www.proxyvote.com* and follow the instructions included on the proxy card or voting instruction. Your proxy will be voted according to your instructions. If you vote by Internet, you do not need to mail in a proxy card or voting instruction.

By Telephone: Call 1-800-690-6903 and follow the instructions included on the proxy card or voting instruction. If you vote by telephone, you do not need to mail in a proxy card or voting instruction.

By Mail: If you received your proxy materials by mail, complete, properly sign, date and mail the enclosed proxy card or voting instruction.

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Registered shareholders are urged to deliver proxies or voting instructions by using the Internet, calling the toll-free telephone number or by completing and mailing the proxy card or voting instruction. The Internet and telephone voting procedures are designed to authenticate shareholders' identities, to allow shareholders to give their proxies or voting instructions and to confirm that such instructions have been recorded properly. Instructions for voting over the Internet or by telephone are included on the enclosed proxy card or voting instruction. If you received your proxy materials via mail, registered shareholders may send their proxies or voting instructions by completing, signing and dating the enclosed proxy card or voting instruction and returning it as promptly as possible in the enclosed prepaid envelope.

Shareholders who hold common stock through banks, brokers or other nominees ("street name shareholders") who wish to vote at the Annual Meeting should receive voting instructions from the institution that holds their shares. Please contact the institution that holds your shares if you have not received voting instructions. Street name shareholders may also be eligible to vote their shares electronically by following the voting instructions provided by the bank, broker or other nominee that holds the shares, using either the toll-free telephone number or the Internet address provided on the voting instruction; or by completing, dating and signing the voting instruction and returning it promptly in the enclosed prepaid envelope.

The deadline for voting via the Internet or telephone is 11:59 p.m., Eastern Time, on June 8, 2016.

10. Can I attend the Annual Meeting?

Yes. The Annual Meeting is open to all holders of our common stock as of the record date, April 18, 2016. You may attend the Annual Meeting and vote in person. However, even if you plan to attend the Annual Meeting, we encourage you to vote your shares by proxy.

All shareholders must present a form of personal photo identification in order to be admitted to the meeting. Cameras, recording devices and other electronic devices are not permitted at the Annual Meeting.

11. How will my shares be voted if I sign, date and return my proxy card or voting instruction card, but do not provide complete voting instructions with respect to each proposal?

Shareholders should specify their vote for each matter on the enclosed proxy. The proxies solicited by this Proxy Statement vest in the proxy holders' voting rights with respect to the election of directors (unless the shareholder marks the proxy to withhold that authority) and on all other matters voted upon at the Annual Meeting.

Unless otherwise directed in the enclosed proxy card, the persons named as proxies therein will vote all properly executed, returned and not-revoked proxy cards or voting instruction cards (1) **FOR** the election of the seven director nominees listed thereon; (2) **FOR** the proposal to ratify the appointment by the Audit Committee of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016; (3) **FOR** the non-binding proposal regarding approval of the compensation of the company's named executive officers; and (4) **FOR** the approval of the Amendment to the Amended and Restated Intrexon Corporation 2013 Omnibus Incentive Plan. As to any other business that may properly come before the Annual Meeting, the persons named in the enclosed proxy card or voting instruction will vote the shares of common stock represented by the proxy in the manner as the Board may recommend, or otherwise at the proxy holders' discretion. The Board does not presently know of any other such business.

12. How will my shares be voted if I do not return my proxy card or my voting instruction?

It will depend on how your ownership of shares of common stock is registered. If you own your shares as a registered holder, which means that your shares of common stock are registered in your name, your unvoted shares will not be represented at the Annual Meeting and will not count toward the quorum requirement, as explained under 6. *How many votes must be present to hold the Annual Meeting?* on page 2, unless you attend the Annual Meeting to vote them in person.

If you own your shares of common stock in street name, which means that your shares are registered in the name of your bank, broker or its nominee, your shares may be voted even if you do not provide your bank, broker or other nominee with voting instructions. Under the rules of the New York Stock Exchange (the NYSE) your bank, broker or other nominee may vote your shares in its discretion on routine matters. However, NYSE rules do not permit your bank, broker or other nominee to vote your shares on proposals that are not considered routine. When a proposal is not a routine matter and your bank, broker or other nominee has not received your voting instructions with respect to such proposal, your bank, broker or other nominee cannot vote your shares on that proposal. When a bank, broker or other nominee does not cast a vote for a routine or a non-routine matter, it is called a broker non-vote.

Please note in the absence of your specific instructions as to how to vote, that your bank, broker or other nominee may not vote your shares with respect to the election of directors, the non-binding proposal regarding the compensation of the named executive officers or the proposal to approve the Amendment to the Amended and Restated Intrexon Corporation 2013

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Omnibus Incentive Plan. Under NYSE rules, these matters are not considered routine matters. Based on NYSE rules, we believe that the ratification of the appointment by the Audit Committee of PricewaterhouseCoopers LLP is a routine matter for which brokerage firms may vote on behalf of their clients if no voting instructions are provided. Therefore, if you are a shareholder whose shares of common stock are held in street name with a bank, broker or other nominee and you do not return your voting instruction card, your bank, broker or other nominee may vote your shares **FOR** the ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm. **Please return your proxy card so your vote can be counted.**

13. How are abstentions and broker non-votes counted?

Only votes cast for or against are included in determining the votes cast with respect to any matter presented for consideration at the Annual Meeting. As described above, when brokers do not have discretion to vote or do not exercise such discretion, the inability or failure to vote is referred to as a broker non-vote. Proxies marked as abstaining, and any proxies returned by brokers as non-votes on behalf of shares held in street name because beneficial owners' discretion has been withheld as to one or more matters to be acted upon at the Annual Meeting, will be treated as present for purposes of determining whether a quorum is present at the Annual Meeting. Broker non-votes and abstentions will not be included in the vote total for the proposal to elect the nominees for director and will not affect the outcome of the vote for the proposal. In addition, under Virginia corporation law, abstentions are not counted as votes cast on a proposal. Therefore, abstentions and broker non-votes will not count either in favor of or against (i) the election of directors, (ii) the ratification of the appointment of PricewaterhouseCoopers LLP or (iii) the non-binding proposal regarding the compensation of the named executive officers. Abstentions, however, will be considered as votes cast under the rules of the NYSE and will have the effect of a vote against the proposal to approve the Amendment to the Amended and Restated Intrexon Corporation 2013 Omnibus Incentive Plan.

14. What if I change my mind after I vote?

Whether you vote by Internet, telephone or by mail, you may later change or revoke your proxy at any time before it is exercised by (i) submitting a properly signed proxy with a later date, (ii) voting by telephone or the Internet at a later time, or (iii) voting in person at the Annual Meeting. See the enclosed proxy card for instructions. Attendance at the Annual Meeting will not by itself revoke a previously granted proxy.

If you are a shareholder whose stock is held in street name with a bank, broker or other nominee, you must follow the instructions found on the voting instruction card provided by the bank, broker or other nominee, or contact your bank, broker or other nominee to change or revoke your previously given proxy.

15. Who pays the cost of proxy solicitation?

Intrexon will pay all expenses of soliciting proxies, including clerical work, printing and postage. Our officers and other employees may personally solicit proxies or solicit proxies by mail, telephone, facsimile or Internet, but we will not provide any compensation for such solicitations. We will also reimburse banks, brokers and other persons holding shares in their names or in the names of nominees for expenses incurred sending material to beneficial owners and obtaining proxies from beneficial owners.

16. Could other matters be decided in the Annual Meeting?

The Board does not know of any other business that may be brought before the Annual Meeting. However, if any other matters should properly come before the Annual Meeting or at any adjournment or postponement thereof, it is the intention of the persons named in the accompanying proxy to vote on such matters as they, in their discretion, may determine.

17. How do I make a shareholder proposal for the 2017 Annual Meeting of Shareholders?

We must receive proposals from shareholders intended to be presented at the 2017 Annual Meeting of Shareholders, on or before December 30, 2016, to be considered for inclusion in our Proxy Statement and form of proxy/voting instruction card for that meeting pursuant to Rule 14a-8 under the Securities Exchange Act of 1934, as amended (Exchange Act), and for consideration at that meeting. Shareholders submitting such proposals are required to be the beneficial owners of shares of the common stock amounting to at least \$2,000 in market value and to have held such shares for at least one year prior to the date of submission.

Our Amended and Restated Bylaws also set forth the procedures a shareholder must follow to nominate directors or to bring other business before shareholder meetings. For a shareholder to nominate a candidate for director or bring other matters before the 2017 Annual Meeting of Shareholders, we must receive notice of the nomination no later than March 11, 2017 and no earlier than February 9, 2017. For the nomination of a candidate for director, the notice must describe various matters regarding the nominee, including name, address, occupation and shares held. (See

CORPORATE GOVERNANCE Nominating and Governance Committee on page 10 for more information regarding the director nomination process.) For bringing other matters before the 2017 Annual Meeting of Shareholders, the notice must include a description of the proposed

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business, the reasons therefore and other matters specified in our Bylaws. In each case, the notice must be timely given to our Corporate Secretary in writing, whose address is 20374 Seneca Meadows Parkway, Germantown, Maryland 20876. A printed copy of the Bylaws is available free of charge to any shareholder who requests it by contacting the Corporate Secretary in writing at Intrexon Corporation, 20374 Seneca Meadows Parkway, Germantown, Maryland 20876.

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CORPORATE GOVERNANCE

General

Our business and affairs are managed under the direction of the Board in accordance with the Virginia Stock Corporation Act and our Amended and Restated Articles of Incorporation and Bylaws. Members of the Board are kept informed of our business through discussions with the Chairman and Chief Executive Officer and other officers, by reviewing materials provided to them and by participating in meetings of the Board and its committees. The corporate governance practices we follow are summarized below.

Corporate Governance Guidelines

The Board has adopted corporate governance guidelines (the Corporate Governance Guidelines) that set forth the practices of the Board with respect to the qualification, selection and election of directors, director orientation and continuing education, director responsibilities, Board composition and performance, director access to management and independent advisors, director compensation guidelines, management evaluation and succession, policies regarding the Lead Independent Director, meetings of the non-management directors, the policy on communicating with the non-management directors and various other issues. A copy of our Corporate Governance Guidelines is available on our website at <http://investors.dna.com> under the caption Corporate Governance. A printed copy is available free of charge to any shareholder who requests it by contacting the Corporate Secretary in writing at Intrexon Corporation, 20374 Seneca Meadows Parkway, Germantown, Maryland 20876.

Board Standards of Independence

The Board sets our independence standards in our Corporate Governance Guidelines. The director independence standards provide that a majority of the Board must be independent under the independence standards established by the Corporate Governance Guidelines, the NYSE and the Securities and Exchange Commission (the SEC) as in effect from time to time. For a Board member or candidate for election to the Board to qualify as independent, the Board must determine that the person and his or her immediate family members do not have a material relationship with us (either directly or as a partner, shareholder or officer of an organization that has a relationship with us) or any of our affiliates. Under the categorical standards adopted by the Board, a member of the Board is not independent if:

The director is, or has been within the last three years, our employee, or an immediate family member is, or has been within the last three years, an executive officer of the Company;

The director has received, or has an immediate family member who has received, during any twelve-month period within the last three years, more than \$120,000 in direct compensation from us, other than director and committee fees and pension or other forms of deferred compensation for prior service (provided such compensation is not contingent in any way on continued service);

(i) The director is a current partner or employee of a firm that is our internal or external auditor; (ii) the director has an immediate family member who is a current partner of such a firm; (iii) the director has an immediate family member who is a current employee of such a firm and personally works on our audit; or (iv) the director or an immediate family member was within the last three years a partner or

employee of such a firm and personally worked on our audit within that time;

The director or an immediate family member is, or has been within the last three years, employed as an executive officer of another company where any of our present executive officers at the same time serves or served on that company's compensation committee; or

The director is a current employee, or an immediate family member is a current executive officer, of a company that has made payments to, or received payments from, us for property or services in an amount which, in any of the last three fiscal years, exceeds the greater of \$1 million, or two percent, of such other company's consolidated gross revenues.

The Board will also consider a director's charitable relationships. Contributions to tax-exempt organizations are not considered payments for purposes of the test in the final bullet point above, provided that we are required to disclose in our annual proxy statement any such contributions made by us to any tax-exempt organization in which any independent director serves as an executive officer if, within the preceding three years, contributions in any single fiscal year from us to the organization exceeded the greater of \$1 million, or two percent, of such tax-exempt organization's consolidated gross revenues.

For purposes of the above independence standards, an immediate family member includes a person's spouse, parents, children, siblings, mothers- and fathers-in-law, sons- and daughters-in-law, brothers- and sisters-in-law and anyone (other than domestic employees) who shares such person's home. When applying the look-back provisions set forth above, the Board need not consider individuals who are no longer immediate family members as a result of legal separation or divorce, or those who have died or become incapacitated.

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With the exception of Mr. Kirk, our Chairman of the Board and Chief Executive Officer, the Board has affirmatively determined that each member of the Board is independent in accordance with the above standards. Additionally, we made no contributions during fiscal year 2015 to any charitable organization in which an independent director serves as an executive officer in any single fiscal year within the preceding three fiscal years in an amount in excess of the greater of \$1 million, or two percent, of the charitable organization's consolidated gross revenues.

In determining that Mr. Cesar Alvarez is independent, the Board considered that Mr. Alvarez is the Senior Chairman of Greenberg Traurig, LLP (Greenberg Traurig). Greenberg Traurig has provided legal services to us in the past for which it received customary fees. As the Senior Chairman, Mr. Alvarez does not participate in such services, and does not materially benefit from the engagement. No payments were made to Greenberg Traurig for legal services in 2015. The Board has determined that this relationship is not material and that it does not impair Mr. Alvarez's independence.

In determining that Mr. Steven Frank is independent, the Board considered that Mr. Frank is the Chairman of Global Healthcare Investment Banking at J.P. Morgan Securities LLC (JPM). JPM served as the lead underwriter in our initial public offering in August 2013, the lead underwriter in our public offering in January 2015 and provides other financial advisory, investment banking and other services to us from time to time, for which it has received and may continue to receive customary fees and commissions. Mr. Frank has recused himself from any decision made by the Board concerning JPM. In addition, Mr. Frank did not participate in our initial public offering or January 2015 public offering in his capacity as an executive of JPM. The Board has determined that this relationship is not material and that it does not impair Mr. Frank's independence.

In determining that Mr. James Turley is independent, the Board considered that Mr. Turley is the former Chairman and Chief Executive Officer of Ernst & Young LLP. From time to time, Ernst & Young provides valuation and technical accounting services to us, for which it receives customary fees. As Mr. Turley retired from Ernst & Young in June 2013, Mr. Turley does not participate in such services and does not materially benefit from the engagement. The Board has determined that this relationship is not material and that it does not impair Mr. Turley's independence.

Board Meetings and Attendance at Annual Meeting of Shareholders

During fiscal year 2015, there were nine meetings of the Board held either in-person or by teleconference. Each director attended more than 75 percent of the combined meetings of the Board and the committees on which he served during the year.

Our Corporate Governance Guidelines provide that all directors are strongly encouraged to attend the Annual Meeting each year. All members of our Board at the time of the 2015 Annual Meeting attended the Annual Meeting.

Board Leadership Structure

As provided in the Corporate Governance Guidelines, the Board does not have a policy on whether the role of the Chief Executive Officer and Chairman of the Board should be separate or, if it is to be separate, whether the Chairman should be selected from the non-employee directors or be an employee. We currently operate with one individual, Mr. Kirk, serving as Chairman of the Board and Chief Executive Officer. The Board appointed Mr. Kirk as Chief Executive Officer in April 2009 and Chairman of the Board in February 2008. The Board believes that because Mr. Kirk owns a majority of our common stock and has unique and extensive experience and understanding of our business, he is well-situated to lead and execute strategy and business plans to maximize shareholder value. The Board believes that combining the Chairman of the Board and Chief Executive Officer positions is the right corporate governance structure for us at this time because it most effectively utilizes Mr. Kirk's extensive experience and

knowledge regarding the Company, including by allowing him to lead Board discussions regarding our business and strategy and provides us with unified leadership.

To ensure that the independent directors play a leading role in our current leadership structure, the Board established the position of Lead Independent Director in the Corporate Governance Guidelines adopted in connection with the Company's initial public offering in August 2013. Mr. Robert Shapiro currently serves as our Lead Independent Director. The Company currently maintains a significant majority of independent directors (Mr. Kirk is the only non-independent director) and independent Board committees. In his role as Lead Independent Director, Mr. Shapiro is in frequent contact with the Chairman of the Board and Chief Executive Officer and is regularly consulted on material matters. The Lead Independent Director is elected by the independent directors and ensures that the Board operates independently of management and directors and shareholders have an independent leadership contact.

The responsibilities of the Lead Independent Director of the Board include the following:

preside over meetings of the non-management and independent Board members and, as appropriate, provide prompt feedback to the Chief Executive Officer and Chairman.

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together with the Chief Executive Officer and Chairman, and with input from the non-management and independent Board members, prepare the Board's agenda.

serve as a point of contact between non-management and independent Board members and the Chief Executive Officer and Chairman to report or raise matters.

call executive sessions of the Board or of the non-management and independent Board members.

serve as a sounding board and mentor to the Chief Executive Officer and Chairman.

take the lead in assuring that the Board carries out its responsibilities in circumstances where the Chief Executive Officer and Chairman is incapacitated or otherwise unable to act.

consult with the Chairman of the Compensation Committee to provide performance feedback and compensation information to the Chief Executive Officer and Chairman.

perform such other duties and responsibilities as may be delegated to the Lead Independent Director by the Board from time to time.

The Board has three standing committees: the Audit Committee, the Nominating and Governance Committee and the Compensation Committee. Each committee has a separate chairperson and each committee is composed solely of independent directors.

Given our current circumstances and operating strategies, we believe having a combined Chairman of the Board and Chief Executive Officer, as well as having a Lead Independent Director and independent standing Board committees, is the most appropriate structure for our shareholders and the Company. We believe this structure demonstrates clear leadership to our employees, shareholders and other interested parties and eliminates the potential for redundancies and confusion. The Lead Independent Director protects the role of the independent directors by providing leadership to the independent directors and working closely with the Chairman of the Board and Chief Executive Officer.

As part of the Board's annual assessment process, the Board evaluates our Board leadership structure to ensure that it remains appropriate. The Board recognizes that there may be circumstances in the future that would lead it to separate the roles of Chief Executive Officer and Chairman of the Board, but believes that the absence of a policy requiring either the separation or combination of the roles of Chairman and Chief Executive Officer provides the Board with the flexibility to determine the best leadership structure.

The Board's Role in Risk Oversight

The Board is responsible for our risk oversight, and each committee of the Board is responsible for risk oversight within such committee's area of responsibility and regularly reports to the Board. Management is responsible for our risk management, including providing oversight and monitoring to ensure our policies are carried out and processes are executed in accordance with our performance goals and risk tolerance. On a regular basis, our management team identifies, discusses and assesses financial risk from current macro-economic, industry and company perspectives and

provides regular reports to the Board and its committees on areas of material risk to the Company, including operational, financial, legal and regulatory as well as strategic and reputational risks.

The Audit Committee charter provides that the Audit Committee is responsible for discussing with management our major financial risk exposures and the steps and processes management has taken to monitor and control such exposures, including our risk assessment and risk management policies. As part of its regular reporting process, management reports and reviews with the Audit Committee our material risks, including, but not limited to, proposed risk factors and other public disclosures, and mitigation strategies and our internal controls over financial reporting. The Audit Committee also engages in regular periodic discussions with the Chief Financial Officer and other members of management regarding risks as appropriate.

The Compensation Committee considers human resources risks and risks that may result from our executive compensation programs. The Nominating and Governance Committee considers succession planning and corporate governance risks. Each committee regularly reports to the Board. Moreover, the Board reviews and oversees our various financial policies, financing programs, capital and operating plans, benefit plan management and certain risk management policies.

We believe the current leadership structure of the Board supports the risk oversight functions described above by providing independent leadership at the committee level, with ultimate oversight by the full Board as led by the Chairman of the Board and Chief Executive Officer and the Lead Independent Director.

Board Committees

Our Board has established three standing committees – audit, compensation and nominating and governance – each of which operates under a written charter that has been approved by our Board. Current copies of each committee’s charter are available on our website at <http://investors.dna.com> under the caption Corporate Governance. Alternatively, you can request a printed copy of any of these documents free of charge by writing to the Corporate Secretary at Intrexon Corporation, 20374 Seneca Meadows Parkway, Germantown, Maryland 20876.

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Audit Committee

The members of our Audit Committee during 2015 were Messrs. Jeffrey Kindler, Dean Mitchell and Larry D. Horner, who served on the Audit Committee until his death on December 29, 2015. The members of our Audit Committee currently are Messrs. Kindler, Mitchell and Shapiro. Mr. Kindler is the chair of the Audit Committee and was appointed chair on March 10, 2016. The Board has determined that each member of the Audit Committee is independent within the meaning of the enhanced independence standards for audit committee members in the Securities Exchange Act of 1934, as amended, and the rules thereunder, as incorporated into the listing standards of the NYSE, and the independence standards of our Corporate Governance Guidelines as discussed above under CORPORATE GOVERNANCE Board Standards of Independence on page 6. The Board has further determined that each of the members of the Audit Committee is financially literate and that, as required by the NYSE listing standards, at least one member of the Committee has accounting or related financial management expertise, as such terms are interpreted by the Board in its business judgment. Our Board has further determined that Mr. Kindler qualifies as an audit committee financial expert within the meaning of SEC regulations and the NYSE Rules. In making this determination, our Board has considered the formal education and nature and scope of his previous experience, coupled with past and present service on various audit committees. Our Audit Committee assists our Board in its oversight of our accounting and financial reporting process and the audits of our financial statements. Our Audit Committee's responsibilities include, among other things, overseeing:

our accounting and financial reporting processes;

the integrity of our financial statements;

our compliance with laws and regulations;

our independent auditor's qualifications and independence; and

the performance of our internal audit functions and independent auditors.

The Audit Committee met nine times during fiscal year 2015 for the purpose of overseeing management's responsibilities for accounting, internal control over financial reporting and financial reporting. The Audit Committee selects, appoints, compensates and oversees the performance of our independent registered public accounting firm for each fiscal year and approves the audit and non-audit fees we pay to such firm. The Audit Committee reviews the scope and the results of the work of the independent registered public accounting firm and internal auditors and reviews the adequacy of internal control over financial reporting. The functions and responsibilities of the Audit Committee are described in the Audit Committee Report on page 22.

The Audit Committee has adopted a written policy for the provision of audit services and permitted non-audit services by our independent registered public accounting firm. Our Chief Financial Officer has primary responsibility to the Audit Committee for administration and enforcement of this policy and for reporting non-compliance. Under the policy, our Audit Committee receives a presentation of an annual budget and plan for audit services and for any proposed audit-related, tax or other non-audit services to be performed by the independent registered public accounting firm, but management may, from time to time, seek approval of certain additional audit or non-audit

services not provided for in the budget.

Compensation Committee

Prior to March 10, 2016, the members of the Compensation Committee were Messrs. Alvarez, Kindler and Shapiro. The members of our Compensation Committee are currently Messrs. Alvarez, Kindler and Turley. Mr. Turley is the chair of the Compensation Committee. The Compensation Committee met eight times during fiscal year 2015 for the purpose of assisting our Board in the discharge of its responsibilities relating to the compensation of our executive officers. The Compensation Committee's responsibilities include, among other things:

developing and maintaining an executive compensation policy and monitoring the results of that policy;

considering the impact of our compensation policy and practices on our risk profile;

recommending to the Board for approval compensation and benefit plans;

reviewing and approving annually corporate and personal goals and objectives to serve as the basis for the Chief Executive Officer's compensation, evaluating the Chief Executive Officer's performance in light of those goals and objectives and determining the Chief Executive Officer's compensation based on that evaluation;

determining and approving the annual compensation for other executive officers;

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approving any grants of stock options, restricted stock, performance shares, stock appreciation rights, and other equity-based incentives to the extent provided under the our equity compensation plans;

reviewing and making recommendations to the Board regarding the compensation of non-employee directors;

reviewing and discussing with management the Compensation Discussion and Analysis to the extent required by SEC rules;

preparing the Compensation Committee report when required by SEC rules;

reviewing and recommending to the Board for approval our approach with respect to the advisory vote on executive compensation, or say-on-pay, and the frequency of the say-on-pay advisory vote; and

considering the application of Section 162(m) of the Internal Revenue Code to our compensation practices and developing a related policy.

The Board has determined that the members of the Compensation Committee are non-employee directors (within the meaning of Rule 16b-3 of the Securities Exchange Act of 1934, as amended), outside directors (within the meaning of Section 162(m) of the Internal Revenue Code of 1986, as amended, (referred to herein as the Internal Revenue Code)) and independent directors (as defined under the applicable NYSE listing standards and our Corporate Governance Guidelines as discussed above under CORPORATE GOVERNANCE Board Standards of Independence on page 6).

While the Compensation Committee charter does not specify qualifications required for members, the members of the Compensation Committee have been members of other public company boards of directors, are current or former executive officers of public companies or have comparable positions.

The Compensation Committee is authorized to retain experts, consultants and other advisors to aid in the discharge of its duties. In 2015, the Compensation Committee retained F. Daniel Siciliano as its outside independent compensation consultant. Mr. Siciliano is the Faculty Director for the Arthur and Toni Rembe Rock Center for Corporate Governance at Stanford Law School. He is a Professor of the Practice of Law and Associate Dean for Executive Education and Special Programs. Mr. Siciliano is a noted authority on matters related to executive compensation and corporate governance. Mr. Siciliano was retained to (1) review the company's historical compensation practices, (2) advise the Compensation Committee on compensation standards and trends, (3) assist in the implementation of policies and programs, and (4) review recommendations from management on compensation matters. In retaining Mr. Siciliano, the Compensation Committee separately considered the six factors set forth in Section 10C-1(b)(4)(i) through (vi) of the Exchange Act and, based on such consideration, determined that the work of Mr. Siciliano did not raise any conflict of interest.

Compensation Committee Interlocks and Insider Participation

None of our executive officers serves, or in the past has served, as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any entity that has one or more executive officers who serve as members of our Board or our Compensation Committee. None of the members of our Compensation

Committee is an officer or employee of our Company, nor have they ever been an officer or employee of our Company.

Nominating and Governance Committee

The members of our Nominating and Governance Committee are Mr. Alvarez, Mr. Mitchell and Mr. Shapiro. Mr. Alvarez is the chair of the Nominating and Governance Committee. The Nominating and Governance Committee met three times during fiscal year 2015. The Nominating and Governance Committee's responsibilities include, among other things:

considering and reviewing periodically the desired composition of the Board and ensuring that the Board is composed so as to satisfy SEC listing requirements and NYSE Rules, including the independence of directors and the financial and accounting experience of directors;

establishing any qualifications and standards for individual directors;

identifying, nominating and evaluating candidates for election to the Board;

making recommendations to the Board regarding the size of the Board, the tenure and classifications of directors, and the composition of the Board's committees;

reviewing and evaluating our various governance policies and guidelines;

considering chief executive officer succession planning;

reviewing committee structure and effectiveness; and

considering other corporate governance and related matters as requested by the Board.

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The Board has determined that all members of the Nominating and Governance Committee are independent within the meaning of the listing standards of the NYSE and the independence standards set by the Board as discussed in the section entitled CORPORATE GOVERNANCE Board Standards of Independence on page 6 of this Proxy Statement.

Director Candidate Recommendations and Nominations by Shareholders. The Nominating and Governance Committee's charter provides that the Nominating and Governance Committee will consider qualified director candidate recommendations by shareholders. Shareholder nominees will be evaluated under the same standards as nominees recommended by management or the non-management members of the Board. Shareholders should submit any such director recommendations to the Nominating and Governance Committee through the method described in QUESTIONS AND ANSWERS ABOUT THE ANNUAL MEETING 17. How do I make a shareholder proposal for the 2017 Annual Meeting of Shareholders? on page 4. The Nominating and Governance Committee did not receive any recommendations from any shareholders in connection with the Annual Meeting.

Nominating and Governance Committee Process for Identifying and Evaluating Director Candidates. The Nominating and Governance Committee identifies and evaluates all director candidates in accordance with the director qualification standards described in the Corporate Governance Guidelines. The Nominating and Governance Committee evaluates a candidate's qualifications to serve as a member of the Board based on the background and expertise of individual Board members as well as the background and expertise of the Board as a whole. Nominees will be required to bring the skills, talents, knowledge and expertise to ensure that the composition, structure and operation of the Board serve the best interests of our shareholders. In addition, the Nominating and Governance Committee will evaluate a candidate's independence and his or her background and expertise in the context of the Board's needs.

We have no formal policy regarding Board diversity. Our priority in selection of Board members is identification of members who will further the interests of our shareholders through his or her established record of professional accomplishment, the ability to contribute positively to the collaborative culture among Board members, knowledge of our business and understanding of the competitive landscape of the industries in which we operate. We will consider, in identifying first-time candidates, nominees for director, or evaluating individuals recommended by shareholders, the current composition of the Board in light of the diverse communities and geographies we serve and the interplay of the candidate's or nominee's diverse individual experience, education, skills, background and other qualities and attributes with those of the other Board members. The Nominating and Governance Committee and Board monitor its effectiveness through the Board's self-evaluation process. As described under NOMINEES FOR ELECTION AS DIRECTORS beginning on page 14, the Nominating and Governance Committee and the Board believe that the current composition of the Board reflects a group of highly talented individuals with diverse backgrounds, skills, professional and industry experience, and other personal qualities and attributes best suited to perform oversight responsibilities for the Company and its shareholders.

Code of Business Conduct and Ethics

We have adopted a written code of business conduct and ethics that applies to our directors, officers and employees, including our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. The code covers a broad range of professional conduct, including employment policies, conflicts of interest, intellectual property and the protection of confidential information, as well as adherence to all laws and regulations applicable to the conduct of our business. A copy of the code is available on the Corporate Governance section of our website, which is located at www.dna.com. If we make any substantive amendments to, or grant any waivers from, the code of business conduct and ethics for any officer or director, we intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K by disclosing the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Political Contributions

In general, it is not our practice to make financial or in-kind political contributions with corporate assets, even when permitted by applicable law. We comply with all applicable state and federal laws related to the disclosure of lobbying activities.

Communications with the Board

Shareholders wishing to communicate with our board of directors may do so by writing to the Board, the Chairman, the Lead Independent Director, or the non-employee members of the Board as a group, at: Intrexon Corporation, 20374 Seneca Meadows Parkway, Germantown, Maryland 20876; Attn: Corporate Secretary.

The communication must prominently display the legend **BOARD COMMUNICATION** in order to indicate to the Secretary that it is a communication for the Board. Upon receiving such a communication, the Secretary will promptly forward the communication to the relevant individual or group to which it is addressed. The Board has requested that certain items that are unrelated to the Board's duties and responsibilities should be excluded, such as spam, junk mail and mass mailings, resumes and other forms of job inquiries, surveys and business solicitations or advertisements.

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The Secretary will not forward any communication determined in his or her good faith belief to be frivolous, unduly hostile, threatening, illegal or similarly unsuitable. The Secretary will maintain a list of each communication that was not forwarded because it was determined by the Secretary to be frivolous. Such list is delivered to the Board at each quarterly meeting of the Board. In addition, each communication subject to this policy that was not forwarded because it was determined by the Secretary to be frivolous is retained in the Company's files and made available at the request of any member of the Board to whom such communication was addressed.

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PROPOSAL 1

ELECTION OF DIRECTORS

ITEM 1 ON PROXY CARD

Background

Our Board currently consists of seven directors, all of whom were elected as directors by our shareholders at our 2015 Annual Meeting. Our directors hold office until their successors have been elected and qualified or until the earlier of their resignation or removal. Mr. Horner was a director until his death on December 29, 2015. The Board, upon unanimous recommendation of the Nominating and Governance Committee, unanimously approved the seven persons named below as nominees for election to the Board at the Annual Meeting. Each of the nominees: (i) is currently a member of the Board, (ii) has been nominated for election at the Annual Meeting to hold office until the next Annual Meeting or, if earlier, the election of his/her respective successor and (iii) has consented to being named as such and to serve as such if elected.

There were no nominee recommendations from shareholders or from any group of shareholders submitted in accordance with our Bylaws. Unless otherwise indicated on a proxy, the proxy holders intend to vote the shares each proxy represents for all nominees for election as directors.

Our Bylaws provide that a nominee for director will be elected to the Board if the votes cast for such nominee exceed the votes cast against such nominee's election; *provided, however*, that such directors will be elected by a plurality of the votes cast at any meeting of the shareholders for which (i) the Secretary receives a notice that a shareholder has nominated a person for election to the Board in compliance with the advance notice requirements for shareholder nominees for director set forth in the Bylaws, and (ii) such nomination has not been withdrawn by such shareholder on or prior to the 10th day preceding the date we first mail the notice of meeting for such meeting to the shareholders. If directors are to be elected by a plurality of the votes cast, the shareholders will not be permitted to vote against a nominee.

Our Corporate Governance Guidelines provide that any nominee for director in an uncontested election who receives a greater number of shareholder votes cast against his or her election than votes for his or her election must promptly tender his or her resignation to the Board for consideration. The Nominating and Governance Committee will then evaluate the best interests of the Company and will recommend to the Board whether to accept or reject the tendered resignation. Following the Board's receipt of this recommendation and determination as to whether to accept the resignation, we will disclose the Board's decision and an explanation of how the decision was reached.

Proxies solicited by the Board will be voted in favor of the nominees listed below unless otherwise specified in the proxy. All of the nominees proposed by the Board have consented to serve if elected. We know of no reason why the nominees would not be available for election or, if elected, would be unable to serve. While we do not anticipate that any of the nominees will be unable to serve, if any should be unable to serve, the proxy holders reserve the right to substitute another person designated by the Board.

Vote Required and Board Recommendation

The affirmative vote of a majority of the votes cast on the matter is required for the approval of this item. As this proposal is not considered a routine item, your bank, broker or other nominee cannot vote your shares without receiving your voting instructions. Abstentions and broker non-votes will not count either in favor of or against the

proposal.

THE BOARD RECOMMENDS THAT SHAREHOLDERS VOTE FOR ALL OF THE PROPOSED DIRECTOR NOMINEES LISTED.

Table of Contents**NOMINEES FOR ELECTION AS DIRECTORS**

Set forth below is information for each nominee concerning the individual's age, principal occupation, employment and directorships during the past five years, positions with the Company, the year in which he first became a director of the Company and his term of office as a director. Also set forth below is a brief discussion of the specific experience, qualifications, attributes or skills that led to the Board's conclusion that, in light of our business and structure, each nominee should serve as a director as of the date of this Proxy Statement.

Name**Period Served as Director****Age****Business Experience During Past Five Years and Other Affiliations**

Randal J. Kirk

Director since 2008

Age 62

Randal J. Kirk, Chief Executive Officer and Chairman of the Board. Mr. Kirk has served as our Chief Executive Officer since April of 2009 and Chairman of the Board since February 2008. Mr. Kirk provides a wealth of strategic, operational and management experience. Mr. Kirk currently serves as the Senior Managing Director and Chief Executive Officer of Third Security, LLC, an investment management firm founded by Mr. Kirk in March 1999. Additionally, Mr. Kirk founded and became Chairman of the Board 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 currently serves in a number of additional capacities including as a member of the board of directors of Halozyme Therapeutics, Inc. (NASDAQ: HALO) since May 2007 and as a member of the board of directors of ZIOPHARM Oncology, Inc. (NASDAQ: ZIOP) since January 2011. 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 of directors from December 2004 to April 2011. Mr. Kirk served on the board of visitors of Radford University from July 2003 to June 2009, was Rector of the board of directors from September 2006 to September 2008, and 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. We believe that Mr. Kirk's business experience, including his extensive business experience as chief executive officer of multiple companies, his experience as an investor, his service on committees of academic institutions and other public company boards, combined with his business acumen and judgment, provide our board of directors with valuable strategic and operational expertise and leadership skills.

Cesar L. Alvarez

Director since 2008

Age 68

Cesar L. Alvarez. Mr. Alvarez is the immediate past Chief Executive Officer and Executive Chairman of the international law firm of Greenberg Traurig, LLP. He served as its Executive Chairman since February 2010 and previously served as the law firm's Chief Executive Officer since February 1997. Presently, Mr. Alvarez serves as the Senior Chairman of Greenberg Traurig, LLP. Mr. Alvarez also serves as Chairman of the board of directors of Mednax, Inc. (NYSE: MD), a provider of physician services, including newborn, maternal-fetal, pediatric subspecialties, and anesthesia care, and as director of Fairholme Funds, Inc., a family of publicly traded focused investment funds, St. Joe Co. (NYSE: JOE), a real estate development company, and Sears Holdings Corporation (Nasdaq: SHLD), a national retailer. Mr. Alvarez previously served until May 2015 as a director of Watsco, Inc. (NYSE: WSO), a distributor of air conditioning, heating and refrigeration equipment and related parts and supplies. Mr. Alvarez holds a Bachelor of Science, a Masters of Business Administration, and a Juris Doctor from the University of Florida. Mr. Alvarez's qualifications to serve on the board of directors include his experience as Chief Executive Officer and Executive Chairman of one of the nation's largest law firms with approximately \$1.3 billion in revenues with professionals providing services in 36 multiple locations across the country and abroad as well as his many years of corporate experience, both advising clients in the fields of corporate and securities and serving on the boards of directors of publicly traded and private companies.

Table of Contents**Name****Period Served as Director**

| Age | Business Experience During Past Five Years and Other Affiliations |
|--|--|
| <p>Steven R. Frank</p> <p>Director since 2008</p> <p>Age 56</p> | <p>Steven R. Frank. Mr. Frank has served as a Board member since February 2008. Mr. Frank joined J.P. Morgan Securities LLC, an investment bank, in June 2008 and currently serves as Chairman of Global Healthcare Investment Banking. Mr. Frank had previously been the head of Bear Stearns' Worldwide Health Care Investment Banking group in New York for sixteen years and has provided general investment banking services to all types of health care companies. Specifically, Mr. Frank has led or played major roles in hundreds of mergers and acquisitions and financing transactions across the spectrum of deal structures. He has specialized in transactions involving pharmaceutical, medical device and biotechnology companies. Prior to joining Bear Stearns in 1993, Mr. Frank served over ten years as an institutional investor, primarily at State Farm Insurance Company, where he focused on a multi-billion dollar life-sciences portfolio. Mr. Frank holds a B.S. from Illinois State University and an M.B.A. from the University of Chicago. We believe Mr. Frank's extensive knowledge of our industry and of finance and capital structure strengthen the Board's collective qualifications, skills and experience.</p> |
| <p>Jeffrey B. Kindler</p> <p>Director since 2011</p> <p>Age 60</p> | <p>Jeffrey B. Kindler. Mr. Kindler has served as a Board member since November 2011. He is the Chief Executive Officer of Centrexion Corporation, a privately held clinical stage biopharmaceutical company; a Venture Partner at Lux Capital, a leading venture capital firm; and a managing director at Starboard Capital Partners, a private equity firm. Mr. Kindler was Chief Executive Officer and Chairman of the Board of Pfizer, Inc. (NYSE: PFE), a pharmaceutical company, from 2006 until his retirement in December 2010. He joined Pfizer in 2002 as Executive Vice President and General Counsel and assumed positions of increasing responsibility until being named Chief Executive Officer in 2006. Prior to joining Pfizer, he was Chairman of Boston Market Corporation from 2000 to 2001, and President of the Partner Brands group of McDonald's Corporation during 2001. Mr. Kindler previously served on the board of Chipotle Mexican Grill, Inc. (NYSE: CMG), a chain of Mexican restaurants, from 2012 to 2014. In addition to serving on Intrexon's Board, Mr. Kindler currently serves on the board of Siga Technologies, Inc. (Nasdaq:SIGA), a developer of novel antiviral therapeutics. Mr. Kindler also serves as a board member for a number of privately held companies and for several civic, charitable, educational and other organizations. He brings leadership, extensive business, operating, legal and policy, and corporate strategy experience to our Board, along with tremendous knowledge of several of the industries in which we operate as well as the fundamentals of our business. Mr. Kindler received a B.A. from Tufts University and a J.D. from Harvard Law School.</p> |

Table of Contents**Name****Period Served as Director**

| Age | Business Experience During Past Five Years and Other Affiliations |
|---------------------|---|
| Dean J. Mitchell | <p>Dean J. Mitchell. Mr. Mitchell has served as a Board member since March 2009. In July 2013, Mr. Mitchell was appointed Executive Chairman and board member of Covis Pharma Holdings S.a.r.l., a private specialty pharmaceutical company based in Luxembourg. Since 2012, he has served as a non-executive board member of ImmunoGen, Inc., a public oncology company, and in July 2014 he joined the board of Theravance Biopharma, Inc., a public specialty pharmaceutical company. In the past five years he has also been a non-executive board member of ISTA Pharmaceuticals, Inc. and Talecris Biotherapeutics, Inc., until their respective acquisitions. He was previously President and Chief Executive Officer and a board member of Lux Biosciences, Inc., a privately held ophthalmology company, from July 2010 until June 2013. Prior to that he was President and Chief Executive Officer of Alpharma Inc., a global specialty pharmaceutical company, and also was appointed a member of its board of directors in July 2006. Alpharma Inc. was acquired by King Pharmaceuticals, Inc. in December 2008, and Mr. Mitchell ceased to be an officer and a director of Alpharma Inc. on December 29, 2008. Prior to this, he was President and Chief Executive Officer of Guilford Pharmaceuticals Inc., a public company, from December 2004 until its acquisition by MGI Pharma Inc., a public biopharmaceutical company focused in oncology and acute care, in October 2005, and was a non-executive director of MGI Pharma Inc. until its acquisition by Eisai Co., Ltd. in January 2008. Mr. Mitchell was at Bristol-Myers Squibb, a public company, from 2001 until 2004 in several roles including President International, President U.S. Primary Care and Vice President, Strategy. He also spent fifteen years at Glaxo SmithKline, a public company, and its predecessor companies, most recently as Senior Vice President, Clinical Development and Product Strategy from 1999 to 2001, and prior to that as Vice President and General Manager, Specialty Divisions, Strategic Planning and Business Development, from 1995 to 1999. He received an M.B.A. from City University Business School, in London, U.K., and a B.Sc. degree in Biology from Coventry University, U.K. Mr. Mitchell brings to our Board extensive experience in the pharmaceutical industry, specifically in the areas of management, business and corporate development, sales and marketing and clinical development, as well as his significant experience serving on boards of directors of companies in our industry.</p> |
| Director since 2009 | |
| Age 60 | |

Table of Contents**Name****Period Served as Director****Age**

Robert B. Shapiro

Director since 2011

Age 77

Business Experience During Past Five Years and Other Affiliations

Robert. B. Shapiro. Mr. Shapiro has served as a Board member since November 2011. Mr. Shapiro is Chairman, Managing Director and Co-Founder of Sandbox Industries, a development firm that creates, launches and manages new business concepts. Sandbox Industries also manages venture funds, including the BlueCross BlueShield Venture Partners fund. Mr. Shapiro has served as the Managing Director of Sandbox Industries since its formation in 2004. He was formerly Chairman and Chief Executive Officer of Monsanto from 1995 to 2000. Upon the merger of Monsanto with Pharmacia & Upjohn, he served as Chairman of the newly-formed Pharmacia Corporation. Previously, Mr. Shapiro was President and Chief Operating Officer of Monsanto from 1992 to 1995 and President of Monsanto's Agriculture Group from 1990 to 1992, Chairman and Chief Executive Officer of The NutraSweet Company, a subsidiary of Monsanto, from 1985 to 1990 and President of the NutraSweet Group of G.D. Searle & Co., or Searle, from 1982 to 1985, where he previously served as Vice President and General Counsel. Before joining Searle, Mr. Shapiro was Vice President and General Counsel of General Instrument Corporation from 1972 to 1979. Prior to this, he practiced law in New York City; served in government as Special Assistant to the General Counsel and later to the Undersecretary of the U.S. Department of Transportation; and served as a professor of law at Northeastern University in Boston and the University of Wisconsin in Madison. Mr. Shapiro has served on the boards of directors of the New York Stock Exchange (later NYSE Euronext), Citigroup Inc., Rockwell International, Silicon Graphics Inc., Sapphire Energy, Inc., Theranos, Inc. and Elevance Renewable Sciences, Inc. He currently serves as a director of Chromatin, Inc., Advanced Animal Diagnostics, Inc. and Conservis Corporation, all privately-held corporations. Mr. Shapiro has served on the President's Advisory Committee on Trade Policy, and on the White House Domestic Policy Review of Industrial Innovation. He is a Fellow of the American Academy of Arts and Sciences. Mr. Shapiro is a graduate of Harvard College and holds a J.D. from Columbia University School of Law. As a result of these and other professional experiences, we believe Mr. Shapiro possesses particular knowledge and experience in: strategic planning and leadership of complex organizations; accounting, finance and capital structure; legal, regulatory and government affairs; people management; and board practices of other entities, which strengthen the Board's collective qualifications, skills and experience.

James S. Turley

Director since 2014

Age 60

James S. Turley. Mr. Turley has served as a Board member since April 2014. Mr. Turley is retired having served as the Chairman and Chief Executive Officer of Ernst & Young LLP (Ernst & Young) from 2001 to June 2013. From 1994 to 2001, Mr. Turley served as Regional Managing Partner of Ernst & Young. Mr. Turley serves on the board of directors of Citigroup Inc., a leading global bank, Citibank, N.A., the commercial banking operations of Citigroup Inc., Emerson Electric Co., a global leader in bringing technology and engineering together to provide innovative solutions for customers in industrial, commercial, and consumer markets around the world, and Northrop Grumman Corporation, a leading global security company providing innovative systems, products and solutions to government and commercial customers

worldwide. Mr. Turley is also a Board Member of the Boy Scouts of America, a Trustee of the Council for Economic Development, and the Chairman of Theatre Forward. We believe Mr. Turley's extensive management experience as the former Chairman and Chief Executive Officer of one of the world's largest accounting firms, his accounting and financial expertise, and his experience in serving on the boards of directors of publicly traded companies make him well-qualified to serve on our Board. Mr. Turley has been nominated to serve on the Board because of his extensive knowledge and expertise in the areas of financial reporting, business, and risk management. Having served as Chair and CEO of Ernst & Young, Mr. Turley has developed significant expertise in the areas of compensation, litigation, corporate affairs, and corporate governance.

Table of Contents**DIRECTOR COMPENSATION****Non-Employee Director Compensation**

The compensation of our non-employee directors is established by our Compensation Committee. This compensation is periodically reviewed by the committee to ensure continued alignment with company goals and shareholder interest. Under our current policy, adopted February 18, 2014, our non-employee directors receive the compensation as set forth in the table below. We also reimburse our non-employee directors for reasonable out-of-pocket expenses incurred in connection with attending our board and committee meetings.

| Element of Compensation | Compensation Amount⁽¹⁾ |
|---|--|
| Annual Retainer ⁽²⁾ | \$ 60,000 |
| Committee Chair Additional Retainer ⁽²⁾ | \$ 10,000 |
| Committee Member Additional Retainer ⁽²⁾ | \$ 5,000 |
| Annual Equity Awards ⁽³⁾ | 15,000 options |
| Initial Appointment Equity Awards ⁽⁴⁾ | 40,000 options |

- (1) Non-employee directors have the option to receive payments in shares of common stock, valued at the fair market value at the time of issuance, in lieu of cash. We do not pay cash for fractional shares.
- (2) Annual retainer fees are payable at the first regularly scheduled meeting of the Board for the calendar year.
- (3) All non-employee directors are entitled to an annual grant of options to purchase 15,000 shares of common stock (with an exercise price equal to the fair market value on the date of grant), which options vest upon grant.
- (4) Any newly appointed non-employee director will receive, upon appointment, a one-time grant of options to purchase 40,000 shares of common stock (with an exercise price equal to the fair market value on the date of grant) with one-fourth of such options vesting each year on the anniversary of appointment to the Board, subject to continued Board service.

The following table discloses all compensation provided to the non-employee directors for the most recently completed fiscal year ending December 31, 2015:

| Name⁽¹⁾ | Equity awards (\$)⁽¹⁾ | Option awards (\$)⁽²⁾ | Total (\$) |
|--------------------------------|---|---|-----------------------|
| Cesar L. Alvarez | \$ 74,971 | \$ 399,596 | \$ 474,567 |
| Steven Frank | 59,967 | 399,596 | 459,563 |
| Larry D. Horner ⁽³⁾ | 69,986 | 399,596 | 469,582 |
| Jeffrey B. Kindler | 74,971 | 399,596 | 474,567 |
| Dean J. Mitchell | 69,986 | 399,596 | 469,582 |
| Robert B. Shapiro | 69,986 | 399,596 | 469,582 |
| James S. Turley | 59,967 | 399,596 | 459,563 |

- (1) Our directors may elect to take any portion of their director fees in shares of our common stock instead of cash. During 2015, all of our directors elected to take all such director fees in shares of our common stock. Represents

- the grant date fair market value of such stock awards computed in accordance with FASB ASC Topic 718. This amount does not reflect the actual cash value that will be recognized by each of the non-employee directors when such shares are sold.
- (2) Represents the grant date fair market value of such stock awards computed in accordance with FASB ASC Topic 718. This amount does not reflect the actual cash value that will be recognized by each of the non-employee directors when such options are exercised and the underlying shares are sold.
 - (3) Mr. Horner passed away in December 2015. As of the date of Mr. Horner's death, all of his previously unvested options were vested.

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All outstanding option-based awards for the non-employee directors as of December 31, 2015, are set forth in the following table:

| Name | Option Awards | | | | |
|--------------------|---------------|---|---|----------------------------|------------------------|
| | Grant date | Number of Securities Underlying Options Exercisable (#) | Number of Securities Underlying Unexercised Options (#) | Option exercise price (\$) | Option Expiration date |
| Cesar L. Alvarez | 2/20/2008 | 8,871 | | \$ 2.65 | 2/20/2018 |
| | 2/20/2009 | 2,957 | | \$ 3.18 | 2/20/2019 |
| | 6/30/2010 | 2,957 | | \$ 3.18 | 6/30/2020 |
| | 3/7/2011 | 2,957 | | \$ 5.71 | 3/7/2021 |
| | 12/2/2011 | 8,871 | | \$ 6.88 | 12/2/2021 |
| | 3/15/2012 | 2,217 | 740 | \$ 6.88 | 3/15/2022 |
| | 5/28/2013 | 1,478 | 1,480 | \$ 9.34 | 5/28/2023 |
| | 3/20/2014 | 15,526 | | \$ 29.68 | 3/20/2024 |
| | 3/12/2015 | 15,526 | | \$ 45.87 | 3/12/2025 |
| Steven Frank | 2/20/2008 | 8,871 | | \$ 2.65 | 2/20/2018 |
| | 2/20/2009 | 2,957 | | \$ 3.18 | 2/20/2019 |
| | 6/30/2010 | 2,957 | | \$ 3.18 | 6/30/2020 |
| | 3/7/2011 | 2,957 | | \$ 5.71 | 3/7/2021 |
| | 12/2/2011 | 8,871 | | \$ 6.88 | 12/2/2021 |
| | 3/15/2012 | 2,217 | 740 | \$ 6.88 | 3/15/2022 |
| | 5/28/2013 | 1,478 | 1,480 | \$ 9.34 | 5/28/2023 |
| | 3/20/2014 | 15,526 | | \$ 29.68 | 3/20/2024 |
| | 3/12/2015 | 15,526 | | \$ 45.87 | 3/12/2025 |
| Larry D. Horner(1) | 2/20/2008 | 8,871 | | \$ 2.65 | 12/29/2016 |
| | 2/20/2009 | 2,957 | | \$ 3.18 | 12/29/2016 |
| | 6/30/2010 | 2,957 | | \$ 3.18 | 12/29/2016 |
| | 3/7/2011 | 2,957 | | \$ 5.71 | 12/29/2016 |
| | 12/2/2011 | 8,871 | | \$ 6.88 | 12/2/2021 |
| | 3/15/2012 | 2,957 | | \$ 6.88 | 3/15/2022 |
| | 5/28/2013 | 2,958 | | \$ 9.34 | 5/28/2023 |
| | 3/20/2014 | 15,526 | | \$ 29.68 | 12/29/2016 |
| | 3/12/2015 | 15,526 | | \$ 45.87 | 12/29/2016 |
| Jeffrey B. Kindler | 12/2/2011 | 23,659 | | \$ 6.88 | 12/2/2021 |
| | 3/15/2012 | 2,217 | 740 | \$ 6.88 | 3/15/2022 |
| | 5/28/2013 | 1,478 | 1,479 | \$ 9.34 | 5/28/2023 |
| | 3/20/2014 | 15,526 | | \$ 29.68 | 3/20/2024 |
| | 3/12/2015 | 15,526 | | \$ 45.87 | 3/12/2025 |
| Dean J. Mitchell | 3/17/2009 | 8,871 | | \$ 3.18 | 3/17/2019 |
| | 6/30/2010 | 2,957 | | \$ 3.18 | 6/30/2020 |
| | 3/7/2011 | 2,957 | | \$ 5.71 | 3/7/2021 |

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| | | | | | |
|-------------------|-----------|--------|--------|----------|-----------|
| | 12/2/2011 | 8,871 | | \$ 6.88 | 12/2/2021 |
| | 3/15/2012 | 2,217 | 740 | \$ 6.88 | 3/15/2022 |
| | 5/28/2013 | 1,478 | 1,480 | \$ 9.34 | 5/28/2023 |
| | 3/20/2014 | 15,526 | | \$ 29.68 | 3/20/2024 |
| | 3/12/2015 | 15,526 | | \$ 45.87 | 3/12/2025 |
| Robert B. Shapiro | 12/2/2011 | 23,659 | | \$ 6.88 | 12/2/2021 |
| | 3/15/2012 | 2,217 | 740 | \$ 6.88 | 3/15/2022 |
| | 5/28/2013 | 1,478 | 1,479 | \$ 9.34 | 5/28/2023 |
| | 3/20/2014 | 15,526 | | \$ 29.68 | 3/20/2024 |
| | 3/12/2015 | 15,526 | | \$ 45.87 | 3/12/2025 |
| James S. Turley | 4/16/2014 | 25,877 | 31,053 | \$ 18.95 | 4/16/2024 |
| | 3/12/2015 | 15,526 | | \$ 45.87 | 3/12/2025 |

- (1) All of Mr. Horner's unvested options vested immediately as of the date of his death and remain exercisable for one year following his death, in accordance with the terms of his option grants, except for those grants dated December 2, 2011, March 15, 2012 and May 28, 2013 which are exercisable until the expiration of the option grant.

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PROPOSAL 2
RATIFICATION OF APPOINTMENT OF INDEPENDENT
REGISTERED PUBLIC ACCOUNTING FIRM
ITEM 2 ON PROXY CARD

Background

PricewaterhouseCoopers LLP currently serves as our independent registered public accounting firm. After consideration of the firm's qualifications and past performance, the Board, through the Audit Committee, has appointed PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016. Pursuant to its charter, the Audit Committee of our Board approved in advance each professional service performed by PricewaterhouseCoopers LLP during fiscal year 2015 and considered the possible effect of the provision of such service on the auditors' independence. Information relating to fees paid to PricewaterhouseCoopers LLP over the past two years is set forth in the table below.

Under the Sarbanes-Oxley Act of 2002 and the rules of the SEC promulgated thereunder, the Audit Committee is solely responsible for the selection, appointment, compensation and oversight of the work of our independent registered public accounting firm. Although submission of the appointment of an independent registered public accounting firm to shareholders for ratification is not required by law, the Board considers the appointment of our independent registered public accounting firm to be an important matter of shareholder concern and is submitting the appointment of PricewaterhouseCoopers LLP for ratification by our shareholders, as a matter of good corporate practice. One or more representatives of PricewaterhouseCoopers LLP are expected to be present at the Annual Meeting with the opportunity to make a statement if they so desire and to be available to respond to appropriate questions.

The Board has not determined what action it would take if the shareholders do not approve the selection of PricewaterhouseCoopers LLP, but may reconsider its selection if the shareholders' action so warrants. Even if the selection is ratified, the Audit Committee, exercising its own discretion, may select different auditors at any time during the year if it determines that such a change would be in our best interests and in the best interests of our shareholders.

Required Vote and Board Recommendation

The affirmative vote of a majority of the votes cast on the matter is required for the approval of this item. As this proposal is considered a routine item, your bank, broker or other nominee may vote your shares FOR the proposal without receiving your voting instructions. Abstentions and broker non-votes will not count either in favor of or against the proposal.

THE BOARD RECOMMENDS THAT SHAREHOLDERS VOTE FOR THE RATIFICATION OF THE APPOINTMENT OF PRICEWATERHOUSECOOPERS LLP.

Table of Contents**INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM****Independent Registered Public Accounting Firm Fees**

The following table summarizes the aggregate fees of PricewaterhouseCoopers LLP, our independent registered public accounting firm, billed to us for the fiscal years ended December 31, 2015 and 2014 for audit and other services:

| | Fiscal Year Ended December 31, | |
|---|---|---------------------|
| | 2015 | 2014 |
| Audit Fees | \$ 1,118,870 | \$ 1,023,000 |
| Audit-related Fees | | |
| Total Audit and Audit-related Fees | \$ 1,118,870 | \$ 1,023,000 |
| Tax Fees | 36,805 | 22,518 |
| All Other Fees | | |
| Total Fees | \$ 1,155,675 | \$ 1,045,518 |

Audit Fees. Audit fees include professional services rendered by PricewaterhouseCoopers LLP for the audit of our annual financial statements, including the reviews of the financial statements included in our quarterly reports on Form 10-Q. This category also includes fees for assistance with complex accounting and transactions, fees for audits provided in connection with statutory filings or services that generally only the principal auditor can reasonably provide to a client, and consents and assistance with and review of documents filed with the SEC, including services related to our 2015 public offerings of our common stock.

Audit-Related Fees. Audit-related fees consist of amounts for assurance and related services that are reasonably related to the performance of the audit or review of our financial statements that are not reported under Audit Fees. In fiscal years 2015 and 2014, PricewaterhouseCoopers LLP did not provide any audit-related services.

Tax Fees. Tax fees include original and amended tax returns, studies supporting tax return amounts as may be required by Internal Revenue Service regulations, claims for refunds, assistance with tax audits and other work directly affecting or supporting the payment of taxes, planning, research and advice supporting our efforts to maximize the tax efficiency of our operations for fiscal years 2015 and 2014.

All Other Fees. All other fees are fees for products or services other than those in the above three categories. In fiscal years 2015 and 2014, PricewaterhouseCoopers LLP did not provide any services other than those described above.

Pre-Approval Policy

The Audit Committee has adopted a written policy for the provision of audit services and permitted non-audit services by our independent registered public accounting firm. Our Chief Financial Officer has primary responsibility to the Audit Committee for administration and enforcement of this policy and for reporting non-compliance. Under the policy, our Audit Committee receives a presentation of an annual budget and plan for audit services and for any

proposed audit-related, tax or other non-audit services to be performed by the independent registered public accounting firm, but management may, from time to time, seek approval of certain additional audit or non-audit services not provided for in the budget.

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AUDIT COMMITTEE REPORT

In accordance with the Audit Committee Charter, the Audit Committee assists the Board in fulfilling its responsibility for oversight of the integrity of the accounting, auditing and financial reporting practices of the Company. During the fiscal year ended December 31, 2015, the Audit Committee met nine times, and the Audit Committee reviewed and discussed the interim financial information contained in the Company's Quarterly Reports on Form 10-Q, and discussed press releases announcing earnings with our Chief Financial Officer, our Chief Legal Officer and the independent registered public accounting firm prior to public release.

In discharging its oversight responsibility as to the audit process, the Audit Committee has received the written disclosures and the letter from the 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 the independent registered public accounting firm the independent registered public accounting firm's independence. The Audit Committee also discussed with management the quality and adequacy of the Company's internal controls. The Audit Committee reviewed with the independent auditors their audit plans, audit scope and identification of audit risks.

The Audit Committee members are not professional accountants or auditors, and their functions are not intended to duplicate or to certify the activities of management or the Company's independent registered public accounting firm. The Audit Committee oversees the Company's financial reporting process on behalf of the Board. The Company's management has primary responsibility for the financial statements and reporting process, including the Company's internal control over financial reporting. The independent registered public accounting firm is responsible for performing an integrated audit of the Company's financial statements and internal control over financial reporting in accordance with the auditing standards of the Public Company Accounting Oversight Board.

The Audit Committee reviewed and discussed with the independent registered public accounting firm all communications required by generally accepted auditing standards, including those described in Statement on Auditing Standards No. 61 (AICPA Professional Standards, Vol. 1. AU section 380), as amended, Communication with Audit Committees, as adopted by the Public Company Accounting Oversight Board in Rule 3200T and, with and without management present, discussed and reviewed the results of the independent registered public accounting firm's examination of the financial statements. The Audit Committee also considered, as it determined appropriate, tax matters and other areas of financial reporting and the audit process over which the Audit Committee has oversight.

The Audit Committee reviewed and discussed the audited financial statements of the Company as of and for the fiscal year ended December 31, 2015, with management and the independent registered public accounting firm. Management has the responsibility for the preparation of the Company's financial statements and the independent registered public accounting firm has the responsibility for the audit of those statements.

Based on the above-mentioned review and discussions with management and the independent registered public accounting firm, the Audit Committee recommended to the Board that the Company's audited financial statements be included in its Annual Report on Form 10-K for the fiscal year ended December 31, 2015, for filing with the SEC. The Audit Committee also reappointed PricewaterhouseCoopers LLP as the Company's independent registered public accounting firm for the fiscal year ending December 31, 2016.

THE AUDIT COMMITTEE

Jeffrey B. Kindler, Chair

Dean J. Mitchell

Robert B. Shapiro

The Audit Committee Report above shall not be deemed incorporated by reference by any general statement incorporating this Proxy Statement into any filing under the Securities Act of 1933 or under the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate this information by reference, and shall not otherwise be deemed filed under such Acts.

Table of Contents**BENEFICIAL OWNERSHIP OF COMMON STOCK**

The following table sets forth information regarding beneficial ownership of our share capital as of March 31, 2016 by (1) each of our directors, (2) each of our named executive officers, (3) all of our directors and executive officers as a group, and (4) each person, or group of affiliated persons, known by us to beneficially own more than five percent of our shares of common stock.

The percentage ownership information is based on an aggregate 117,516,486 shares of common stock outstanding as of March 31, 2016.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than five percent of our shares of common stock. We have determined beneficial ownership 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. In addition, the rules include shares of common stock issuable pursuant to the exercise of options or warrants that are either immediately exercisable or exercisable within 60 days after March 31, 2016. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o Intrexon Corporation, 20374 Seneca Meadows Parkway, Germantown, Maryland 20876.

| Name of beneficial owner | Number of shares beneficially owned⁽¹⁾ | Percentage of shares beneficially owned |
|--|--|--|
| Directors | | |
| Cesar L. Alvarez | 114,849 | * |
| Steven Frank | 86,780 | * |
| Jeffrey B. Kindler | 137,700 | * |
| Dean J. Mitchell | 84,711 | * |
| Robert B. Shapiro ⁽²⁾ | 194,884 | * |
| James S. Turley | 73,075 | * |
| Named executive officers | | |
| Randal J. Kirk ⁽³⁾ | 62,258,225 | 53.0% |
| Rick L. Sterling | 174,490 | * |
| Jack A. Bobo | | * |
| Samuel Broder | | * |
| Joel Liffmann | 150,000 | * |
| Executive officers and directors as a group (19 persons) | 64,790,373 | 55.1% |
| 5% or greater shareholders | | |
| FMR, LLC ⁽⁴⁾ | 7,812,177 | 6.6% |

* Represents beneficial ownership of less than 1 percent of our outstanding shares of common stock

- (1) The amounts in this column include shares of common stock to which certain persons had the right to acquire beneficial ownership within 60 days after March 31, 2016, pursuant to the exercise of options: Cesar L. Alvarez, 77,839 shares; Steven Frank, 77,839 shares; Jeffrey B. Kindler, 74,885 shares; Dean J. Mitchell, 74,882 shares; Robert B. Shapiro, 74,885 shares; James S. Turley, 66,754 shares; Randal J. Kirk, 11,828 shares; Rick L. Sterling, 171,121 shares; and executive officers and directors as a group, 1,725,028 shares.
- (2) Includes 80,116 shares held in the Robert B. Shapiro Revocable Trust, an affiliate of Robert B. Shapiro.
- (3) Includes shares held by the following entities over which Mr. Kirk (or an entity over which he exercises exclusive control) exercises exclusive control: 179,199 shares held by ADC 2010, LLC, 130,075 shares held by JPK 2008, LLC, 699,586 shares held by JPK 2009, LLC, 818,461 shares held by JPK 2012, LLC, 6,608,167 shares held by Kapital Joe, LLC, 131,081 shares held by Kellie L. Banks (2009) Long Term Trust, 1,068 shares held by Lotus Capital (2000) Company Inc., 5,483,957 shares held by Mascara Kaboom, LLC, 131,030 shares held by MGK 2008, LLC, 829,379 shares held by MGK 2009, LLC, 940,426 shares held by MGK 2011, LLC, 1,196,077 shares held by New River Management IV, LP, 22,636,052 shares held by New River Management V, LP, 13,340,645 shares held by NRM VI Holdings I, LLC, 243,001 shares held by NRM VII Holdings I, LLC, 4,882,830 shares held by R.J. Kirk Declaration of Trust, 128,548 shares held by Third Security,

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LLC, 678,323 shares held by Third Security Incentive 2010 LLC, 1,356,648 shares held by Third Security Senior Staff 2008 LLC, 237,524 shares held by Third Security Staff 2001 LLC, 1,356,648 shares held by Third Security Staff 2010 LLC, 58,800 shares held by Third Security Senior Staff LLC, 105,204 shares held by ZSK 2008, LLC, and 73,668 shares held by ZSK 2009, LLC.

- (4) Information is based solely on the Schedule 13G that was filed with the SEC on February 12, 2016 by FMR, LLC. FMR, LLC reports that it is the beneficial owner of 7,812,177 shares of our common stock and has sole voting power with respect to 535,279 shares of our common stock and sole dispositive power with respect to 7,812,177 shares of our common stock as of December 31, 2015. The address of FMR, LLC is 245 Summer Street, Boston, Massachusetts 02210.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934, as amended, requires our executive officers, directors and persons who beneficially own more than 10 percent of our equity securities, to file reports of ownership and changes in ownership with the SEC and provide us with copies of such reports.

Based solely on a review of the copies of these reports furnished to us, we believe that all filing requirements applicable to such officers and directors and greater than 10 percent shareholders were complied with during fiscal year 2015, except for one late filing of a Form 4 for each of our non-employee directors: Cesar Alvarez, Steven Frank, Larry Horner, Jeffrey Kindler, Dean Mitchell, Robert Shapiro and James Turley, due to an administrative error following the annual grant of options to each of the non-executive directors in March 2015.

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PROPOSAL 3

NON-BINDING PROPOSAL TO APPROVE THE COMPENSATION OF OUR EXECUTIVE OFFICERS

ITEM 3 ON PROXY CARD

General

Our Board has determined to provide our shareholders the opportunity to vote each year to approve, on an advisory basis, the compensation of our named executive officers, as disclosed in this Proxy Statement. The compensation of our named executive officers is described in the Compensation Discussion and Analysis, the compensation tables and the accompanying narrative on pages 28 to 49 of this Proxy Statement.

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

Our compensation program reflects competition and best practices in the marketplace. The mix of compensation components is competitive with that of other companies of similar size and operational characteristics, links compensation to individual and corporate performance and encourages stock ownership by senior management. Based on its review of the total compensation of our named executive officers for fiscal year 2015, the Compensation Committee believes that the total compensation for each of the named executive officers is reasonable and effectively achieves the objective of aligning compensation with performance measures directly related to our financial goals and creation of shareholder value without encouraging our named executive officers to take unnecessary or excessive risks.

The Compensation Discussion and Analysis section of this Proxy Statement and the accompanying tables and narrative provide a comprehensive review of our named executive officer compensation objectives, program and rationale. We urge you to read this disclosure before voting on this proposal.

Pursuant to Section 14A of the Securities Exchange Act, our Board is requesting shareholders approve an advisory vote on the following resolution:

RESOLVED, that our shareholders approve, on a non-binding advisory basis, the compensation of the named executive officers as disclosed in the Proxy Statement for the 2016 Annual Meeting of Shareholders pursuant to the compensation disclosure rules of the Securities and Exchange Commission, including the Compensation Discussion and Analysis, the Summary Compensation Table, the other related tables and the accompanying narrative.

As an advisory vote, your vote on this proposal will be non-binding on the Board and will not be construed as overruling a decision by the Board. Your vote will not create or imply any change to our fiduciary duties or create or imply any additional fiduciary duties for the Board or us. However, the Board values the opinions that our shareholders express in their votes and will consider the outcome of the vote when making future executive compensation decisions as it deems appropriate.

Vote Required and Board Recommendation

The affirmative vote of a majority of the votes cast on the matter is required for the approval of this item. As this proposal is not considered a routine item, your bank, broker or other nominee cannot vote your shares without receiving your voting instructions. Abstentions and broker non-votes will not count either in favor of or against the proposal.

THE BOARD RECOMMENDS THAT SHAREHOLDERS VOTE TO APPROVE THE NON-BINDING ADVISORY PROPOSAL APPROVING THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS.

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IDENTIFICATION OF EXECUTIVE OFFICERS

Set forth below is information regarding the positions, ages and business experience of each of our executive officers.

Randal J. Kirk, age 62, Chief Executive Officer and Chairman of the Board. For more information about Mr. Kirk, please see his biography under the caption Director Nominees.

Jack A. Bobo, age 50, Senior Vice President, Chief Communications Officer. Mr. Bobo joined Intrexon as our Senior Vice President Chief Communications Officer in July 2015. Mr. Bobo brings to Intrexon significant expertise in the analysis and communication of global trends in biotechnology, food and agriculture to audiences around the world. He has worked extensively to improve the messaging and understanding of science and technology to help address global challenges related to climate change, sustainability, and food security. Prior to joining Intrexon, Mr. Bobo worked in the U.S. Department of State for thirteen years, most recently as Senior Advisor for Food Policy following his positions as Senior Advisor for Biotechnology and Chief, Biotechnology and Textile Trade Division. Through these key roles Mr. Bobo was responsible for global outreach to foreign audiences and senior foreign officials across a variety of issues and led or participated in bilateral trade discussions and negotiations. Prior to his distinguished career at the U.S. Department of State, he was an attorney at Crowell & Moring LLP. He received a J.D. from Indiana University School of Law and an M.S. in Environmental Science from Indiana University School of Public and Environmental Affairs.

Samuel Broder, M.D., age 71, Senior Vice President, Health Sector. Dr. Broder has served as our Senior Vice President Health Sector since July 2015. From August 2014 to July 2015, Dr. Broder served on a range of corporate board and scientific consultancies. From 2012 to 2014, Dr. Broder held several key management positions with Intrexon, including Chairman of the Health Sector and Executive Vice President of Scientific and Public Affairs. Prior to Intrexon, Dr. Broder served as Executive Vice President and Chief Medical Officer at Celera Corporation and Senior Vice President of Research and Development at IVAX Corporation. He also served as Director of the National Cancer Institute (NCI) for six years. During his tenure at NCI, he directed a number of large clinical trials and was instrumental in developing anti-cancer therapeutics as well as several drugs now widely used in the treatment of AIDS. Dr. Broder has authored or co-authored more than 340 scientific publications, holds multiple patents, and is a member of the Institute of Medicine of the National Academy of Sciences. He received his M.D. from the University of Michigan.

Ena Chan Cratsenberg, age 47, Senior Vice President, Consumer Sector. Ms. Cratsenberg joined Intrexon as Senior Vice President Consumer Sector in January 2016. Ms. Cratsenberg brings to Intrexon over two decades experience in leading portfolio development and collaboration strategies for a number of consumer product businesses including cosmetics, flavors and fragrances, food and beverage, and nutritional health markets, as well as alternative fuels. Most recently Ms. Cratsenberg was Senior Vice President, Business Development with Evolva where she was responsible for identifying and evolving commercialization strategies for target businesses as well as successfully leading the development and negotiations of commercial partnerships. Prior to Evolva, she was Vice President of Business Development for Amyris, where she executed a number of strategic deals around emerging technologies for renewable ingredients. Ms. Cratsenberg also held business development roles at Pixar Animation Studios and BP plc. She holds an M.B.A. from the Kellogg Graduate School of Management of Northwestern University and a B.S. in Chemical Engineering from the University of Illinois at Urbana-Champaign.

Corey L. Huck, age 45, Senior Vice President, Food Sector. Mr. Huck joined Intrexon as Senior Vice President Food Sector in October 2015. Mr. Huck brings to Intrexon over two decades of experience in agriculture and crop protection. Prior to joining Intrexon, he spent 22 years with Syngenta AG, a global agriculture company, where he led the daily commercial operations and held Profit & Loss accountability for over \$3 billion in business. Mr. Huck was

instrumental in facilitating new product development initiatives, as well as directing brand and sales management programs. In addition to his role as Head of U.S. Sales, Mr. Huck has held a variety of leadership positions within Syngenta, including Head of Key Account Management, Head of U.S. Commercial Operations – Crop Protection, and Business Unit Head, building corporate and customer relations by leading cross-functional teams to deliver on business needs. Additionally, he was Syngenta’s Global Project Manager in Basel, Switzerland. He received a B.S. in Agriculture Sciences from University of Nebraska.

Donald P. Lehr, age 41, Chief Legal Officer. Mr. Lehr has served as our Chief Legal Officer since 2011. From 2009 to 2011 he served as our Associate General Counsel. Mr. Lehr has broad experience in the areas of corporate, securities, and general business law. Prior to joining us, he was at Hogan Lovells LLP (formerly Hogan & Hartson, LLP) in Baltimore, Maryland from 2002 to 2009. While at Hogan, his practice included the representation of privately and publicly held corporations across many industries, including biotechnology, pharmaceuticals, health care, software, technology, and manufacturing. Prior to his time at Hogan, Mr. Lehr served as a judicial clerk for the Honorable Irma S. Raker of the Court of Appeals of Maryland. Mr. Lehr received a B.A. from Swarthmore College and received a J.D. from the University of Maryland School of Law.

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Joel Liffmann, age 55, Senior Vice President, Finance. Mr. Liffmann joined Intrexon as Senior Vice President Finance in July 2015. Prior to Intrexon, from January 2013 to May 2015, he served as Executive Vice President of Corporate Development at Health Grades, Inc. Prior to Health Grades, from November 2010 to December 2012, Mr. Liffmann was a Senior Advisor to Vestar Capital Partners and was previously a Partner at Oracle Investment Management, Inc., where he specialized in private company investing and merchant banking in health care, bioscience, and related industries. He holds a Bachelor's degree in Business Administration from Boston University.

Nir Nimrodi, age 47, Senior Vice President, Corporate Development. Mr. Nimrodi has served as our Senior Vice President Corporate Development since October 2014. Prior to this, Mr. Nimrodi served as our Senior Vice President Environment Sector from March 2014 to October 2015. Mr. Nimrodi brings to Intrexon over 20 years of diverse international experience, in large global businesses in the life sciences, pharmaceutical, biotechnology, and diagnostics industries. Prior to joining Intrexon, Mr. Nimrodi was most recently the Vice President and General Manager of Life Technologies, Inc. Food Safety and Animal Health Business, now part of Thermo Fisher Scientific, and also served in numerous executive roles, including Chief Executive Officer and Board Member of Life Technologies Israel and Head of Protein Technologies. Previously, Mr. Nimrodi held leadership positions as CEO of Proneuron Biotechnologies, Inc. and also Mindsense Biosystems, as well as Director of Finance of Teva Pharmaceutical Industries, Ltd. Before joining the life sciences industry, he served in the Israeli Navy and worked for the Israeli Ministry of Defense. Mr. Nimrodi earned a B.A. in Economics and an M.B.A in Finance from Tel-Aviv University.

Jeffrey Perez, age 44, Senior Vice President, Intellectual Property Affairs. Mr. Perez has served as Senior Vice President Intellectual Property Affairs since August 2014. Before joining Intrexon, Mr. Perez was Managing Director and Associate General Counsel and Intellectual Property at Third Security, LLC, where he evaluated potential investments of Third Security's managed investment funds. Additionally, Mr. Perez worked with Third Security portfolio companies in evaluating and developing their intellectual property strategies and general corporate activities. Prior to joining Third Security, Mr. Perez practiced law in the area of intellectual property with the law firm of Hunton & Williams LLP in Washington D.C. Mr. Perez's previous work involved client consultation, litigation, agreement work, opinion drafting and patent procurement. Mr. Perez received a B.S. from Cornell University and his J.D. from George Mason University School of Law.

Thomas D. Reed, Ph.D., age 50, Founder and Chief Science Officer. Dr. Reed co-founded Intrexon in 1998 and has served as Chief Science Officer since then and served on Intrexon's board of directors until April 16, 2014. Dr. Reed is a molecular geneticist with over 20 years of experience in recombinant DNA technology. He has developed sophisticated transgenic model systems for studying the role of gene products in neuronal, cardiovascular, and cancer systems. Dr. Reed has published numerous peer-reviewed articles in the fields of subcellular modulation, gene regulation and cardiac function and is an inventor on numerous patents. Dr. Reed received his B.S. in Genetics from the University of California-Davis, an M.S. in Biological Science from Wright State University, and a Ph.D. in Molecular and Developmental Biology from the University of Cincinnati.

Rick L. Sterling, age 52, Chief Financial Officer. Mr. Sterling has served as our Chief Financial Officer since 2007. Prior to joining us, he was with KPMG where he worked in the audit practice for over 17 years, with a client base primarily in the healthcare, technology and manufacturing industries. Mr. Sterling's experience includes serving clients in both the private and public sector, including significant experience with SEC filings and Sarbanes-Oxley compliance. He received a B.S. in Accounting and Finance from Virginia Tech and is a licensed Certified Public Accountant.

Joseph L. Vaillancourt, age 48, Senior Vice President, Environment Sector. Mr. Vaillancourt joined Intrexon as our Senior Vice President Environment Sector in October 2015. Mr. Vaillancourt brings to Intrexon over two decades of

experience in companies ranging from start up to Fortune 500 companies in environmental and industrial businesses. Most recently he founded and served as Managing Partner of V Enterprises LLC dba Venture Enterprises, a strategic, management and operational advisory firm supporting companies across a variety of sectors including waste to energy, recycling, diversified industrial products, and financial services. Prior to that, Mr. Vaillancourt spent over 15 years with Waste Management Inc., a leading provider of environmental solutions services in North America, where he held a variety of key roles including, Vice President of Corporate Venturing, as well as Managing Director of Finance, Business Optimization and Strategy for Wheelabrator Technologies Inc., a wholly-owned subsidiary of Waste Management. He was one of the founding members of Waste Management's corporate venturing group focused on developing new growth platforms in the environmental, sustainability, energy, recycling, and cleantech sectors. He also previously served as a Founder and Principle at Red Team Consulting Group, LLC an advisory firm supporting private equity firms in the specialty contracting, industrial, and fabrication sectors. Mr. Vaillancourt received both an M.B.A and a B.S. in Accounting and Finance from the University of Massachusetts.

Robert F. Walsh, III, age 57, Senior Vice President, Energy Sector. Mr. Walsh has served as our Senior Vice President Energy Sector since 2013. Mr. Walsh has over 30 years of experience in the petroleum and chemical industries. Mr. Walsh served as Chief Commercial Officer of ZeaChem Inc., a cellulosic biofuel and biochemical company, from 2011 to 2013. Prior to his time at ZeaChem, Mr. Walsh served as Chief Executive Officer of Aurora Algae, Inc., an algae production company, from 2008 to 2010, President of LS9, Inc., an industrial biotechnology company, from 2007 to 2008, Senior Vice President and Chief Operating Officer of Chemoil Corporation, from 2005 to 2006, and General Manager Supply, Europe for Shell Europe Oil Products, from 2001 to 2006. Mr. Walsh received a B.S. in Chemical Engineering from Purdue University.

Table of Contents**COMPENSATION DISCUSSION AND ANALYSIS**

The Compensation Committee of our Board is responsible for the determination of compensation for our executive officers. The individuals who served as our Chief Executive Officer and Chief Financial Officer during fiscal 2015, as well as the other individuals included in the Summary Compensation Table, are referred to throughout this Proxy Statement as the named executive officers and together with the other executives of management as the executive officers.

Our named executive officers for fiscal year 2015 are:

| Name | Age | Position |
|---------------------|------------|---|
| Randal J. Kirk | 62 | Chief Executive Officer and Chairman of the Board |
| Rick L. Sterling | 52 | Chief Financial Officer |
| Jack A. Bobo | 50 | Senior Vice President, Chief Communications Officer |
| Samuel Broder, M.D. | 71 | Senior Vice President, Health Sector |
| Joel Liffmann | 55 | Senior Vice President, Finance |

This section discusses the principles underlying our executive compensation programs, policies and decisions and explains the process the Compensation Committee uses to determine compensation and benefits for our named executive officers. It provides qualitative information regarding the manner and context in which compensation is earned by and awarded to our named executive officers and is intended to place in perspective the data presented in the tables and narrative that follow.

The discussion and analysis of our compensation program for our named executive officers should be read in conjunction with the tables and text elsewhere in this Proxy Statement that describe the compensation awarded to, earned by or paid to our named executive officers.

Executive Summary

Our goal with respect to executive compensation is to provide a comprehensive package that is sufficient to attract, motivate and retain executives of outstanding ability, performance and potential. The Compensation Committee seeks to establish and maintain an appropriate relationship between executive compensation and the creation of shareholder value. The Committee believes that the most effective compensation program is one that provides competitive base pay, rewards the achievement of established annual and long-term goals and objectives, and provides incentives for retention.

The Compensation Committee assists the Board in fulfilling its oversight responsibilities with respect to the compensation of our named executive officers. The Compensation Committee is responsible for:

establishing and administering the base salaries and annual cash incentive awards of our executive officers, and

administering and making recommendations and awards under our 2013 Plan.

The Compensation Committee monitors the compensation paid to our named executive officers to ensure it is fair, reasonable and competitive and is substantially tied to our performance. The Compensation Committee evaluates, both subjectively and objectively, our financial performance, competitive position, future potential, and the individual and group performance of the members of executive management. In such evaluation, the Compensation Committee reviews data prepared by management and employs the business experience of the individual members of the Compensation Committee. The Compensation Committee also will utilize, from time to time, the assistance of an independent outside compensation consultant.

Fiscal Year 2015 Performance Highlights

We are designed to be a technology-based company with a management science discipline in order to provide the capital efficiency, growth and financial returns that will enable our progression into a top-tier company. We believe that in 2015 we were successful in achieving several of our most important management objectives while we continued to work for anticipated higher growth ahead.

Financial Highlights

Our 2015 financial highlights include:

Total revenues of \$173.6 million, an increase of 141% over the year ended December 31, 2014;

Net loss of \$84.5 million, attributable to Intrexon, or \$(0.76) per basic share, including noncash charges of \$61.6 million;

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Distribution as a dividend to Intrexon shareholders of equity securities in ZIOPHARM Oncology, Inc., or ZIOPHARM, having a market value of \$172.4 million at the time of distribution;

Total consideration received for technology access fees and reimbursement of research and development expenses covered 167% of cash operating expenses (exclusive of operating expenses of consolidated subsidiaries); and

Total consideration received for technology access fees, reimbursement of research and development services and products and services revenues covered 133% of consolidated cash operating expense.

We completed two underwritten public offerings of shares of our common stock, with net proceeds of approximately \$328.2 million.

In addition, our stock price increased from a closing price of \$27.53 as of December 31, 2014 to a closing price of \$30.15 as of December 31, 2015, an increase of approximately 10%.

Operational Highlights

Our 2015 operational highlights include several strategic acquisitions and key achievements:

We acquired Oxitec Ltd., or Oxitec, a pioneering company in biological insect control solutions, which include its self-limiting mosquito OX513A. OX513A combats the dangerous *Aedes aegypti* mosquito, the primary vector for a number of harmful arboviruses including Zika, dengue and chikungunya.

We acquired Okanagan Specialty Fruits, Inc., or Okanagan, a pioneering agricultural company behind the world's first non-browning apple without the use of any flavor altering chemical or antioxidant additives.

We acquired ActoGeniX NV, or ActoGeniX, a company based in Belgium with technology focused on the molecular engineering of food-grade microbes (*Lactococcus lactis*) that in turn generate biologically-contained ActoBiotics for in-situ expression and secretion of new biotherapeutic proteins and peptides.

AquaBounty Technologies, Inc., or AquaBounty, our majority-owned operating subsidiary, announced that the Food and Drug Administration, or FDA, approved the New Animal Drug Application for AquAdvantage® Salmon, an Atlantic salmon that has been genetically enhanced to reach market size in less time than conventionally farmed Atlantic salmon.

New and Expanded Collaborations

During 2015 we entered into and expanded a number of collaborations, including the following:

We made several significant advancements and agreements related to our immuno-oncology program including the formation of a collaboration with the biopharmaceutical business of Merck KGaA, Darmstadt, Germany, the advancement of the first two chimeric antigen receptor (CAR) T-cell targets of interest under that collaboration, a Cooperative Research and Development Agreement with the National Cancer Institute, and an exclusive licensing agreement with The University of Texas MD Anderson Cancer Center for pursuit of non-viral adoptive cellular therapies in conjunction with ZIOPHARM Oncology.

The Harvest Intrexon Enterprise Fund, an investment vehicle with Harvest Capital Strategies exclusively dedicated to funding companies that utilize our inventions, discoveries and technologies, secured \$245 million in committed funds. In 2015 the fund created Thrive Agrobiotics, Inc., a startup company that will collaborate with Intrexon in an effort to utilize Intrexon's ActoBiotic® platform to express nutritive proteins for improving the overall growth and feed efficacy in piglets.

We established Intrexon Energy Partners II, a joint venture with a select group of external investors employing the Company's proprietary gas-to-liquids bioconversion platform utilizing methanotrophs to produce 1,4-butanediol (BDO), a key chemical intermediate with a global market value exceeding \$5 billion used to manufacture spandex, polyurethane, plastics, as well as polyester.

We executed a number of additional collaborations and expansions of existing collaborations across our operating sectors.

Key Compensation Corporate Governance Practices

The Compensation Committee and the Board continuously review evolving practices in executive compensation and corporate governance. We have adopted certain policies and practices that we believe are consistent with industry best practices. We have also strived to adopt policies that will foster the company's growth and the continual realization of value to our shareholders. Because our company has a unique and dynamic business model, the Compensation Committee and the Board actively scrutinize the anticipated effect of compensation practices on the ultimate goals of the company.

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What We Do:

Use an appropriate balance between short-term and long-term compensation.

Conduct an annual review and assessment of potential and existing risks arising from our compensation programs and policies.

Ban hedging of our stock by our directors, officers and employees.

Engage an independent outside compensation consultant to advise on executive compensation matters.

What We Do Not Do:

Enter into long-term employment, severance or retention agreements with any named executive officer.

Provide excessive perquisites.

Offer executive officers a tax gross-up on any perquisites, except for de minimis amounts related to short-term disability insurance premiums.

Allow repricing of underwater stock options without shareholder approval.

Our Compensation Philosophy

Our compensation philosophy is guided by the principle of pay-for-performance. Our compensation programs are designed to support our business goals by rewarding achievement of short-term and long-term objectives in a manner that links compensation of our named executive officers with the value created for our shareholders. While aligning our named executive officers' compensation with our short-term and long-term business goals, we aim to provide the incentives needed to attract, motivate, reward and retain our management talent, which is crucial to our long-term success. Because our CEO is our largest shareholder and owns a majority of our outstanding shares of common stock, he is extremely focused on ensuring our named executive officers are driving increased shareholder value. The members of our Compensation Committee share this focus.

Principles of Our Compensation Framework

Our executive compensation program is designed to attract, retain, motivate and reward talented individuals who will execute our business plan so that we can succeed in the competitive business environment in which we operate. The Compensation Committee believes that the compensation program for executive officers should reward the achievement of our short-term and long-term objectives and that compensation should be related to the value created

for our shareholders. Furthermore, the compensation program should reflect competition and best practices in the marketplace. The following objectives serve as the Compensation Committee's guiding principles for all compensation decisions:

Our executive compensation and benefits should attract, motivate, reward and retain the management talent necessary to achieve our business objectives at compensation levels that are fair, equitable and competitive with those of comparable companies.

Compensation should be set based on the leadership of each executive officer, which reflects skill sets, experience and achievement, to create a competitive framework for talent acquisition and retention.

Compensation should be linked to individual and corporate performance by aligning our executive compensation program to company-wide performance, which is assessed in terms of financial and non-financial performance and creation of long-term value for our shareholders.

There should be an appropriate mix and weighting among base salary, annual incentive awards and long-term equity incentive awards such that an adequate amount of each executive officer's total compensation is performance-based or at risk. Further, as an executive's responsibilities increase, the portion of at-risk compensation for the executive should increase as a percentage of total compensation.

In addition, the Compensation Committee believes that the various elements of our compensation program effectively align compensation with performance measures that are directly related to our financial goals and creation of shareholder value without encouraging executives to take unnecessary and excessive risks.

Developments in Executive Compensation for Fiscal Year 2015

The Compensation Committee attempts to set reasonable but rigorous goals and objectives for each of our executive officers. We annually review our executive compensation practices to ensure that our plans and practices are supportive of our goals, competitive and in keeping with the best interests of our shareholders and our unique business model and operating environment. As a result of that review, the Compensation Committee approved the following changes to executive compensation during 2015:

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Intrexon Corporation Annual Executive Incentive Plan

In March 2015, the Compensation Committee recommended, and in April 2015 the Board approved, the Intrexon Corporation Annual Executive Incentive Plan, or Annual Incentive Plan, promulgated under the 2013 Incentive Plan, under which our executives may be awarded cash bonuses for company and individual performance using metrics as determined by the Compensation Committee. In June 2015, our shareholders voted to approve the Annual Incentive Plan.

The Annual Incentive Plan is administered by the Compensation Committee, which has sole authority to formulate adjustments and make interpretations under the Plan as it deems appropriate. Eligibility is determined by the Compensation Committee each calendar year within a select group of management or key employees of the Company or any of its subsidiaries. For each bonus period, the Compensation Committee will establish the terms of the bonus awards under the Annual Incentive Plan, including the eligible employees, the corporate performance objectives and the individual performance levels that must be achieved for payment of each bonus award.

Compensatory Arrangements for Mr. Kirk

On October 30, 2015, the Compensation Committee and the independent members of our Board approved a compensation arrangement for Mr. Kirk. Previously, Mr. Kirk did not receive compensation for his services as the Chief Executive Officer of the Company other than through his participation in the Company's Annual Executive Incentive Plan which became effective January 1, 2015. Under the new arrangement, Mr. Kirk receives as compensation a payment of \$200,000 per month, which payment is made in fully-vested shares of our common stock which are subject to a three-year lockup from the date of issuance. The shares of common stock are valued based on the last trading day of the applicable month and are issued pursuant to the terms of a Restricted Stock Unit Agreement, or RSU Agreement, under the 2013 Plan. The RSU Agreement has a term of 12 months. The RSU Agreement, and Mr. Kirk's employment, are terminable at will by the decision of the independent members of the Board.

Mr. Kirk is also entitled to participate in executive incentive compensation plans adopted by our Board or the Compensation Committee of the Board from time to time, including the Annual Incentive Plan described above.

Elements of Our Compensation Program

The Compensation Committee has a mix of compensation components that it utilizes, with the intent to make each component of total direct compensation competitive while also linking compensation to individual and corporate performance and encouraging stock ownership by our named executive officers. The table below describes each compensatory element in our program and briefly explains how it promotes our objectives. We believe the combination of these elements provides an appropriate balance of rewards, incentives and benefits to our executives and enables us to meet our desired compensation objectives, strengthen our ability to attract and retain highly qualified individuals and to appropriately link pay to performance.

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| Element of | How this Element Promotes | |
|--|--|---|
| Compensation | Description | Our Objectives |
| <i>Annual Compensation</i> | | |
| Base Salary | Fixed annual compensation that is certain in payment and provides continuous income. | Aids in both recruitment and retention; designed to be competitive in the marketplace. |
| Annual Incentive Awards | Performance-based compensation for achieving established goals and objectives. | Motivates and rewards achievement of annual corporate objectives by providing at-risk comprehensive pay opportunities linked to performance. |
| <i>Long-term Compensation</i> | | |
| Equity Incentive Awards | Grants of options that are part of our long-term incentive program; time-based vesting, generally over four years. | Promotes retention, increases long-term equity ownership and aligns executive and long-term shareholder interests by linking a portion of their compensation to changes in company stock price. |
| <i>Other Compensation</i> | | |
| Post-Termination Payments and Benefits | Payments and benefits upon termination of an executive's employment in specified circumstances, such as retirement, death, disability or a change in control, as described in greater detail beginning on page 48. | Provides assurance of financial security, which is desirable in lateral recruiting and executive retention and permits objective evaluation by executives of potential changes to our strategy and structure. |
| Other Benefits | Executives participate in employee benefit plans generally available to our employees. | Fair and competitive programs to provide for the health and well-being of executives and their families. |

We do not provide our executives with any meaningful perquisites not provided to employees generally. We also do not have any deferred compensation programs or retirement programs other than our 401(k) plan that is generally available to all employees. We enroll all eligible employees in our health, dental and life and disability insurance programs.

Base Salary

Base salary levels for our executive officers, with the exception of our Chief Executive Officer, are recommended by our Chief Executive Officer and are subject to annual review and approval by the Compensation Committee and the Board. In setting the base salary level for each executive officer (other than our Chief Executive Officer), the Compensation Committee generally considers the executive officer's experience level, demonstrated capabilities, time and placement in position, our geographic region and our and the executive's actual performance. No particular weight is assigned to any one factor.

The base salary for our Chief Executive Officer, Mr. Kirk, is defined by his RSU Agreement, as discussed above on page 31.

Annual Incentive Awards

In March 2015, the Compensation Committee recommended, and in April 2015 the Board approved, the Annual Incentive Plan, under which our executives may be awarded awards for achievement of Company and individual performance goals and objectives using metrics as determined by the Compensation Committee. In June 2015, our shareholders approved the Annual Incentive Plan.

The Annual Incentive Plan is administered by the Compensation Committee, which has sole authority to formulate adjustments and make interpretations under the Plan as it deems appropriate. Eligibility is determined by the Compensation Committee each calendar year within a select group of management or key employees of the Company or any of its subsidiaries. For each bonus period, the Compensation Committee will establish the terms of the bonus awards under the Annual Incentive Plan, including the eligible employees, the corporate performance objectives by which the aggregate bonus pool will be determined and the individual performance levels that must be achieved for payment of each bonus award to individual participants. The Compensation Committee is also empowered to determine whether any awards will be paid in cash, equity securities, or a combination thereof. We maintain a strong link between performance and pay through emphasis on incentives and use of financial, operational and leadership measures, which we believe are key drivers of long-term value creation for shareholders. These criteria are used together with non-financial metrics that the Compensation Committee believes are leading indicators of the creation of long-term shareholder value. While these criteria serve as guidelines, the Compensation Committee has discretion to determine the annual cash incentive awards to each executive officer.

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For 2015, under our Annual Incentive Plan, we made cash bonus awards to each of our named executive officers. Such awards were recommended by the Compensation Committee and approved by the Board. In determining the aggregate pool for the cash incentive awards for 2015, the Compensation Committee considered a number of performance objectives with the most significant among them being the market cap growth of the company as defined under the Annual Incentive Plan. Based on that definition, the aggregate bonus pool payable to participants in the plan (prior to reduction for payment of employment taxes) was \$12,267,123 which represented approximately two percent (2%) of the amount by which the average market value of our stock for the 30 day period ending the year exceeded the average market value of such stock for the 30 day period immediately prior to the beginning of the year.

The following describes the specific annual incentive awards approved by our Compensation Committee for each of our named executive officers for fiscal year 2015:

Randal J. Kirk. Mr. Kirk serves as our Chief Executive Officer and Chairman of the Board. In January 2016, the Compensation Committee evaluated Mr. Kirk's performance in his role as chief executive officer, taking into account, among other factors, the following:

Mr. Kirk served as a key driver of company valuation through active leadership of strategic financial and business transactions;

Mr. Kirk was principally responsible for the company's strategy, vision, and business model and communication of such to both internal and external stakeholders;

Mr. Kirk oversaw the company's achievement of its corporate performance objectives and increase in value to shareholders.

Based on its evaluation, the Compensation Committee determined to award Mr. Kirk a cash bonus of \$4,350,000 for his contributions to our performance in 2015.

Rick L. Sterling. Mr. Sterling serves as our Chief Financial Officer. In January 2016, the Compensation Committee evaluated Mr. Sterling's performance, taking into account, among other factors, the following:

Mr. Sterling provided effective management and leadership over our finance department.

Coordination and completion of critical SEC filings, including our Annual Report on Form 10-K and quarterly reports on Forms 10-Q, prospectus filings in connection with our underwritten public offerings and establishment of our ATM program, pro forma and other required financial statements filings for acquisitions and filings related to our dividend to our shareholders of all of our shares of ZIOPHARM common stock;

Mr. Sterling supported our progress this year in solidifying our capital resources through successful equity raises.

Mr. Sterling oversaw the successful integration of the financial aspects of our acquisition targets including, in particular, acquisitions of Exemplar, ActoGeniX, Okanagen, and Oxitec.

Based on its performance evaluation, the Compensation Committee determined to award Mr. Sterling a cash bonus of \$500,000 for his contributions to our performance in 2015.

Jack A. Bobo. Mr. Bobo joined our Company as our Senior Vice President, Chief Communications Officer in July 2015. In January 2016, the Compensation Committee evaluated Mr. Bobo's performance, taking into account, among other factors, the following:

Mr. Bobo was responsible for maintaining several critical external relationships, including those with analysts and existing and potential investors.

Mr. Bobo coordinated and established the Company's first Investor Day Presentation.

Mr. Bobo supported the integration and development of communications teams within our subsidiary operations, including public relation activities both domestically and abroad.

Based on its performance evaluation, the Compensation Committee determined to award Mr. Bobo a prorated cash bonus of \$112,329 for his contributions to our performance in 2015.

Samuel Broder, M.D. Dr. Broder serves as our Senior Vice President, Health Sector. In January 2016, the Compensation Committee evaluated Dr. Broder's performance, taking into account, among other factors, the following:

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As head of the Health Sector, Dr. Broder oversaw a number of our active collaborations and the formation of several new collaborations;

Dr. Broder was involved with critical operational steps involving the integration of the ActoGeniX, technology platform and other subsidiary operations;

Dr. Broder oversaw the advancement of several key collaboration programs that we expect will drive value for us and our collaborators.

Based on its performance evaluation, the Compensation Committee determined to award Dr. Broder a cash bonus of \$700,000 for his contributions to our performance in 2015.

Joel Liffmann. Mr. Liffmann joined our Company as our Senior Vice President, Finance in July 2015. In January 2016, the Compensation Committee evaluated Mr. Liffmann's performance, taking into account, among other factors, the following:

Mr. Liffmann was principally responsible for the establishment of our ATM program;

Mr. Liffmann had a significant role in the assessment of prospective acquisition target companies; and

Mr. Liffmann supported a variety of corporate financial matters.

Based on its performance evaluation, the Compensation Committee determined to award Mr. Liffmann a prorated cash bonus of \$134,795 for his contributions to our performance in 2015.

Long-Term Equity Incentive Awards

Our primary objectives in granting long-term equity incentive awards are to encourage significant ownership of our common stock by management and to provide long-term financial incentives linked directly to our long-term performance. The Compensation Committee believes that significant ownership of our common stock by senior management helps to align the interests of management and the shareholders.

Our long-term equity incentive awards have historically been in the form of time-vested stock options, generally vesting over four years. Although we do not have a formal policy with respect to the grant of equity incentive awards to our executive officers, or any formal equity ownership guidelines applicable to them, we believe that equity grants provide our executives with a strong link to our long-term performance, create an ownership culture, and help to align the ownership interests of our executives and our shareholders. In addition, we believe that equity grants with a time-based vesting feature promote executive retention because this feature incentivizes our executive officers to remain in our employment during the vesting period. Further, the levels at which they are granted, we believe, are competitive and appropriate for a company such as ours that is in a stage of anticipated growth with anticipated potential upside in stock performance over the long term. The size of the awards has historically taken into account numerous factors, including company performance as defined by the achievement of strategic objectives, individual performance, stock price performance, salary level and tenure. The Compensation Committee believes that broad and significant employee ownership of our common stock effectively motivates the building of shareholder wealth. We

also use stock options because we believe that equity compensation in this form aligns the interests of shareholders with senior management to ensure the Company's long-term success.

With the exception of significant promotions and new hires, equity grants, including long-term equity incentive awards, when awarded, have been awarded toward the beginning of the fiscal year. The Compensation Committee selects this timing because it enables us to consider the prior year performance of the Company and the participants and our expectations for the next performance period, while also ensuring that awards will be made after we publicly disclose our performance for the year.

The Compensation Committee's practice when granting stock options had been to use the closing price of our common stock on the day of the grant. As a matter of formal written policy, we have not and do not time the grant of stock options around the disclosure of non-public information or back-date stock options.

Severance Policies

We generally do not provide contractual severance protection to our named executive officers, other than through the terms of any equity awards granted under the 2013 Plan, which provide for vesting upon a change of control, death, or disability. Unvested options are cancelled if a named executive officer terminates his or her employment.

Deferred Compensation

We do not provide a deferred compensation plan.

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Other Benefits

The Compensation Committee believes employee benefits are an essential component of our competitive total compensation package. These benefits are designed to attract and retain our employees. The named executive officers may participate in the same benefit plans that are provided to all of our eligible employees, which include medical, health and dental insurance, long-term disability insurance, accidental death and disability insurance and our 401(k) Plan. As part of the 401(k) Plan, we generally match 100 percent of the first three percent of compensation contributed by the employee into the 401(k) Plan subject to the Internal Revenue Code and our 401(k) Plan limits. We have disclosed all company matches for our named executive officers in the column labeled "All Other Compensation," in the Summary Compensation Table on page 39, and separately disclosed each amount in Footnote 8 to that table on page 40 of this Proxy Statement.

The Compensation Committee provides our executives, including named executive officers, with certain limited additional benefits that we believe provide security for current and future needs of the executives and their families and therefore assist in attracting and retaining them, including contributions to medical, dental, life and disability insurance.

The Compensation Review Process

Process for Approval of Compensation Measures. Our Chief Executive Officer identifies for the Compensation Committee and the Board key financial goals, operational goals and performance measures that will guide us for the relevant fiscal year. These metrics are presented and approved by the Board and become the compensation measures for the executive officers.

Role of the Compensation Committee and Management. Governance of our compensation program is the responsibility of the Compensation Committee, which consists solely of independent directors. At the direction of the Compensation Committee, our Chief Executive Officer prepares compensation recommendations regarding the compensation of each of our executive officers, other than himself, and presents those recommendations to the Compensation Committee for approval. The Compensation Committee evaluates the overall performance of the executive officers based on the Company's achievement of corporate performance objectives and goals and individual performance. The Compensation Committee then reviews and takes into account all elements of executive compensation in setting policies and determining compensation amounts.

Role of Compensation Consultant. The Compensation Committee is authorized to retain experts, consultants and other advisors to aid in the discharge of its duties. In 2015, the Compensation Committee retained F. Daniel Siciliano as its outside independent compensation consultant. Mr. Siciliano is the Faculty Director for the Arthur and Toni Rembe Rock Center for Corporate Governance at Stanford Law School. He is a Professor of the Practice of Law and Associate Dean for Executive Education and Special Programs. Mr. Siciliano is a noted authority on matters related to executive compensation and corporate governance. Mr. Siciliano was retained to (1) review the company's historical compensation practices, (2) advise the Compensation Committee on compensation standards and trends, (3) assist in the implementation of policies and programs, and (4) review recommendations from management on compensation matters. All work completed by Mr. Siciliano is subject to the approval of the Compensation Committee. Mr. Siciliano's role with respect to the Compensation Committee is to provide independent advice and counsel. The Compensation Committee does not delegate authority to its outside advisor or to other parties.

In retaining Mr. Siciliano, the Compensation Committee separately considered the six factors set forth in Section 10C-1(b)(4)(i) through (vi) of the Exchange Act and, based on such consideration, determined that the work of Mr. Siciliano did not raise any conflict of interest.

No Peer Group Analysis. We believe we have structured the compensation available to our named executive officers to be competitive. The Board and the Compensation Committee believe that, due to the unique nature of our business, there are no directly comparable peer companies to our company. For this reason, we did not undertake a peer group analysis of executive compensation or target compensation to specific benchmarks against any peer group companies. The Compensation Committee, however, does review compensation data for companies with which it believes we compete for executive talent and considers other available information gathered by members of our Compensation Committee and our human resources staff.

Establishing Total Direct Remuneration

Total direct remuneration is the sum of base salary, annual incentive awards, long-term equity incentive awards and other benefits. A major portion of each named executive officer's remuneration is established by performance-based incentives, which requires achievement of performance objectives and goals as a condition to earning annual incentive awards and long-term equity incentive awards, which requires an increase in our stock price to have value. The at-risk portion of total direct remuneration provides increased pay for higher levels of corporate and/or business sector performance.

In setting each named executive officer's total direct remuneration opportunity, the Compensation Committee takes into account other factors such as the responsibilities, experience, performance, contributions and service of the executive. As a

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result, we do not set total direct remuneration or the component parts at levels to achieve a mathematically precise market position. In determining executive compensation, the Compensation Committee reviews all components of each named executive officer's total compensation, including retirement benefits and the costs of all perquisites received to ensure such compensation meets the goals of the program. As a part of this review, the Compensation Committee considers corporate performance information and the recommendations of senior management. The Compensation Committee also takes into consideration individual and overall company operating performance to ensure executive compensation reflects past performance as well as future potential and, we believe, adequately differentiates among employees, based on the scope and complexity of the employee's job position, individual performance and experience and our ability to pay. The Compensation Committee reviews annually each named executive officer's performance prior to considering changes in compensation. The performance of each named executive officer is evaluated in light of our overall performance (as described in greater detail below) and non-financial goals and strategic objectives approved by the Compensation Committee and the Board. Based on its latest review, the Compensation Committee believes total compensation for each of the named executive officers is reasonable.

Consideration of Say-on-Pay Vote Results

Our Board has determined to provide our shareholders the opportunity to vote each year to approve, on an advisory basis, the compensation of our named executive officers as disclosed in our Proxy Statement (say-on-pay). As an advisory vote, the vote on executive compensation is non-binding on the Board and should not be construed as overruling a decision by the Board and will not create or imply any change to our fiduciary duties or create or imply and additional fiduciary duties for the Board. Although the vote is non-binding, the Board and the Compensation Committee value the opinions of our shareholders, and consider our shareholders' views when making executive compensation decisions, as they deem appropriate.

At our 2015 annual meeting, we held our first non-binding shareholder say-on-pay vote. Our shareholders overwhelmingly approved our 2015 executive compensation proposal, with more than 99% of the shares that were cast on the proposal voted in favor of the say-on-pay resolution. Given the high level of support from our shareholders for our say-on-pay proposal, as demonstrated by the results of the shareholder vote, we did not make any significant changes in our policies or programs in response to their vote. We will continue to consider the outcome of the say-on-pay vote for future compensation decisions for our named executive officers.

Other Executive Compensation Practices*Anti-Hedging Policy*

To ensure alignment of the interests of our shareholders, directors and executive officers, including our named executive officers, the Company's Code of Conduct does not permit directors, officers or employees to engage in short-term or speculative transactions involving the Company's securities, including short sales, publicly-traded options or hedging the Company's securities.

Compensation Recovery Policies

It is the Board's policy that in the event the Board determines that a significant restatement or correction of our financial results or other metrics is required for the prior fiscal year for which audited financial statements have been completed, and, had the results or metrics been properly calculated, our officers would have received less compensation, the Board has the authority to obtain reimbursement of any portion of any performance based compensation paid or awarded, whether cash or equity based, to the officers and to other employees responsible for

accounting errors resulting in the restatement or correction that is greater than would have been paid or awarded calculated based upon the restated or corrected financial results or metrics. Further, it is the policy of the Board to seek recoupment in all instances where Section 304 of the Sarbanes-Oxley Act of 2002 requires us to seek recoupment.

United States Federal Income Tax Limits on Deductibility

Section 162(m) of the Internal Revenue Code generally precludes a tax deduction by any publicly-held company for compensation paid to any covered employee to the extent the compensation paid to such covered employee exceeds \$1 million during any taxable year of the company. Covered employees include the Chief Executive Officer of the company and the three other highest paid officers of the company (other than the Chief Executive Officer or the Chief Financial Officer). The \$1 million deduction limit, however, does not apply to qualified performance-based compensation that is based on the attainment of pre-established, objective performance goals established under a shareholder-approved plan. We consider the impact of this exclusion when developing and implementing our executive compensation programs. We believe that it is important to preserve flexibility in administering compensation programs in a manner designed to promote various corporate goals. Accordingly, we have not adopted a policy that all compensation must qualify as deductible under Section 162(m) of the Internal Revenue Code. Amounts paid under any of our compensation programs, including salaries, annual incentive awards, performance awards and grants of restricted stock and deferred stock units, may not qualify as performance-based compensation that is excluded from the Section 162(m) limitation on deductibility.

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The rules and regulations promulgated under Section 162(m) of the Internal Revenue Code are complicated and subject to change from time to time, sometimes with retroactive effect. There can be no guarantee, therefore, that amounts potentially subject to the Section 162(m) limitations will be treated by the Internal Revenue Service as qualified performance-based compensation under Section 162(m) of the Internal Revenue Code and/or deductible by the Company. A number of requirements must be met under Section 162(m) of the Internal Revenue Code in order for particular compensation to so qualify for the exception, such that there can be no assurance that qualified performance-based compensation under the 2013 Plan will be fully deductible under all circumstances. In addition, other awards under the 2013 Plan, such as time-vested restricted stock and restricted stock units, generally will not qualify for the exception under Section 162(m) of the Internal Revenue Code, so that compensation paid to certain covered employees in connection with such awards may, to the extent it and other compensation subject to Section 162(m) of the Internal Revenue Code's deductibility cap exceed \$1 million in a given taxable year, not be deductible by the Company as a result of Section 162(m) of the Internal Revenue Code. Compensation to certain employees resulting from vesting of awards in connection with a change in control or termination following a change in control also may be non-deductible under Internal Revenue Code Sections 4999 and 280G.

The Annual Incentive Plan is not designed to comply with Section 162(m) of the Internal Revenue Code, as it would require our Annual Incentive Plan awards to be entirely formulaic and not allow for the Compensation Committee to exercise an acceptable level of discretion in determining individual performance. In considering the structure of the Annual Incentive Plan, the Compensation Committee carefully assessed the potential cost of making awards under a plan that do not comply with Section 162(m) against the limitations such compliance would place upon the structure of the Annual Incentive Plan. We believe our Annual Incentive Plan is closely aligned with Company performance and also will appropriately reward our executives for their individual contributions to the Company's success while giving the Compensation Committee critical flexibility in compensation decisions regarding our executives.

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COMPENSATION COMMITTEE REPORT

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K with management and, based on such review and discussion, the Compensation Committee recommended to the Board that it be included in this Proxy Statement.

THE COMPENSATION COMMITTEE

James Turley, Chair
Cesar L. Alvarez
Jeffrey Kindler

The Compensation Committee Report above shall not be deemed incorporated by reference by any general statement incorporating this Proxy Statement into any filing under the Securities Act of 1933 or under the Securities Exchange Act of 1934, as amended, except to the extent that we specifically incorporate this information by reference, and shall not otherwise be deemed filed under such Acts.

Compensation Risk Assessment

As part of its oversight of our executive compensation program, the Compensation Committee considers the impact of our executive compensation program, and the incentives created by the compensation awards that it administers, on our risk profile. In addition, we review all our compensation policies and procedures, including the incentives that they create and factors that may reduce the likelihood of excessive risk-taking, to determine whether they present a significant risk to us. The Compensation Committee concluded that our compensation programs are designed with the appropriate balance of risk and reward in relation to our overall business strategy and that the balance of compensation elements discourages excessive risk-taking. The Compensation Committee, therefore, determined that the risks arising from our compensation policies and practices for employees are not reasonably likely to have a material adverse effect on us. The Compensation Committee will continue to consider compensation risk implications while deliberating the design of our executive compensation programs. In its discussions, the Compensation Committee considered the attributes of our programs, including:

Appropriate pay philosophy in light of our business model;

Balance with respect to the mix of cash and equity compensation; and measures of performance against both annual and multi-year standards;

Short and long-term incentives linked to stock price performance;

Performance goals are set at levels that are sufficiently high to encourage strong performance and support the resulting compensation expense, but within reasonably attainable parameters to discourage pursuit of excessively risky business strategies;

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Long-term incentives generally have multi-year vesting to ensure a long-term focus and appropriate balance against short-term goals;

Independent Compensation Committee oversight, with Compensation Committee discretion to reduce incentives based on subjective evaluation of individual performance; and

Anti hedging policies.

Table of Contents**SUMMARY COMPENSATION TABLE**

The following table sets forth the compensation paid or accrued during the fiscal years ended December 31, 2015, 2014 and 2013 to our named executive officers.

| Name and principal position | Year | Salary (\$)⁽¹⁾ | Bonus (\$) | Stock awards (\$)⁽²⁾ | Option awards (\$)⁽³⁾ | All Other Compensation (\$)⁽⁸⁾ | Total (\$) |
|---|-------------|----------------------------------|-------------------|--|---|--|-------------------|
| Randal J. Kirk ⁽⁴⁾ Chief Executive Officer and Chairman of the Board | 2015 | | 4,350,000 | 314,025 | | | 4,664,025 |
| | 2014 | | | | | | |
| | 2013 | | | | | | |
| Rick L. Sterling ⁽⁵⁾ Chief Financial Officer | 2015 | 285,475 | 500,000 | | | 31,542 | 817,017 |
| | 2014 | 235,425 | 146,760 | | 3,665,540 | 29,427 | 4,077,152 |
| Jack A. Bobo ⁽⁶⁾ Senior Vice President and Chief Communications Officer | 2015 | 126,389 | 112,329 | | 8,160,775 | 2,572 | 8,402,065 |
| Samuel Broder ⁽⁷⁾ Senior Vice President Health Sector | 2015 | 179,167 | 700,000 | | 25,582,720 | 284 | 26,462,171 |
| Joel Liffmann ⁽⁶⁾ Senior Vice President Finance | 2015 | 180,556 | 134,795 | | 26,114,480 | 12,853 | 26,442,684 |

(1) Represents salaries before any employee contributions under our 401(k) Plan.

(2) Represents the grant date fair value computed by us for financial reporting purposes, computed in accordance with FASB ASC Topic 718 (ASC 718). In November 2015, Mr. Kirk began receiving \$200,000 per month payable in fully vested shares of our common stock, which are subject to a three year lock-up on resale. For the year ended December 31, 2015, Mr. Kirk received 12,141 shares of common stock. The three year lock-up on resale results in a discount to the monthly value for financial reporting purposes. For a full description of the assumptions we use in computing this amount, see Note 14 to our consolidated financial statements for the year ended December 31, 2015, which is included in our SEC filings.

(3) Represents the grant date fair value computed by us for financial reporting purposes, computed in accordance with ASC 718. For a full description of the assumptions we use in computing these amounts, see Note 14 to our consolidated financial statements for the years ended December 31, 2015 and 2014 which are included in our SEC filings. The actual value a named executive officer may receive depends on market prices and there can be no assurance that the amounts reflected in the Option Awards column will actually be realized. No gain to a named executive officer is possible without an appreciation in stock value after the date of grant.

(4) We did not compensate Mr. Kirk in 2014 or 2013.

(5) Mr. Sterling was employed by us in 2013 but his information is provided only for 2015 and 2014 because, as he was not a named executive officer until the filing of our 2014 proxy statement, information for him for 2013 is not required to be disclosed.

(6) Messrs. Bobo and Liffmann were each hired in 2015 and thus were not paid compensation by us in 2014 or 2013.

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- (7) Mr. Broder was employed by us for 2013 and through August 2014, but his information is provided only for 2015 because, as he was not a named executive officer until the filing of this proxy statement, information for him for those years is not required to be disclosed.
- (8) The table below reflects the types and dollar amounts of perquisites, additional compensation and other personal benefits provided to the named executive officers during fiscal year 2015. For purposes of computing the dollar amounts of the items listed below, we used the actual out-of-pocket costs to us of providing the perquisite or other personal benefit to the named executive officer. The named executive officers paid any taxes associated with these benefits without reimbursement from us.

All Other Compensation Table

| Name | Year | Company-Paid | 401(k) Plan | Total(\$) |
|------------------|------|--|----------------------------|-----------|
| | | Welfare and Life Benefits Premiums(\$) | Company Contributions (\$) | |
| Randal J. Kirk | 2015 | | | |
| | 2014 | | | |
| Rick L. Sterling | 2015 | 23,592 | 7,950 | 31,542 |
| | 2014 | 21,627 | 7,800 | 29,427 |
| Jack A. Bobo | 2015 | 472 | 2,100 | 2,572 |
| Samuel Broder | 2015 | 284 | | 284 |
| Joel Liffmann | 2015 | 9,853 | 3,000 | 12,853 |

GRANTS OF PLAN-BASED AWARDS

The following table presents information regarding grants of plan-based awards to the named executive officers during the fiscal year ended December 31, 2015.

| Name | Grant date | All other stock | All other option | Exercise or base price of option awards (\$/Sh) | Grant date fair value of stock and option awards |
|------------------|------------|--|--|---|--|
| | | awards: Number of shares of stock or units (#) | awards: Number of securities underlying options(#) | | |
| Randal J. Kirk | 11/30/2015 | 5,508 | | | 157,017 |
| | 12/31/2015 | 6,633 | | | 157,008 |
| Rick L. Sterling | | | | \$ | \$ |
| Jack A. Bobo | 7/20/2015 | | 250,000 ⁽¹⁾ | \$ 57.95 | \$ 8,160,775 |
| Samuel Broder | 7/21/2015 | | 800,000 ⁽¹⁾ | \$ 56.77 | \$ 25,582,720 |
| Joel Liffmann | 7/20/2015 | | 800,000 ⁽¹⁾ | \$ 57.95 | \$ 26,114,480 |

(1) Represents the initial grant of options to each of the named executive officers upon their employment with us.

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The following table sets forth specified information concerning unexercised stock options and equity incentive plan awards for each of the named executive officers outstanding as of December 31, 2015.

| Name | date | Option awards | | Number of Equity incentive plan securities awards: | | Option price | Option expiration |
|------------------|-----------|--|--|--|--|--------------|-------------------|
| | | Number of securities underlying unexercised options: | Number of securities underlying unexercised options: | Number of securities underlying unexercised options: | Number of securities underlying unexercised options: | | |
| | | Exercisable | Unexercisable | options | (\$) | | |
| Randal J. Kirk | 2/20/2008 | 8,871 | | | \$ 2.65 | | 2/20/2018 |
| | 2/20/2009 | 2,957 | | | \$ 3.18 | | 2/20/2019 |
| Rick L. Sterling | 7/9/2007 | 70,979 | | | \$ 2.65 | | 7/9/2017 |
| | 3/20/2014 | 48,386 | 155,268(1) | | \$ 29.68 | | 3/20/2024 |
| Jack A. Bobo | 7/20/2015 | | 250,000(1) | | \$ 57.95 | | 7/20/2025 |
| Samuel Broder | 7/21/2015 | | 800,000(1) | | \$ 56.77 | | 7/21/2025 |
| Joel Liffmann | 7/20/2015 | | 800,000(1) | | \$ 57.95 | | 7/20/2025 |

(1) These options vest over four years in equal increments, beginning on the first anniversary of the grant date.

OPTION EXERCISES AND STOCK VESTED

The following table sets forth specified information concerning exercises of stock options stock vesting for each of the named executive officers outstanding as of December 31, 2015.

| Name | Option awards | | Stock awards | |
|------------------|---------------------------------------|---------------------------------|--------------------------------------|--------------------------------|
| | Number of shares acquired on exercise | Value realized on exercise (\$) | Number of shares acquired on vesting | Value realized on vesting (\$) |
| Randal J. Kirk | | | 12,141 ⁽²⁾ | \$ 399,980 |
| Rick L. Sterling | 3,369 | \$ 3,706 ⁽¹⁾ | | |
| Jack A. Bobo | | | | |
| Samuel Broder | | | | |
| Joel Liffmann | | | | |

- (1) Mr. Sterling exercised 3,369 stock options in December 2015 and has held the shares received upon exercise since exercise.
- (2) In 2015, Mr. Kirk received 12,141 fully vested shares of common stock pursuant to his Restricted Stock Unit Agreement.

No other named executive officers exercised stock options during the fiscal year ended December 31, 2015 and we have not issued any other stock awards with vesting features.

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EQUITY COMPENSATION PLANS AND OTHER BENEFIT PLANS

Intrexon Corporation 2008 Equity Incentive Plan

The Intrexon Corporation 2008 Equity Incentive Plan, as amended, which we refer to as the 2008 Plan, was first adopted by our Board and our shareholders in April 2008.

The 2008 Plan provides for the grant of incentive stock options, nonstatutory stock options, stock appreciation rights, or SARs, restricted stock awards, restricted stock unit awards and incentive awards. Our employees, directors, consultants and advisors, and the employees, directors, consultants and advisors of our affiliated entities, are eligible to receive awards under the 2008 Plan; however, incentive stock options may only be granted to our employees or the employees of our affiliated entities. In accordance with the terms of the 2008 Plan, the Compensation Committee of our Board administers the 2008 Plan and, subject to any limitations in the 2008 Plan, selects the recipients of awards and determines, among other things:

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

the exercise prices of options;

the duration of options (subject to certain limitations set forth in the plan);

the methods of payment of the exercise price of options;

the number of shares of common stock subject to any SARs and the terms and conditions of those rights, including the term (subject to certain limitations set forth in the plan), the conditions for exercise and payment upon exercise;

the number of shares of common stock subject to any restricted stock awards and restricted stock unit awards and the terms and conditions of those awards, including the price, if any, restriction period (subject to certain limitations set forth in the plan) and conditions for repurchase (with respect to restricted stock awards); and

the number of shares of common stock subject to any incentive awards and the terms and conditions of those awards, including the payment terms and award or the dollar amount of any incentive award period (subject to certain limitations set forth in the plan).

In the event of a change in control, as defined in the 2008 Plan, the Compensation Committee has the discretion to take one or more of the following actions with respect to outstanding awards on or before the date of the change in control:

provide, upon notice to the participant, that some or all of the outstanding awards shall terminate on or before the change in control without payment to the holder of such award if not exercised by the holder (to the extent such awards are then exercisable or exercisable by the change in control) within a specified reasonable period of time;

provide that all outstanding awards shall terminate on or before the change in control in consideration for payment to the holders (to the extent such awards are then exercisable or exercisable by the change in control) of the excess, if any, of the fair market value of the common stock subject to the award minus the exercise price or initial value (as applicable); and

take such other action as the Compensation Committee determines reasonable to permit the holder of the award to realize the value of the award (to the extent such awards are then exercisable or exercisable by the change in control).

As of March 31, 2016, there were options to purchase an aggregate of 1,154,315 shares of common stock outstanding under the 2008 Plan at a weighted-average exercise price of \$6.41 per share. On and after the effective date of the Amended and Restated Intrexon Corporation 2013 Omnibus Incentive Plan described below, which we refer to as the 2013 Plan, we have not granted any further stock options or other awards under the 2008 Plan.

Intrexon Corporation 2013 Omnibus Incentive Plan

The 2013 Plan became effective upon the closing of our initial public offering in August 2013 and was approved by our shareholders at our 2014 Annual Meeting. At our 2015 Annual Meeting, our shareholders authorized an additional 3,000,000 shares of common stock for issuance pursuant to the 2013 Plan. The material terms of the 2013 Plan are summarized below. As of March 31, 2016, there were options to purchase an aggregate of 9,355,773 shares of common stock outstanding under the 2013 Plan at a weighted-average exercise price of \$36.10 per share. As of March 31, 2016, there were 2,421,499 shares of common stock reserved for future issuance under the 2013 Plan. As described in Proposal 4 of this proxy statement, the Board has approved, subject to shareholder approval, authorizing an additional 3,000,000 shares of common stock for issuance pursuant to the 2013 Plan.

Table of Contents*Summary of the material terms of the 2013 Plan*

Purpose. We established the 2013 Plan to attract, retain and motivate our employees, officers and directors, to promote the success of our business by linking the personal interests of our employees, officers, consultants, advisors and directors to those of our shareholders and to encourage stock ownership on the part of management. The 2013 Plan is intended to permit the grant of stock options (both incentive stock options, or ISOs and non-qualified stock options, or NQSOs or, collectively Options), stock appreciation rights, or SARS, restricted stock awards, or Restricted Stock Awards, restricted stock units, or RSUs, incentive awards, or Incentive Awards, other stock-based awards, or Stock Based Awards, and dividend equivalents, or Dividend Equivalents.

Administration. The 2013 Plan is administered by our Compensation Committee, who has the authority to grant awards to such persons and upon such terms and conditions (not inconsistent with the provisions of the 2013 Plan) as it may consider appropriate. Our Compensation Committee may act through subcommittees or, with respect to awards granted to individuals who are not subject to the reporting and other provisions of Section 16 of the Exchange Act and who are not members of our Board or the board of directors of our Affiliates (as defined by the 2013 Plan), delegate to one or more officers all or part of its duties with respect to such awards. Our Compensation Committee may, at its discretion, accelerate the time at which any award may be exercised, become transferable or nonforfeitable or become earned and settled including without limitation (i) in the event of the participant's death, disability, retirement or involuntary termination of employment or service (including a voluntary termination of employment or service for good reason) or (ii) in connection with a Change in Control (as defined in the 2013 Plan).

Authorized Shares. Under the 2013 Plan, we may issue a maximum aggregate of 13,000,000 shares of common stock (16,000,000 shares of common stock if the shareholders approve the Amendment to the 2013 Plan as discussed under Item 4 below), all of which may be issued pursuant to Options, SARs, Restricted Stock Awards, RSUs, Incentive Awards, Stock-Based Awards or Dividend Equivalents. Each share issued in connection with an award will reduce the number of shares available under the 2013 Plan by one, and each share covered under a SAR will reduce the number of shares available under the 2013 Plan by one, even though the share is not actually issued upon settlement of the SAR. Shares relating to awards that are terminated by expiration, forfeiture, cancellation or otherwise without issuance of shares of common stock, settled in cash in lieu of shares, or exchanged prior to the issuance of shares for awards not involving shares, will again be available for issuance under the 2013 Plan. Shares not issued as a result of net settlement of an award, tendered or withheld to pay the exercise price, purchase price or withholding taxes of an award or shares purchased on the open market with the proceeds of the exercise price of an award will not again be available for issuance under the 2013 Plan.

Written Agreements. All awards granted under the 2013 Plan will be governed by separate written agreements between the participants and us. The written agreements will specify the terms of the particular awards.

Transferability. Generally, an award is non-transferable except by will or the laws of descent and distribution, and during the lifetime of the participant to whom the award is granted, the award may only be exercised by, or payable to, the participant. However, the Compensation Committee may provide that awards, other than ISOs or a Corresponding SAR that is related to an ISO, may be transferred by a participant to immediate family members or trust or other entities on behalf of the Participant and/or family members for charitable donations. Any such transfer will be permitted only if (i) the participant does not receive any consideration for the transfer and (ii) the Committee expressly approves the transfer. The holder of the transferred award will be bound by the same terms and conditions that governed the award during the period that it was held by the participant, except that such transferee may only transfer the award by will or the laws of descent and distribution.

Maximum Award Period. No award shall be exercisable or become vested or payable more than ten years after the date of grant. An ISO granted to a Ten Percent Shareholder (as defined in the 2013 Plan) or a corresponding SAR that relates to such an ISO may not be exercisable more than five years after the date of grant.

Compliance With Applicable Law. No award shall be exercisable, vested or payable except in compliance with all applicable federal and state laws and regulations (including, without limitation, tax and securities laws), any listing agreement with any stock exchange to which we are a party, and the rules of all domestic stock exchanges on which our shares may be listed.

Payment. The exercise or purchase price of an award, and any taxes required to be withheld with respect to an award, may be paid in cash or, if the written agreement so provides, the Compensation Committee may allow a participant to pay all or part of the exercise or purchase price, and any required withholding taxes, by tendering shares of common stock, through a broker-assisted cashless exercise, by means of net exercise procedure, or any other specified medium of payment.

Shareholder Rights. No participant shall have any rights as our shareholder as a result of issuance of an award until the award is settled by the issuance of common stock (other than a Restricted Stock Award or RSUs for which certain shareholder rights may be granted).

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Forfeiture Provisions. Awards do not confer upon any individual any right to continue in our employ or service or in the employ or service of our Affiliates. All rights to any award that a participant has will be immediately forfeited if the participant is discharged from employment or service.

Types of awards

Options. Both ISOs and NQSOs may be granted under the 2013 Plan. Our Compensation Committee determines the eligible individuals to whom grants of Options will be made, the number of shares subject to each option, the exercise price per share, the time or times at which the option may be exercised, whether any performance or other conditions must be satisfied before a participant may exercise an option, the method of payment by the participant, the method of delivery of shares to a participant, whether the Option is an ISO or a NQSO, and all other terms and conditions of the award. However, the exercise price of an Option may not be less than the fair market value of a share of common stock on the date the Option is granted. No participant may be granted ISOs that are first exercisable in any calendar year for shares of common stock having an aggregate fair value (determined on the date of grant) that exceeds \$100,000. With respect to an ISO granted to a participant who is a Ten Percent Shareholder (as defined in the 2013 Plan), the exercise price per share may not be less than 110 percent of the fair market value of the common stock on the date the Option is granted. At the Compensation Committee's discretion, an Option may be granted with or without a Corresponding SAR (as defined below).

SARs. A SAR entitles the participant to receive, upon exercise, the excess of the fair market value on that date of each share of common stock subject to the exercised portion of the SAR over the fair market value of each such share on the date of the grant of the SAR. A SAR can be granted alone or in tandem with an Option. A SAR granted in tandem with an Option is called a Corresponding SAR and entitles the participant to exercise the Option or the SAR, at which time the other tandem award expires with respect to the number of shares being exercised. The Compensation Committee is authorized to determine the eligible individuals to whom grants of SARs will be made, the number of shares of common stock covered by the grant, the time or times at which a SAR may be exercised and all other terms and conditions of the SAR. However, no participant may be granted Corresponding SARs that are related to ISOs which are first exercisable in any calendar year for shares of common stock having an aggregate fair market value (determined on the date of grant) that exceeds \$100,000.

Restricted Stock Awards and RSUs. A Restricted Stock Award is the grant or sale of shares of common stock, which may be subject to forfeiture for a period of time or subject to certain conditions. An RSU entitles the participant to receive, upon vesting, shares of our common stock. We will deliver to the participant one share of common stock for each RSU that becomes earned and payable. With regard to Restricted Stock Awards, the Compensation Committee is authorized to determine the eligible individuals to whom grants will be made, the number of shares subject to such grants, the purchase price, if any, to be paid for each share subject to the award of restricted stock, the time or times at which the restrictions will terminate, and all other terms and conditions of the restricted stock. With regards to RSUs, the Compensation Committee is authorized to determine the eligible individuals to whom grants will be made, the number of shares subject to such grants and the vesting conditions entitling a participant to settlement of the RSUs.

Incentive Awards. An Incentive Award entitles the participant to receive cash or common stock when certain conditions are met. The Compensation Committee has the authority to determine the eligible individuals to whom grants will be made and all other terms and conditions of the Incentive Award.

Stock-Based Awards. Stock-Based Awards may be denominated or payable in, valued by reference to or otherwise based on shares of common stock, including awards convertible or exchangeable into shares of common stock (or the cash value thereof) and common stock purchase rights and awards valued by reference to the fair market value of the common stock. The Compensation Committee has the authority to determine the eligible individuals to whom grants

will be made and all other terms and conditions of Stock-Based Awards. However, the purchase price for the common stock under any Stock-Based Award in the nature of a purchase right may not be less than the fair market value of a share of common stock as of the date the award is granted. Cash awards, as an element of or supplement to any other award under the 2013 Plan, may also be granted.

Our Compensation Committee is also authorized under the 2013 Plan to grant shares of common stock as a bonus, or to grant shares of common stock or other awards in lieu of any of our obligations or of our affiliates to pay cash or to deliver other property under the 2013 Plan or under any other of our plans or compensatory arrangements or any of our affiliates.

Dividend Equivalents. Our Compensation Committee may also grant Dividend Equivalents under the 2013 Plan. A Dividend Equivalent is an award that entitles the participant to receive cash, shares of common stock, other awards or other property equal in value to all or a specified portion of dividends paid with respect to shares of our common stock. The Compensation Committee is authorized to determine the eligible individuals to whom grants will be made and all other terms and conditions of the Dividend Equivalents. However, no Dividend Equivalents may be awarded with an Option, SAR or Stock-Based Award in the nature of purchase rights.

Table of Contents*Material Terms of the Performance-Based Compensation*

Awards that are paid to Named Executive Officers (as defined in the 2013 Plan) are potentially subject to the tax deduction limitations of Section 162(m) of the Code. The limitations of Section 162(m) of the Code do not apply, however, to performance-based compensation that meets certain requirements, including shareholder approval of the eligibility requirements, business criteria for performance goals and individual award limits of the 2013 Plan pursuant to which such awards are made.

Eligibility. Any of our employees or service providers, employees or service providers of our Affiliates (as defined in the 2013 Plan), and nonemployee members of our Board or of any board of directors of our Affiliates is eligible to receive an award under the 2013 Plan.

Award Limits. In any calendar year, no participant may be granted awards that relate to more than 1,000,000 shares of common stock. For these purposes, an Option and its corresponding SAR will be counted as a single award. For any award stated with reference to a specific dollar limit, the maximum amount payable with respect to any 12-month performance period to any one participant is \$5,000,000 (pro-rated up or down for performance periods greater or less than 12 months). Award limits that are expressed as a number of shares are subject to the adjustment provisions of the 2013 Plan as described below.

Performance Criteria. Our Compensation Committee has the discretion to establish objectively determinable performance conditions for when awards will become vested, exercisable and payable. Objectively determinable performance conditions generally are performance conditions (a) that are established in writing (i) at the time of the grant or (ii) no later than the earlier of (x) 90 days after the beginning of the period of service to which they relate and (y) before the lapse of 25 percent of the period of service to which they relate; (b) that are uncertain of achievement at the time they are established and (c) the achievement of which is determinable by a third party with knowledge of the relevant facts. These performance conditions may be based on one or any combination of metrics related to our financial, market or business performance. The form of the performance conditions also may be measured on a company, affiliate, division, business unit or geographic basis, individually, alternatively or in any combination, subset or component thereof. Performance goals may reflect absolute entity performance or a relative comparison of entity performance to the performance of a peer group of entities or other external measure of the selected performance conditions. Profits, earnings and revenues used for any performance condition measurement may exclude any extraordinary or nonrecurring items. The performance conditions may, but need not, be based upon an increase or positive result under the aforementioned business criteria and could include, for example and not by way of limitation, maintaining the status quo or limiting the economic losses (measured, in each case, by reference to the specific business criteria). An award that is intended to become exercisable, vested or payable on the achievement of performance conditions means that the award will not become exercisable, vested or payable solely on mere continued employment or service. However, such an award, in addition to performance conditions, may be subject to continued employment or service by the participant. The performance conditions may include any or any combination of the following: (a) revenue, (b) earnings before interest, taxes, depreciation and amortization, or EBITDA, (c) cash earnings (earnings before amortization of intangibles), (d) operating income, (e) pre-or after-tax income, (f) earnings per share, (g) net cash flow, (h) net cash flow per share, (i) net earnings, (j) return on equity, (k) return on total capital, (l) return on sales, (m) return on net assets employed, (n) return on assets or net assets, (o) share price performance, (p) total shareholder return, (q) improvement in or attainment of expense levels, (r) improvement in or attainment of working capital levels, (s) net sales, (t) revenue growth or product revenue growth, (u) operating income (before or after taxes), (v) pre-or after-tax income (before or after allocation of corporate overhead and bonus), (w) earnings per share; (x) return on equity, (y) appreciation in and/or maintenance of the price of the shares of our common stock, (z) market share, (aa) gross profits, (bb) comparisons with various stock market indices; (cc) reductions in cost, (dd) cash flow or cash flow per share (before or after dividends), (ee) return on capital (including return on total capital or

return on invested capital), (ff) cash flow return on investments; (gg) improvement in or attainment of expense levels or working capital levels, and/or (hh) shareholder equity.

The foregoing performance conditions represent the criteria on which performance goals may be based under the 2013 Plan for awards that are intended to qualify for the qualified performance-based compensation exception to Section 162(m) of the Code. At its sole discretion, our Compensation Committee may grant an award that is subject to the achievement or satisfaction of performance conditions that are not set forth in the 2013 Plan to the extent our Compensation Committee does not intend for such award to constitute qualified performance-based compensation within the meaning of Section 162(m) of the Code.

Our Compensation Committee has the discretion to select one or more periods of time over which the attainment of one or more of the foregoing performance conditions will be measured for the purpose of determining when an award will become vested, exercisable or payable. The Compensation Committee has the authority to adjust goals and awards in the manner set forth in the 2013 Plan.

Change in Control. In the event of a Change in Control (as defined in the 2013 Plan) and, with respect to awards that are subject to Section 409A of the Internal Revenue Code of 1986, as amended, or the Code, and such awards, 409A

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Awards, only to the extent permitted by Section 409A of the Code, our Compensation Committee in its discretion may, on a participant-by-participant basis (a) accelerate the vesting of all unvested and unexercised Options, SARs or Stock-Based Awards in the nature of purchase rights and/or terminate such awards, without any payment therefore, immediately prior to the date of any such transaction after giving the participant at least seven days written notice of such actions; (b) fully vest and/or accelerate settlement of any awards; (c) terminate any outstanding Options, SARs or Stock-Based Awards in the nature of purchase rights after giving the participant notice and a chance to exercise such awards (to the extent then exercisable or exercisable upon the change in control); (d) cancel any portion of an outstanding award that remains unexercised or is subject to restriction or forfeiture in exchange for a cash payment to the participant of the value of the award; or (e) require that the award be assumed by the successor corporation or replaced with interests of an equal value in the successor corporation.

Amendment and Termination. The 2013 Plan expires 10 years after its effective date, unless terminated earlier by our Board. Any award that is outstanding as of the date the 2013 Plan expires will continue in force according to the terms set out in the award agreement. Our Board may terminate, amend or modify the 2013 Plan at any time. However, shareholder approval may be required for certain types of amendments under applicable law or regulatory authority. Except as may be provided in an award agreement or the 2013 Plan, no amendment to the 2013 Plan may adversely affect the terms and conditions of any existing award in any material way without the participant's consent.

An amendment will be contingent on approval of our shareholders, to the extent required by law, by the rules of any stock exchange on which our securities are then traded or if the amendment would (i) increase the benefits accruing to participants under the 2013 Plan, including without limitation, any amendment to the 2013 Plan or any agreement to permit a re-pricing or decrease in the exercise price of any outstanding awards, (ii) increase the aggregate number of shares of common stock that may be issued under the 2013 Plan, (iii) modify the requirements as to eligibility for participation in the 2013 Plan or (iv) change the stated performance conditions for performance-based compensation within the meaning of Section 162(m) of the Code. Additionally, to the extent the Compensation Committee deems necessary for the 2013 Plan to continue to grant awards that are intended to comply with the performance-based exception to the deduction limits of Section 162(m) of the Code, the Compensation Committee will submit the material terms of the stated performance conditions to our shareholders for approval no later than the first shareholder meeting that occurs in the fifth year following the year in which our shareholders previously approved the performance goals.

Material U.S. Federal Income Tax Consequences of Awards under the 2013 Plan

The following discussion summarizes the principal federal income tax consequences associated with awards under the 2013 Plan. The discussion is based on laws, regulations, rulings and court decisions currently in effect, all of which are subject to change.

ISOs. A participant will not recognize taxable income on the grant or exercise of an ISO (although the excess of the fair market value of the common stock over the exercise price will be included for alternative minimum tax purposes). A participant will recognize taxable income when he or she disposes of the shares of common stock acquired under the ISO. If the disposition occurs more than two years after the grant of the ISO and more than one year after its exercise, the participant will recognize long-term capital gain (or loss) to the extent the amount realized from the disposition exceeds (or is less than) the participant's tax basis in the shares of common stock. A participant's tax basis in the common stock generally will be the amount the participant paid for the stock. If common stock acquired under an ISO is disposed of before the expiration of the ISO holding period described above, the participant will recognize as ordinary income in the year of the disposition the excess of the fair market value of the common stock on the date of exercise of the ISO over the exercise price. Any additional gain will be treated as long-term or short-term capital gain, depending on the length of time the participant held the shares. Special rules apply if a participant pays the

exercise price by delivery of common stock. We will not be entitled to a federal income tax deduction with respect to the grant or exercise of an ISO. However, in the event a participant disposes of common stock acquired under an ISO before the expiration of the ISO holding period described above, we generally will be entitled to a federal income tax deduction equal to the amount of ordinary income the participant recognizes.

NQSOs. A participant will not recognize any taxable income on the grant of a NQSO. On the exercise of a NQSO, the participant will recognize as ordinary income the excess of the fair market value of the common stock acquired over the exercise price. A participant's tax basis in the common stock is the amount paid plus any amounts included in income on exercise. Special rules apply if a participant pays the exercise price by delivery of common stock. The exercise of a NQSO generally will entitle us to claim a federal income tax deduction equal to the amount of ordinary income the participant recognizes.

SARs. A participant will not recognize any taxable income at the time SARs are granted. The participant at the time of receipt will recognize as ordinary income the amount of cash and the fair market value of the common stock that he or she receives. We generally will be entitled to a federal income tax deduction equal to the amount of ordinary income the participant recognizes.

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Restricted Stock Awards and RSUs. With regard to Restricted Stock Awards, a participant will recognize ordinary income on account of a Restricted Stock Award on the first day that the shares are either transferable or not subject to a substantial risk of forfeiture. The ordinary income recognized will equal the excess of the fair market value of the common stock on such date over the price, if any, paid for the stock. However, even if the shares under a Restricted Stock Award are both nontransferable and subject to a substantial risk of forfeiture, the participant may make a special 83(b) election to recognize income, and have his or her tax consequences determined, as of the date the Restricted Stock Award is made. The participant's tax basis in the shares received will equal the income recognized plus the price, if any, paid for the Restricted Stock Award. We generally will be entitled to a federal income tax deduction equal to the ordinary income the participant recognizes. With regard to RSUs, the participant will not recognize any taxable income at the time RSUs are granted. When the terms and conditions to which the RSUs are subject have been satisfied and the RSUs are paid, the participant will recognize as ordinary income the fair market value of the common stock he or she receives. We generally will be entitled to a federal income tax deduction equal to the ordinary income the participant recognizes.

Incentive Awards. A participant will not recognize any taxable income at the time an Incentive Award is granted. When the terms and conditions to which an Incentive Award is subject have been satisfied and the award is paid, the participant will recognize as ordinary income the amount of cash and the fair market value of the common stock he or she receives. We generally will be entitled to a federal income tax deduction equal to the amount of ordinary income the participant recognizes, subject to the deduction conditions and limits applicable under Section 162(m) of the Code.

Stock-Based Awards. A participant will recognize ordinary income on receipt of cash or shares of common stock paid with respect to a Stock-Based Award. We generally will be entitled to a federal tax deduction equal to the amount of ordinary income the participant recognizes.

Dividend Equivalents. A participant will recognize as ordinary income the amount of cash and the fair market value of any common stock he or she receives on payment of the Dividend Equivalents. To the extent the Dividend Equivalents are paid in the form of other awards, the participant will recognize income as otherwise described herein.

Limitation on Deductions. Section 162(m) of the Internal Revenue Code generally precludes a tax deduction by any publicly-held company for compensation paid to any covered employee to the extent the compensation paid to such covered employee exceeds \$1 million during any taxable year of the company. Covered employees include the Chief Executive Officer of the company and the three other highest paid officers of the company (other than the Chief Executive Officer or the Chief Financial Officer). The \$1 million deduction limit, however, does not apply to qualified performance-based compensation that is based on the attainment of pre-established, objective performance goals established under a shareholder-approved plan. We consider the impact of this exclusion when developing and implementing our executive compensation programs. We believe that it is important to preserve flexibility in administering compensation programs in a manner designed to promote varying corporate goals. Accordingly, we have not adopted a policy that all compensation must qualify as deductible under Section 162(m) of the Internal Revenue Code. Amounts paid under any of our compensation programs, including salaries, annual incentive awards, performance awards and grants of restricted stock and options, may not qualify as performance-based compensation that is excluded from the Section 162(m) limitation on deductibility.

The rules and regulations promulgated under Section 162(m) of the Internal Revenue Code are complicated and subject to change from time to time, sometimes with retroactive effect. There can be no guarantee, therefore, that amounts potentially subject to the Section 162(m) limitations will be treated by the Internal Revenue Service as qualified performance-based compensation under Section 162(m) of the Internal Revenue Code and/or deductible by the Company. A number of requirements must be met under Section 162(m) of the Internal Revenue Code in order for particular compensation to so qualify for the exception such that there can be no assurance that qualified

performance-based compensation under the 2013 Plan will be fully deductible under all circumstances. In addition, other awards under the 2013 Plan, such as non-performance-based restricted stock and restricted stock units, generally will not qualify for the exception under Section 162(m) of the Internal Revenue Code, so that compensation paid to certain covered employees in connection with such awards may, to the extent it and other compensation subject to Section 162(m) of the Internal Revenue Code's deductibility cap exceed \$1 million in a given taxable year, not be deductible by the Company as a result of Section 162(m) of the Internal Revenue Code. Compensation to certain employees resulting from vesting of awards in connection with a change in control or termination following a change in control also may be non-deductible under Internal Revenue Code Sections 4999 and 280G.

Other Tax Rules. The 2013 Plan is designed to enable our Compensation Committee to structure awards that will not be subject to Section 409A of the Code, which imposes certain restrictions and requirements on deferred compensation. However, our Compensation Committee may grant awards that are subject to Section 409A of the Code. In that case, the terms of such 409A Award will be (a) subject to the deferral election requirements of Section 409A of the Code; and (b) may only be paid upon a separation from service, a set time, death, disability, a change in control or an unforeseeable emergency, each within the meanings of Section 409A of the Code. Our Compensation Committee shall not have the authority to accelerate or defer a 409A Award other than as permitted by Section 409A of the Code. Moreover, any payment on a separation from service of a Specified Employee (as defined in the 2013 Plan) will not be made until six months following the participant's separation from service (or upon the participant's death, if earlier) as required by Section 409A of the Code.

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401(k) Plan

We provide a 401(k) Plan to all eligible employees as defined in the plan. Subject to annual limits set by the Internal Revenue Service, we match 100 percent of eligible employee contributions up to a maximum of 3 percent of an employee's salary and vesting in our match is ratable over three years from an employee's date of employment.

Rule 10b5-1 Plans

Certain of our executive officers have adopted written plans, known as Rule 10b5-1 plans, in which they will contract with a broker to buy or sell shares of our common stock on a periodic basis. Under a Rule 10b5-1 plan, a broker executes trades pursuant to parameters established by the director or executive officer when entering into the Rule 10b5-1 plan, without further direction from such director or executive officer. The director or executive officer may amend or terminate the Rule 10b5-1 plan in specified circumstances.

Pension Benefits

We do not have any plan that provides for payments or other benefits at, following, or in connection with retirement.

Nonqualified Deferred Compensation

We do not have any defined contribution or other plan that provides for the deferral of compensation on a basis that is not tax-qualified.

POTENTIAL PAYMENTS UPON TERMINATION OR A CHANGE IN CONTROL

None of our named executive officers have employment agreements or change of control agreements with us. We do not offer long-term severance, employment, or retention agreements to our named executive officers. However, to ensure that we will have the continued dedicated service of certain executives, including some of our named executive officers, notwithstanding the possibility, threat, or occurrence of a change of control, our stock option awards with our named executive officers contain change of control provisions. Because we do not have any severance, employment, or retention agreements with our named executive officers, the Compensation Committee believes that the change of control provisions in our stock option awards serve the best interests of our Company and our shareholders by ensuring that if a change of control is ever under consideration, our executives are able to perform their duties and responsibilities and advise the Board about the potential transaction in the best interests of shareholders, without being unduly influenced by the distracting uncertainty and risk associated with a change of control, such as fear of the economic consequences of losing their equity awards as a result of a change of control.

A **Change in Control** is defined in the 2013 Plan to mean generally the occurrence of any of the following events:

- (a) the accumulation in any number of related or unrelated transactions by any person of beneficial ownership (as such term is used in Rule 13d-3 promulgated under the Exchange Act) of more than fifty percent (50%) of the combined voting power of the Company's voting stock; provided that for purposes of this subsection (a), a Change in Control will not be deemed to have occurred if the accumulation of more than fifty percent (50%) of the voting power of the Company's voting stock results from any acquisition of voting stock (i) directly from the Company that is approved by the Incumbent Board (as defined in the 2013 Plan), (ii) by the Company, (iii) by any employee benefit plan (or related trust)

sponsored or maintained by the Company or any Affiliate, or (iv) by any person pursuant to a merger, consolidation, reorganization or other transaction (a Business Combination) that would not cause a Change in Control under subsections (b), (c) or (d) below; or

- (b) consummation of a Business Combination, unless, immediately following that Business Combination, (i) all or substantially all of the persons who were the beneficial owners of the voting stock of the Company immediately prior to that Business Combination beneficially own, directly or indirectly, more than fifty percent (50%) of the then outstanding shares of common stock and more than fifty percent (50%) of the combined voting power of the then outstanding voting stock entitled to vote generally in the election of directors of the entity resulting from that Business Combination (including, without limitation, an entity that as a result of that Business Combination owns the Company or all or substantially all of the Company's assets either directly or through one or more subsidiaries) in substantially the same proportions relative to each other as their ownership, immediately prior to that Business Combination, of the voting stock of the Company, or
- (c) a sale or other disposition of all or substantially all of the assets of the Company, except pursuant to a Business Combination that would not cause a Change in Control under subsections (b) above or (d) below; or

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- (d) approval by the shareholders of a complete liquidation or dissolution of the Company, except pursuant to a Business Combination that would not cause a Change in Control under subsections (b) and (c) above; or
- (e) the acquisition by any person, directly or indirectly, of the power to direct or cause the direction of the management and policies of the Company (i) through the ownership of securities which provide the holder with such power, excluding voting rights attendant with such securities, or (ii) by contract; provided that a Change in Control will not be deemed to have occurred if such power was acquired (x) directly from the Company in a transaction approved by the Incumbent Board, (y) by an employee benefit plan (or related trust) sponsored or maintained by the Company or any affiliate or (z) by any person pursuant to a Business Combination that would not cause a Change in Control under subsections (b), (c) or (d) above; or
- (f) During any period of two consecutive years, the Incumbent Board ceases to constitute a majority of the Board.

Notwithstanding the foregoing, a change in control does not include any accumulation of beneficial ownership or any Business Combination pursuant to which more than fifty percent (50%) of the beneficial ownership of the combined voting power of the Company's voting stock is owned by (i) Randal J. Kirk, his spouse, his descendants and the spouses of his descendants, (ii) trusts and other entities established generally for the benefit of Randal J. Kirk, his spouse, his descendants and the spouses of his descendants, (iii) NewVa Capital Partners, LP, New River Management IV, LP., New River Management V, LP, Kirkfield, L.L.C., RJK, L.L.C., Third Security Staff 2001 LLC and any related funds, investors or entities, and/or (iv) any entities established by any of the foregoing.

Our stock option and restricted award agreements with our named executive officers provide that in the event a Change in Control (as defined in the 2013 Plan) occurs and no provision is made for the continuance, assumption or substitution of the option award by the Company or its successor in connection with a Change in Control, then, the award will become exercisable in full, to the extent not exercisable previously, on the earlier of the control change date or the date the award is to be terminated in connection with the Change in Control, provided the executive has remained continuously employed by the Company or any affiliate from the grant date until such time.

| | | Termination⁽¹⁾ | Change in Control⁽²⁾ | Incapacity⁽³⁾ | Death⁽⁴⁾ |
|------------------|---------------|----------------------------------|--|---------------------------------|----------------------------|
| Randal J. Kirk | Options | \$ | \$ | \$ | \$ |
| | Benefit Plans | | | | |
| | Total | | | | |
| Rick L. Sterling | Options | | 72,976 | | |
| | Benefit Plans | 28,846 | | 192,000 | 1,145,000 |
| | Total | 28,846 | 72,976 | 192,000 | 1,145,000 |
| Jack A. Bobo | Options | | | | |
| | Benefit Plans | 6,109 | | 192,000 | 1,106,000 |

| | | | | |
|---------------|---------------|--------|---------|-----------|
| | Total | 6,109 | 192,000 | 1,106,000 |
| Samuel Broder | Options | | | |
| | Benefit Plans | 17,142 | (5) | 1,346,000 |
| | Total | 17,142 | | 1,346,000 |
| Joel Liffmann | Options | | | |
| | Benefit Plans | 8,085 | 192,000 | 1,346,000 |
| | Total | 8,085 | 192,000 | 1,346,000 |

- (1) Includes accrued but unused vacation. If a named executive officer is terminated for cause all options, including vested options, are cancelled.
- (2) In the event of a change in control (as described above), unvested stock options vest immediately. The amount shown represents the market value of unvested stock options that would become fully vested following a qualifying change of control transaction. Options with a strike price greater than \$30.15 are not included because the closing price of our common stock of \$30.15 on December 31, 2015, the last trading day of fiscal 2015, was less than the option exercise price.
- (3) Includes benefits payable under long-term disability insurance. Long-term disability benefits are payable beginning in the 13th month of disability through the 36th month of disability. These benefits equal 60% of base salary, capped at \$8,000 per month. The values in the table above assume benefit payments for the maximum 24 months.
- (4) Includes benefits payable to the executive's heirs pursuant to life insurance, which is generally two times base salary with a cap of \$545,000, with certain exceptions to the cap, and accidental death and disability insurance, which is two times base salary with a cap of \$1 million.
- (5) Mr. Broder is not eligible for long-term disability benefits.

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CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2015 to which we have been a party, in which the amount involved exceeded or will exceed \$120,000, and in which any of our directors, executive officers or beneficial owners of more than five percent of our voting securities, or affiliates or immediate family members of any of our directors, executive officers or beneficial owners of more than five percent of our voting securities, had or will have a direct or indirect material interest.

Our Company has historically been owned, funded, and managed by Randal J. Kirk, our Chief Executive Officer, and affiliates of Mr. Kirk, for the purpose of exploiting our synthetic biotechnology. As a result, we have engaged in a variety of financial and operational transactions with Mr. Kirk and these affiliates. In accordance with the requirements of the SEC, we describe below all such transactions in which we have engaged since January 1, 2015.

We believe that each of these transactions were on terms no less favorable to us than terms we could have obtained from unaffiliated third parties. Moreover, all of these transactions have been approved by a majority of the independent and disinterested members of the Board. It is our intention to ensure that all future transactions, if any, between us and our officers, directors, principal shareholders and their affiliates or immediate family members, are approved by the Nominating and Governance committee or a majority of the independent and disinterested members of the Board, and are on terms no less favorable to us than those that we could obtain from unaffiliated third parties.

J.P. Morgan Securities LLC

Mr. Frank is the Chairman of Global Healthcare Investment Banking at JPM. JPM served as the lead underwriter in our initial public offering in August 2013 and our public offering in January 2015 and provides other financial advisory, investment banking and other services to us from time to time, for which it has received and may continue to receive customary fees and commissions. JPM received an aggregate of approximately \$3.6 million in fees and commissions in conjunction with our January 2015 offering. Mr. Frank has recused himself from any decision made by the Board concerning JPM, including JPM's participation in our initial public offering and January 2015 public offering. In addition, Mr. Frank did not participate in our initial public offering or January 2015 public offering in his capacity as an executive of JPM. The Board has determined that this relationship is not material and that it does not impair Mr. Frank's independence.

January 2015 Public Offering

On January 27, 2015, we closed a public offering of 4,312,500 shares of our common stock at a public offering price of \$27.00 per share for total gross proceeds of approximately \$116.4 million, before deducting underwriting discounts, commissions and expenses. 555,556 of these shares were purchased for an aggregate purchase price of \$15.0 million by Kapital Joe, LLC and Mascara Kaboom, LLC, affiliates of Mr. Kirk.

Transactions with Third Security, LLC and Affiliates

Services Agreement

On October 30, 2015, the independent members of the Board approved a Services Agreement (the "Services Agreement") to be entered into and effective as of November 1, 2015, by and between the Company and Third Security, LLC ("Third Security"). Mr. Kirk and shareholders affiliated with him beneficially own approximately 53.0 percent of the Company's voting stock. Mr. Kirk, currently serves as the Senior Managing Director and Chief Executive Officer of Third Security and owns 100% of the equity interests of Third Security. Third Security is the

manager to certain funds that own shares of our common stock, and, therefore may be deemed to have beneficial ownership of approximately 48.7 percent of the Company. The Services Agreement was unanimously approved by the Audit Committee and the independent members of the Board in accordance with our policy on related person transactions.

Pursuant to the terms of the Services Agreement, Third Security provides us with the services necessary or appropriate to support the Company and Mr. Kirk in his role as Chief Executive Officer of the Company. Third Security provides a wide variety of resources to us at the direction of Mr. Kirk, including the efforts of professionals with significant experience in areas such as accounting, corporate finance, research and analysis, law, tax, due diligence support, complex transaction structuring and support, mergers and acquisitions, and strategic relationship development and opportunity sourcing. Third Security also provides executive assistant, administrative, and other support services for Mr. Kirk in his role as Chief Executive Officer of the Company. Additionally, Third Security provides such other general support services to us as directed by Mr. Kirk in such role.

In exchange for the foregoing services, the Company pays Third Security a fee of \$800,000 per month, which payment is made in fully-vested shares of our common stock. The shares of common stock are valued based on the closing price of our common stock on the 15th day of the applicable month (or the most recent trading day prior to such date if such date is not a trading day).

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The payments made by us under the Services Agreement constitute, in the aggregate, an award under the 2013 Plan and are subject to the terms of the Plan. If, based on the advice of counsel, the Company determines that it is unable to issue shares under the 2013 Plan after a period of 30 days, then the payment of any deficiency shall be made to Third Security in cash rather than in shares of our common stock.

The Services Agreement has a term of one year, and may be extended only by agreement of the parties. An extension of the agreement will require, on behalf of the Company, approval of a majority of the independent members of the Board. The Services Agreement may be terminated at any time by us upon delivery of written notice to Third Security. Third Security may terminate the agreement upon 30 days prior written notice.

For the year ended December 31, 2015, we issued 48,678 shares to Third Security as payment for services pursuant to the Services Agreement.

Reimbursement of Expenses

We reimburse Third Security for certain administrative services and out-of-pocket expenses incurred by them on our behalf. The total amount of expenses reimbursed by us for the year ended December 31, 2015, was approximately \$428,000.

Genopaver

Effective March 2013, we entered into an exclusive channel collaboration (ECC) with Genopaver LLC, or Genopaver, which is a limited liability company formed for the express purpose of entering into the ECC and developing and commercializing products identified through the ECC. Genopaver is an affiliate of Third Security, LLC. We are reimbursed for research and development services as provided for in the ECC. We are entitled to a royalty on the gross profits of product sales from a product developed from the ECC.

Persea Bio

Effective December 2014, we entered into an ECC with Persea Bio, LLC, or Persea Bio, which is a limited liability company formed for the express purpose of entering into the ECC and developing and commercializing products identified through the ECC. Persea Bio is an affiliate of Third Security, LLC. We are reimbursed for research and development services as provided for in the ECC. We are entitled to a royalty on the gross profits of product sales from a product developed from the ECC.

Chief Executive Officer Position

Mr. Kirk assumed the role of our Chief Executive Officer in April 2009 and served on a part-time basis in that capacity through 2011. In 2012, Mr. Kirk began serving in this role on a full-time basis. Until entering into the Restricted Stock Unit Agreement in November 2015, Mr. Kirk had not received compensation for his service as Chief Executive Officer other than through his participation in the Company's Annual Executive Incentive Plan which became effective January 1, 2015.

Executive Officer Relationships

Mr. Krish S. Krishnan, our former Chief Operating Officer through March 2016, is the husband of Mrs. Suma M. Krishnan, our former Senior Vice President, Product Development through March 2016. Mrs. Krishnan served as an officer of the Company since 2012, first as our Senior Vice President, Regulatory Affairs, and starting in March 2014

as our Senior Vice President Product Development.

Harvest Intrexon Enterprise Fund I LP

As a means to further the development of our business model, in June 2015, we entered into an agreement with Harvest Intrexon Enterprise Fund I LP, or Harvest, an investment fund sponsored by Harvest Capital Strategies, LLC. Affiliates of Mr. Kirk have an approximate 20 percent ownership in Harvest. Harvest was established to invest in life science research and development opportunities that we offer to Harvest. These will be investment proposals that are suitable for pursuit by a start-up venture, characterized by the agreement as start-up opportunities. For such start-up opportunities, we will provide Harvest with the exclusive rights of first-look and first negotiation. For any opportunities it decides to pursue, Harvest would establish new collaboration entities which would enter into an ECC with us in a designated field. The terms of such ECCs would be negotiated between us and Harvest. In addition, the agreement provides us the right to present to Harvest the opportunity to invest in other ventures, including investment opportunities with respect to our existing collaborations. Any such opportunities would be presented at our discretion on a non-exclusive basis. The agreement with Harvest does not limit our ability to execute other collaborations and joint ventures with third parties. As consideration for providing exclusive rights of first-look and first negotiation for start-up opportunities, we receive a portion of the management fee collected by the fund sponsor of Harvest. We collected approximately \$1.349 million of these fees in the year ended December 31, 2015.

Table of Contents**Transactions with ECC Parties, Joint Ventures and Majority-Owned Subsidiaries*****ZIOPHARM***

Pursuant to an ECC, a securities purchase agreement and a registration rights agreement, each dated in January 2011, we granted to ZIOPHARM Oncology, Inc., or ZIOPHARM, a worldwide exclusive license to use certain specified patents and other intellectual property in the field of oncology as defined in the ECC. Pursuant to the securities purchase agreement, we agreed to purchase up to an additional \$50 million of common stock in conjunction with securities offerings that may be conducted by ZIOPHARM in the future, subject to certain conditions and limitations. Between February 2011 and February 2015, we purchased an aggregate of \$43.6 million of ZIOPHARM securities reducing our future obligation to purchase ZIOPHARM common stock to approximately \$6.4 million. The remaining \$6.4 million obligation was waived in conjunction with the ECC amendment discussed below. In conjunction with the original transactions in January 2011, Mr. Kirk joined the board of directors of ZIOPHARM.

In January 2015, we and ZIOPHARM entered into a license agreement with The University of Texas System Board of Regents on behalf of The University of Texas M.D. Anderson Cancer Center, or MD Anderson. Pursuant to the license agreement, we hold an exclusive license to certain technologies owned and licensed by MD Anderson, including technologies relating to novel chimeric antigen receptor (CAR) T-cell therapies. The license agreement also includes co-licenses and non-exclusive licenses to certain other related technologies. Among the license rights, we received exclusive sublicensed rights, through MD Anderson, for intellectual property developed at the University of Minnesota for the development of cellular therapies to prevent, diagnose and/or treat cancers. We expect to employ the licensed technologies, together with our existing suite of proprietary technologies, through our existing exclusive collaboration agreement with ZIOPHARM to pursue the development and commercialization of non-viral adoptive cellular therapies based on designer cytokines and CARs under control of RheoSwitch technology targeting both hematologic and solid tumor malignancies. In addition to the licenses, the license agreement transferred to us and ZIOPHARM certain existing programs of MD Anderson, including ongoing clinical and preclinical programs. In connection with this transfer, ZIOPHARM committed to funding between \$15 million and \$20 million for ongoing research at MD Anderson for three years. We will have certain rights to technologies developed through such research, as provided in the agreement.

In March 2015, we and ZIOPHARM entered into a Second Amendment, or the Amendment, to our first ECC discussed above. The Amendment modifies the scope of the parties' collaboration and provides that we will pay to ZIOPHARM fifty percent of all payments we receive for upfronts, milestones and royalties under a license and collaboration agreement with ARES Trading S.A., a company within the pharmaceutical business of Merck KGaA, Darmstadt, Germany. The Amendment also reduced our aggregate commitment, described above, to purchase ZIOPHARM common stock from \$50.0 million to \$43.5 million, which commitment has been satisfied in full. In June 2015, we distributed 17,830,305 shares of ZIOPHARM common stock to our shareholders as a special stock dividend, representing all of the equity interests of ZIOPHARM held by us. Affiliates of Mr. Kirk received 8,223,632 shares of ZIOPHARM common stock as a result of this special stock dividend. As of March 31, 2016, Mr. Kirk, together with his affiliates (excluding us), beneficially owned 9,692,403 shares, or 7.4 percent of ZIOPHARM's common stock.

In September 2015, we entered into our second ECC with ZIOPHARM through which we granted to ZIOPHARM an exclusive license to use our proprietary technologies and other intellectual property to develop and commercialize novel biotherapeutics for the treatment of patients with graft-versus-host-disease, or GvHD. We received a technology access fee of \$10 million.

Synthetic Biologics

Pursuant to an ECC, a securities purchase agreement and a registration rights agreement, each dated in November 2011, we granted to Synthetic Biologics, Inc., or Synthetic Biologics, a worldwide exclusive license to use certain specified patents and other intellectual property for the treatment of pulmonary arterial hypertension, or PAH. We terminated this ECC in April 2013. Pursuant to a second ECC, dated in August 2012, we granted to Synthetic Biologics a worldwide exclusive license to use certain specified patents and other intellectual property in connection with the research, development, use, importing, manufacture, sale and offer for sale of monoclonal antibody therapies for the treatment of eight specific target infectious disease indications. In conjunction with the collaboration, we are entitled to, at our election, purchase up to 19.99 percent of securities offerings that may be conducted by Synthetic Biologics in the future, subject to certain conditions and limitations. To date we have purchased 2,000,000 shares of Synthetic Biologics common stock with no purchases occurring in 2015 or through March 31, 2016. We have also been granted the right to make purchases of Synthetic Biologics common stock in the open market up to an additional 10 percent of Synthetic Biologics common stock. We have made no open market purchases of Synthetic Biologics common stock.

In August 2015, we entered into our third ECC with Synthetic Biologics through which we granted to Synthetic Biologics an exclusive license to use our proprietary technologies and other intellectual property to develop and commercialize novel biotherapeutics for the treatment of patients with phenylketonuria, or PKU. In consideration for this license, we received 937,500 shares of Synthetic Biologics common stock with a value, at the time, of \$3 million.

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Prior to 2015, pursuant to stock purchase agreements, an affiliate of Mr. Kirk, NRM VII Holdings, I, LLC, purchased shares of Synthetic Biologics common stock. As of March 31, 2016, Mr. Kirk, together with his affiliates (excluding us), beneficially owned 3,625,000 shares, or 4.0 percent of Synthetic Biologics outstanding common stock.

Oragenics

Pursuant to an ECC and a stock issuance agreement, each dated in June 2012, we granted to Oragenics, Inc., or Oragenics, an exclusive license to use our proprietary technologies and other intellectual property to develop and commercialize lantibiotics for the treatment of infectious diseases in humans and companion animals. In conjunction with our first ECC with Oragenics, we are entitled to, at our election, purchase up to 30 percent of securities offerings that may be conducted by Oragenics in the future, subject to certain conditions and limitations. To date, pursuant to this right, we have purchased 1,100,000 shares of Oragenics common stock, with no purchases occurring in 2015 or through March 31, 2016.

In September 2013, we entered into a second ECC with Oragenics through which we granted to Oragenics an exclusive license to use our proprietary technologies and other intellectual property to develop and commercialize probiotics for the treatment of diseases of the oral cavity, throat, sinus and esophagus, including, but not limited to, aphthous stomatitis and Behcet's disease. In September 2015, we and Oragenics mutually agreed to terminate this second ECC.

In June 2015, we entered into our third ECC with Oragenics through which we granted to Oragenics an exclusive license to use our proprietary technologies and other intellectual property to pursue development of biotherapeutics for use in certain treatments of oral mucositis and other diseases and conditions of the oral cavity, throat, and esophagus. In consideration for this license, we received a \$5 million convertible promissory note maturing on or before December 31, 2015. In December 2015, Oragenics converted this promissory note into 3,381,004 shares of Oragenics common stock. In conjunction with this ECC, we agreed to purchase additional shares of Oragenics common stock in a qualified financing, as defined in the agreement, during the sixteen months following the effective date of this ECC in an amount up to the lesser of (i) the amount that is the proportion of such financing equal to our pro rate equity holdings in Oragenics as of the effective date and (ii) \$10 million subject to certain conditions.

Prior to 2015, pursuant to stock purchase agreements, an affiliate of Mr. Kirk, NRM VII Holdings, I, LLC, purchased shares of Oragenics common stock. As of March 31, 2016, Mr. Kirk, together with his affiliates (excluding us), beneficially owned 1,000,555 shares, or 2.5 percent, of Oragenics outstanding common stock.

Fibrocell Science

Pursuant to an ECC, a stock issuance agreement and a registration rights agreement, each dated in October 2012, we granted to Fibrocell Science, Inc., or Fibrocell, an exclusive license to use our proprietary technologies and other intellectual property to research, develop, use, import, export, make, have made, sell and offer for sale certain products in the United States in the field of the development of autologous, gene-modified fibroblasts for therapeutic purposes.

Effective June 2013, we entered into an amendment to our ECC with Fibrocell. The amendment expands the ECC to include potential treatments based on engineered autologous fibroblast cells for the localized treatment of autoimmune and inflammatory disorders including morphea (localized scleroderma), cutaneous eosinophilias and moderate to severe psoriasis. Effective January 2014, we entered into a second amendment to our ECC with Fibrocell. The amendment expanded the ECC to include potential treatments for Ehlers-Danlos syndrome hypermobility type (EDS-HT), a rare genetic disorder resulting in weakened connective tissue. In September 2015, we and Fibrocell mutually agreed to terminate the second amendment to the ECC.

In July 2015, we and certain affiliates of Mr. Kirk acquired an aggregate amount of 975,987 shares of Fibrocell common stock at a price of \$5.80 per share. In December 2015, we entered into our second ECC with Fibrocell through which we granted to Fibrocell an exclusive license to use our proprietary technologies and other intellectual property to develop and commercialize genetically-modified fibroblasts to treat chronic inflammatory and degenerative diseases of the joint, including arthritis and related conditions. We received a technology access fee of \$10 million.

Pursuant to securities purchase agreements and through open market purchases, affiliates of Mr. Kirk have acquired shares of Fibrocell common stock, including the shares acquired in July 2015. As of March 31, 2016, Mr. Kirk, together with his affiliates (excluding us), beneficially owned 10,219,631 shares, or 23.3 percent, of Fibrocell's outstanding common stock.

AquaBounty

In June 2015, we purchased 12,728,044 shares of AquaBounty Technologies, Inc., or AquaBounty, common stock with an agreed value, at the time, of \$3 million increasing our ownership to approximately 63 percent. In February 2016, we and AquaBounty entered into a promissory note whereby AquaBounty may draw up to \$10 million. The note bears interest at 10 percent and matures in March 2017, and the outstanding principal and interests amounts may be converted into AquaBounty common stock at our election. AquaBounty borrowed \$2.5 million from us in February 2016. As of March 31, 2016, we own 99,114,668 shares, or approximately 63 percent, of AquaBounty's outstanding common stock.

Table of Contents***AmpliPhi***

Pursuant to an ECC and a stock issuance agreement, each dated in March 2013, we granted to AmpliPhi Biosciences Corporation, or AmpliPhi, an exclusive license to use our proprietary technologies and all other intellectual property to develop and commercialize new bacteriophage-based therapies to target specific antibiotic resistant infections. In March 2015, pursuant to a stock purchase agreement, we purchased 278,788 shares of AmpliPhi common stock for \$2.3 million and also received 69,696 warrants to purchase common shares of AmpliPhi.

Prior to 2015, pursuant to stock purchase agreements, an affiliate of Mr. Kirk, NRM VII Holdings I, LLC, has made separate investments in AmpliPhi and received shares of AmpliPhi's Series B preferred stock, which is convertible into common shares of AmpliPhi on a 10-to-1 basis, and shares of AmpliPhi's common stock. Additionally, in conjunction with the purchase of AmpliPhi's Series B preferred stock, NRM VII Holdings I, LLC received warrants to purchase common shares of AmpliPhi. As of March 31, 2016, Mr. Kirk, together with his affiliates (excluding us), beneficially owned 935,714 shares of AmpliPhi common stock, or 12.4 percent, of AmpliPhi.

The share amounts above reflect a 1-for-50 reverse stock split of AmpliPhi's common stock effective August 7, 2015.

On April 13, 2016, pursuant to the terms of the ECC agreement, we received written notice of AmpliPhi's intent to terminate the ECC effective July 12, 2016.

Soligenix

Pursuant to an ECC and a stock issuance agreement, each dated in April 2013, we granted to Soligenix, Inc., or Soligenix, an exclusive license to use our proprietary technologies and all other intellectual property to develop and commercialize human monoclonal antibody therapies for the treatment of melioidosis. In September 2015, we and Soligenix mutually agreed to terminate the ECC. In conjunction with the ECC, we are entitled to, at our election, participate in securities offerings conducted by Soligenix in the future, subject to certain conditions and limitations. We have made no purchases of Soligenix's common stock pursuant to this arrangement.

Prior to 2015, pursuant to a stock purchase agreement, an affiliate of Mr. Kirk, NRM VII Holdings I, LLC, purchased shares of Soligenix's outstanding common stock. Additionally, NRM VII Holdings I, LLC received warrants to purchase common shares of Soligenix. As of March 31, 2016, Mr. Kirk, together with his affiliates (excluding us), beneficially owned 5,833,333 shares, or 17.3 percent of Soligenix's common stock.

BioPop

In April 2015, we and Biological & Popular Culture, Inc., or BioPop, entered into a \$450,000 promissory note which bears interest at 5% and matures in September 2016. As of March 31, 2016, BioPop has repaid \$75,000 of the principal amount on this promissory note. In August 2015, we and BioPop entered into a \$150,000 promissory note which bears interest at 5% and matures in May 2016. BioPop has repaid \$75,000 of the principal amount on this promissory note. As of March 31, 2016, we own 51 percent of BioPop's outstanding common stock.

Agilis

In October 2013, we entered into an ECC with Agilis Biotherapeutics, LLC, or Agilis, a synthetic biology-based company focused on rare diseases. In December 2013, pursuant to a stock purchase agreement, an affiliate of Mr. Kirk, NRM VII Holdings I, LLC, invested \$1,000,000 in Agilis and received 12,500 Series A membership units. As of March 31, 2015, NRM VII Holdings I, LLC owned 12,500 Series A membership units which represents 10.0

percent of the outstanding Series A membership units of Agilis.

OvaScience

In December 2013, we entered into an ECC with OvaScience, Inc., or OvaScience, a life sciences company focused on the discovery, development and commercialization of new treatments for infertility. The ECC was formed to use our synthetic biology technology platform to develop methodologies to accelerate the development of OvaScience's OvaTure™ technology platform, a next-generation approach to in vitro fertilization. Prior to 2015, pursuant to a securities purchase agreement, an affiliate of Mr. Kirk, NRM VII Holdings I, LLC, purchased shares of OvaScience's common stock. As of March 31, 2016, Mr. Kirk, together with his affiliates (excluding us), beneficially owned 100,000 shares of OvaScience common stock, or 0.4 percent, of OvaScience.

Additionally, we and OvaScience formed OvaXon, LLC, or OvaXon, a joint venture to create new applications for improving human and animal health. Both we and OvaScience made an initial capital contribution of \$1.5 million in January 2014 for a 50 percent membership interest in OvaXon. OvaXon is governed by the OvaXon board of managers, or the OvaXon Board, which has four members, two each from us and OvaScience. In cases in which the OvaXon Board determines that additional capital contributions are necessary in order for OvaXon to conduct business and comply with its obligations, each of

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we and OvaScience have the right, but not the obligation, to make additional capital contributions to OvaXon subject to the terms of the agreement. OvaScience also licensed certain technology relating to egg precursor cells to OvaXon pursuant to a separate license agreement.

Contemporaneously with the formation of the joint venture, we entered into an ECC with OvaXon to create new applications for improving human and animal health.

S & I Ophthalmic

In September 2013, we entered into a Limited Liability Company Agreement, or the Sun LLC Agreement, with Caraco Pharmaceutical Laboratories, Ltd., or Sun Pharmaceutical Subsidiary, an indirect subsidiary of Sun Pharmaceutical Industries Ltd., or Sun Pharmaceutical, an international specialty pharmaceutical company focused on chronic diseases, to form S & I Ophthalmic, LLC, or S & I Ophthalmic. The Sun LLC Agreement governs the affairs and the conduct of business of S & I Ophthalmic. S & I Ophthalmic leverages experience and technology from both us and Sun Pharmaceutical. Both we and Sun Pharmaceutical Subsidiary made an initial capital contribution of \$5 million in October 2013 for a 50 percent membership interest in the joint venture. S & I Ophthalmic is governed by the S & I Ophthalmic board of managers, or the S & I Ophthalmic Board, which has four members, two each from us and Sun Pharmaceutical Subsidiary. In cases in which the S & I Ophthalmic Board determines that additional capital contributions are necessary in order for the joint venture to conduct business and comply with its obligations, each of we and Sun Pharmaceutical Subsidiary have committed to making additional capital contributions to S & I Ophthalmic, subject to certain limits defined in the agreement. Each has the right, but not the obligation, to make additional capital contributions above the defined limits when and if solicited by the S & I Ophthalmic Board. Each has the right, but not the obligation, to make additional capital contributions above the defined limits when and if solicited by the S & I Ophthalmic Board.

Beginning on the seventh anniversary of the effective date of the Sun LLC Agreement, and upon the second anniversary thereafter, we, as well as Sun Pharmaceutical Subsidiary, may make a cash offer to purchase all of the other party's interest in S & I Ophthalmic. Upon receipt of such an offer, the other party must either agree to tender its interests at the offered price or submit a counteroffer at a price higher than the original offer. Such offer and counteroffer may continue until one party agrees to the other's price.

Contemporaneously with the formation of the joint venture, we entered into an ECC with S & I Ophthalmic.

Intrexon Energy Partners

In March 2014, we and certain investors, or the IEP Investors, including an affiliate of Mr. Kirk, NRM VII Holdings I, LLC, entered into a Limited Liability Company Agreement which governs the affairs and conduct of business of Intrexon Energy Partners, LLC, or Intrexon Energy Partners, a joint venture formed to optimize and scale-up our gas-to-liquid bioconversion platform for the production of certain fuels and lubricants. We also entered into an ECC with Intrexon Energy Partners providing exclusive rights to our technology for the use in bioconversion, as a result of which we received a technology access fee of \$25 million while retaining a 50 percent membership interest in Intrexon Energy Partners. The IEP Investors made initial capital contributions, totaling \$25 million in the aggregate, in exchange for pro rata membership interests in Intrexon Energy Partners totaling 50 percent. We committed to make capital contributions of up to \$25 million, and the IEP Investors, as a group and pro rata in accordance with their respective membership interests in Intrexon Energy Partners, have committed to make additional capital contributions of up to \$25 million, at the request of the Intrexon Energy Partners Board, and subject to certain limitations. Intrexon Energy Partners is governed by the Intrexon Energy Partners Board, which has five members. Two members of the Intrexon Energy Partners Board are designated by us and three members of the Intrexon Energy Partners Board are

designated by a majority of the IEP Investors. We and the IEP Investors have the right, but not the obligation, to make additional capital contributions above these limits when and if solicited by the Intrexon Energy Partners Board.

Histogenics

In September 2014 we entered into an ECC with Histogenics Corporation, or Histogenics, and received a \$10 million convertible promissory note as upfront consideration. The note originally matured in September 2015 and accrued interest at 6.0% per annum. Upon the closing of Histogenics IPO on December 7, 2014, the note, as well as accrued interest, was converted to Histogenics common stock. Additionally, we purchased 1,772,364 shares of Histogenics common stock at \$11.00 per share in the Histogenics IPO. As of March 31, 2016, we own approximately 20 percent of Histogenics common stock.

Thrive Agrobiotics, Inc.

In September 2015, we entered into an ECC with Thrive Agrobiotics Inc., or Thrive Agrobiotics, an affiliate of Harvest. Thrive Agrobiotics was formed for the purpose of entering into the ECC and developing and commercializing products to improve the overall growth and feed efficiency of piglets. Upon execution of the ECC, we received a technology

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access fee in the form of equity in Thrive Agrobiotics valued, at the time, at approximately \$1.667 million. We are reimbursed for research and development services provided pursuant to the ECC. We may also receive additional payments if certain development and commercialization milestones are achieved and will receive royalty payments based on a percentage of quarterly gross profits of product sales developed under the ECC. As of March 31, 2016, we own 25 percent of Thrive Agrobiotics common stock.

Intrexon Energy Partners II

In December 2015, we and certain investors, or the IEP II Investors, including Harvest, entered into a Limited Liability Company Agreement which governs the affairs and conduct of business of Intrexon Energy Partners II, LLC, or Intrexon Energy Partners II, a joint venture formed to utilize our natural gas bioconversion platform for the production of 1,4-butanediol, an industrial chemical intermediate used to manufacture spandex, polyurethane, plastics, and polyester. We also entered into an ECC with Intrexon Energy Partners II providing exclusive rights to our technology for the use in the field, as a result of which we received a technology access fee of \$18 million while retaining a 50 percent membership interest in Intrexon Energy Partners II. The IEP II Investors made initial capital contributions, totaling \$18 million in the aggregate, in exchange for pro rata membership interests in Intrexon Energy Partners II totaling 50 percent. In December 2015, the owners of Intrexon Energy Partners II made a capital contribution of \$4 million, half of which was paid by us. We committed to make capital contributions of up to \$10 million, and the IEP II Investors, as a group and pro rata in accordance with their respective membership interests in Intrexon Energy Partners, have committed to make additional capital contributions of up to \$10 million, at the request of the Intrexon Energy Partners II board of managers, or the Intrexon Energy Partners II Board, and subject to certain limitations. Intrexon Energy Partners II is governed by the Intrexon Energy Partners II Board, which has five members. One member of the Intrexon Energy Partners II Board is designated by us and four members of the Intrexon Energy Partners II Board are designated by a majority of the IEP II Investors. We and the IEP Investors II have the right, but not the obligation, to make additional capital contributions above these limits when and if solicited by the Intrexon Energy Partners II Board.

Exotech Bio, Inc.

In March 2016, we entered into an ECC with Exotech Bio, Inc., or Exotech Bio, an affiliate of Harvest. Exotech Bio was formed for the purpose of entering into the ECC and developing and commercializing products using exosomes carrying a RNA payload designed to kill, suppress, or render immune-visible a cancer cell. Upon execution of the ECC, we received a technology access fee in the form of equity in Exotech Bio valued, at the time, at \$5 million. We will be reimbursed for research and development services provided pursuant to the ECC. We may also receive additional payments if certain development and commercialization milestones are achieved and will receive royalty payments based on a percentage of net sales of products developed under the ECC. As of March 31, 2016, we own 25 percent of Exotech Bio's common stock.

Relieve Genetics, Inc.

In March 2016, we entered into an ECC with Relieve Genetics, Inc., or Relieve Genetics, an affiliate of Harvest. Relieve Genetics was formed for the purpose of entering into the ECC and developing and commercializing products using a viral vector expressing interleukin-10 for the treatment of chronic neuropathic pain resultant from cancer in humans. Upon execution of the ECC, we received a technology access fee in the form of equity in Relieve Genetics valued, at the time, at approximately \$4.333 million. We will be reimbursed for research and development services provided pursuant to the ECC. We may also receive additional payments if certain development and commercialization milestones are achieved and will receive royalty payments based on a percentage of net sales of products developed under the ECC. As of March 31, 2016, we own 25 percent of Relieve Genetics common stock.

Intrexon T1D Partners, LLC

In March 2016, we and certain investors, or the T1D Investors, including affiliates of Mr. Kirk, entered into a Limited Liability Company Agreement which governs the affairs and conduct of business of Intrexon T1D Partners, LLC, or Intrexon T1D, a joint venture formed to utilize our proprietary actobiotics platform to develop and commercialize products to treat Type 1 Diabetes. We also entered into an ECC with Intrexon T1D Partners providing exclusive rights to our technology, as a result of which we received a technology access fee of \$10 million while retaining a 50 percent membership interest in Intrexon T1D Partners. The T1D Investors made initial capital contributions, totaling \$10 million in the aggregate, in exchange for pro rata membership interests in Intrexon T1D Partners totaling 50 percent. We committed to make capital contributions of up to \$5 million, and the T1D Investors, as a group and pro rata in accordance with their respective membership interests in Intrexon T1D Partners, have committed to make additional capital contributions of up to \$5 million, at the request of the Intrexon T1D Partners board of managers, or the Intrexon T1D Partners Board, and subject to certain limitations. Intrexon T1D Partners is governed by the Intrexon T1D Partners Board, which has five members. Two members of the Intrexon T1D Partners Board are designated by us and three members of the Intrexon T1D Partners Board are designated by a majority of the T1D Investors. We and the T1D Investors have the right, but not the obligation, to make additional capital contributions above these limits when and if solicited by the Intrexon T1D Partners Board.

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Agreements with our shareholders

In connection with our preferred stock financings, we entered into an investor rights agreement with the purchasers of our preferred stock and certain holders of our common stock. The investor rights agreement provides those certain former holders of our preferred stock with the right to demand that we file a registration statement, subject to certain limitations, and to request that their shares be covered by a registration statement that we are otherwise filing. All rights under the investor rights agreement terminated upon the closing of our initial public offering other than certain registration rights for certain former holders of our preferred stock.

Any investor who purchased at least \$10.0 million of our common stock in the private placement related to Intrexon Energy Partners will have the right to require us to register such shares of our common stock on a registration statement on Form S-3, if available for use.

Employment, severance and change in control agreements

We do not have employment, severance or change in control agreements with our named executive officers.

Indemnification of officers and directors

Our Amended and Restated Articles of Incorporation provide that we will indemnify our directors and officers with respect to certain liabilities, expenses and other accounts imposed upon them because of having been a director or officer, except in the case of willful misconduct or a knowing violation of criminal law.

Policies and procedures for related person transactions

Our Board has adopted a written related policy with respect to related person transactions. This policy governs the review, approval or ratification of covered related person transactions. The Audit Committee of our Board manages this policy.

For purposes of this policy, a related person transaction is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we (or any of our subsidiaries) were, are or will be a participant, and the amount involved exceeds \$120,000 and in which any related person had, has or will have a direct or indirect interest. For purposes of determining whether a transaction is a related person transaction, the Audit Committee relies upon Item 404 of Regulation S-K, promulgated under the Securities Exchange Act of 1934, as amended.

A related person is defined as:

Any person who is, or at any time since the beginning of our last fiscal year was, one of our directors or executive officers or a nominee to become one of our directors;

Any person who is known to be the beneficial owner of more than five percent of any class of our voting securities;

Any immediate family member of any of the foregoing persons, which means any child, stepchild, parent, stepparent, spouse, sibling, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law or sister-in-law of the director, executive officer, nominee or more than five percent beneficial owner, and any person (other than a tenant or employee) sharing the household of such director, executive officer, nominee or more than five percent beneficial owner; and

Any firm, corporation, or other entity in which any of the foregoing persons is employed or is a general partner or principal or in a similar position or in which such person has a ten percent or greater beneficial ownership interest.

The policy generally provides that we may enter into a related person transaction only if:

the Audit Committee pre-approves such transaction in accordance with the guidelines set forth in the policy,

the transaction is on terms comparable to those that could be obtained in arm's length dealings with an unrelated third party and the Audit Committee (or the chairperson of the Audit Committee) approves or ratifies such transaction in accordance with the guidelines set forth in the policy,

the transaction is approved by the disinterested members of the Board, or

the transaction involves compensation approved by the Compensation Committee of the Board.

In the event a related person transaction is not pre-approved by the Audit Committee and our management determines to recommend such related person transaction to the Audit Committee, such transaction must be reviewed and by the Audit Committee. After review, the Audit Committee will approve or disapprove such transaction. When our Chief Legal Officer, in consultation with our Chief Executive Officer or our Chief Financial Officer, determines that it is not practicable or

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desirable for us to wait until the next Audit Committee meeting, the chairperson of the Audit Committee possesses delegated authority to act on behalf of the Audit Committee. The Audit Committee (or the chairperson of the Audit Committee) may approve only those related person transactions that are in, or not inconsistent with, our best interests and the best interests of our shareholders, as the Audit Committee (or the chairperson of the Audit Committee) determines in good faith.

The Audit Committee has determined that certain types of related person transactions are deemed to be pre-approved by the Audit Committee. Our related person transaction policy provides that the following transactions, even if the amount exceeds \$120,000 in the aggregate, are considered to be pre-approved by the Audit Committee:

any employment of certain named executive officers that would be publicly disclosed;

director compensation that would be publicly disclosed;

transactions with other companies where the related person's only relationship is as a director or owner of less than ten percent of said company (other than a general partnership), if the aggregate amount involved does not exceed the greater of \$200,000 or five percent of that company's consolidated gross revenues;

transactions where all shareholders receive proportional benefits;

transactions involving competitive bids;

transactions with a related person involving the rendering of services at rates or charges fixed in conformity with law or governmental authority; and

transactions with a related person involving services as a bank depository of funds, transfer agent, registrar, trustee under a trust indenture or similar services.

In addition, the Audit Committee will review the policy at least annually and recommend amendments to the policy to the Board from time to time.

The policy provides that all related person transactions will be disclosed to the Audit Committee, and all material related person transactions will be disclosed to the Board. Additionally, all related person transactions requiring public disclosure will be properly disclosed, as applicable, on our various public filings.

The Audit Committee will review all relevant information available to it about the related person transaction. The policy provides that the Audit Committee may approve or ratify the related person 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 policy provides that the Audit Committee may, in its sole discretion, impose such conditions as it deems appropriate on us or the related person in connection with approval of the related person transaction.

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PROPOSAL 4

APPROVAL OF THE AMENDMENT TO THE AMENDED AND RESTATED INTREXON

CORPORATION 2013 OMNIBUS INCENTIVE PLAN

ITEM 4 ON PROXY CARD

Overview

The Board requests that shareholders approve the proposed Amendment to the Amended and Restated Intrexon Corporation 2013 Omnibus Incentive Plan (the Amendment) which amends the existing Intrexon Corporation 2013 Omnibus Incentive Plan (the 2013 Plan) to increase the number of shares of common stock authorized for issuance under the 2013 Plan by 3,000,000. Other than the increase in the number of shares authorized for issuance under the 2013 Plan reflected in the proposed Amendment, there are no other amendments to the 2013 Plan. A summary of the material terms of the 2013 Plan appears in EQUITY COMPENSATION PLANS AND OTHER BENEFIT PLANS beginning on page 42 and is incorporated herein by reference.

Share Increase

The 2013 Plan was approved by the shareholders shortly before our initial public offering in August 2013 and has served as an important part of our overall compensation program. The 2013 Plan enabled us to grant equity-based compensation awards designed to provide an additional incentive for our officers and employees who are critical to the achievement of our long-term financial and strategic goals. We believe that the Amendment, which amends the 2013 Plan to increase by 3,000,000 the shares of common stock authorized for issuance under the 2013 Plan, supports our ability to attract, motivate and retain the most competent and skilled employees, which is a significant factor for our long-term success, particularly following our recent initial public offering. Awards made under the 2013 Plan, including annual cash incentive awards and long-term incentive equity grants, are designed to align the individual interests of our employees with the interests of our shareholders and reward them for the creation of long-term shareholder value.

We believe that the number of shares currently available for issuance under the 2013 Plan may not be sufficient in view of our compensation structure and strategy and that the availability of the additional shares sought in this proposal will ensure that we continue to have a sufficient number of shares of common stock authorized for issuance of awards under the 2013 Plan. As a result, the Compensation Committee and the Board have approved the Amendment, subject to the approval of our shareholders at the Annual Meeting.

As of March 31, 2016, there were 117,516,486 shares of common stock outstanding. As of March 31, 2016, there were options to purchase an aggregate of 9,355,773 shares of common stock outstanding under the 2013 Plan at a weighted-average exercise price of \$36.10 per share and a weighted-average remaining term of 8.79 years. As of March 31, 2016, there were 2,421,499 shares of common stock reserved for future issuance under the 2013 Plan, which is our only plan under which equity awards can currently be made to employees and non-employee directors.

In making the recommendation to increase the 2013 Plan s share reserve by an additional 3,000,000 shares, we considered a number of factors, including:

Importance of Long-Term Equity Incentives. Long-term equity incentives are an important component of our executive compensation program, motivating executives to make decisions that focus on creating long-term value for

shareholders, aligning executives' interests with the interests of shareholders and serving as an effective employment recruitment and retention tool. Since our initial public offering in August 2013, we have grown rapidly and we consider our ability to have the capacity to provide long-term equity incentives to be critical to our success in those respects.

Historical Burn Rate. We are committed to managing the use of our equity incentives prudently to balance the benefits equity compensation brings to our compensation program with the dilution it causes our shareholders. As part of our analysis when considering the proposed share increase, we considered the 2013 Plan's burn rate, or the number of shares subject to equity awards granted since our initial public offering in August 2013, divided by the weighted average number of shares outstanding for that period. In addition, in 2015, we made multiple leadership appointments to advance efforts in our operating sectors, to our intellectual property leadership, and to augment communications development across all sectors. In connection with these important appointments, we made equity grants from the 2013 Plan in connection with each of these new hires. We believe these new hires and promotions are key to the development and strengthening of the senior management team with the experience and talent necessary to further implement our strategy. Moreover, we have also sought to compensate our employees who we believe are critical to furthering our business strategy. Finally, we have utilized grants under the 2013 Plan to incentivize key officers and employees of the companies we have acquired.

Shareholder Value Transfer Test. When evaluating the appropriate number of shares to increase the share reserve under the Plan, we reviewed the shareholder value transfer of the proposed increase, calculated as the value of available shares and plan awards as a percentage of our market capitalization, and determined that the addition of 3,000,000 shares to the 2013 Plan share reserve was reasonable and consistent with industry guidelines.

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Expected Duration. We expect that the shares available for future awards, including the additional shares if this proposal is approved by our shareholders, will be sufficient for currently-anticipated awards under the 2013 Plan for the foreseeable future. Expectations regarding future share usage could be impacted by a number of factors such as hiring and promotion activity at the executive level; the rate at which shares are returned to the 2013 Plan reserve upon awards expiration, forfeiture or cash settlement; the future performance of our stock price; consequences of acquiring other companies; and other factors. While we believe that the assumptions we used are reasonable, future share usage may differ from current expectations.

Internal Revenue Code Section 162(m). As discussed above in the summary of the material terms of the 2013 Plan in EQUITY COMPENSATION PLANS AND OTHER BENEFIT PLANS beginning on page 42 and Internal Revenue Code Section 162(m) generally disallows the Company's tax deduction for compensation to the named executive officers in excess of \$1 million in any year. Under Internal Revenue Code Section 162(m), however, compensation that qualifies as performance-based compensation is excluded from the \$1 million deductibility cap, and therefore remains fully deductible. We believe that the design and implementation of the 2013 Plan will continue to permit compensation resulting from awards made under the 2013 Plan to qualify as performance-based compensation and therefore remain fully deductible under Internal Revenue Code Section 162(m), even though payments under the 2013 Plan may represent compensation to a named executive officer in excess of \$1 million.

Text of the Amendment

The first paragraph of Section 6.02 of the 2013 Plan would be revised as follows:

6.02 Aggregate Limit

The maximum aggregate number (the **Maximum Aggregate Number**) of shares of Common Stock which may be subject to Awards under this Plan is ~~13,000,000~~ **16,000,000** shares of Common Stock.

New Plan Benefits

The benefits that will be awarded or paid under the 2013 Plan are not currently determinable. Awards granted under the 2013 Plan are within the discretion of the Compensation Committee and future awards and the individuals who may receive them have not been determined. The following table sets forth the awards granted under the 2013 Plan during the calendar year that ended on December 31, 2015:

| Name and Principal Position | Dollar Value(\$)⁽¹⁾ | Options (#) | Shares of common stock (#) |
|--|---------------------------------------|--------------------|-----------------------------------|
| Randal J. Kirk, Chairman and Chief Executive Officer | 314,025 | | 12,141 |
| Rick L. Sterling, Chief Financial Officer | | | |
| Jack A. Bobo | 8,160,775 | 250,000 | |
| Samuel Broder | 25,582,720 | 800,000 | |
| Joel Liffmann | 26,114,480 | 800,000 | |
| Named Executive Officers as a Group | 60,172,000 | 1,850,000 | 12,141 |
| Non-Employee Directors as a Group | 3,227,006 | 108,682 | 10,106 |
| Non-Named Executive Officers as a Group | 18,880,835 | 850,000 | |

(1) Dollar value is based, with respect to shares of common stock granted to non-employee directors, on the closing price of our common stock on the day the shares of common stock were granted and, with respect to option awards and share awards granted to Randal J. Kirk, on the grant date fair market value of the option and share awards computed in accordance with FASB ASC Topic 718. For the option awards, this amount does not reflect the actual cash value that will be recognized when such options are exercised and the underlying shares are sold. The last reported closing price of Intrexon's common stock as reported by the New York Stock Exchange on April 18, 2016 was \$36.99 per share.

Vote Required and Board Recommendation

The affirmative vote of a majority of the votes cast on the matter is required for the approval of this item. As this proposal is not considered a routine item, your bank, broker or other nominee cannot vote your shares without receiving your voting instructions. Abstentions and broker non-votes will have the effect of a vote against the proposal.

THE BOARD RECOMMENDS THAT THE SHAREHOLDERS VOTE FOR THE APPROVAL OF THE AMENDMENT TO THE 2013 PLAN.

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CERTAIN MATTERS RELATING TO PROXY MATERIALS AND ANNUAL REPORTS

Electronic Access of Proxy Materials and Annual Reports

Our Proxy Statement and Annual Report are available at <https://materials.proxyvote.com/46122T>. Paper copies of these documents may be requested by contacting the Corporate Secretary in writing at Intrexon Corporation, 20374 Seneca Meadows Parkway, Germantown, Maryland 20876.

Householding of Proxy Materials and Annual Reports for Record Owners

The SEC rules permit us, with your permission, to deliver a single proxy statement and annual report to any household at which two or more shareholders of record reside at the same address. Each shareholder will continue to receive a separate proxy card. This procedure, known as householding, reduces the volume of duplicate information you receive and reduces our expenses. Shareholders of record voting by mail can choose this option by marking the appropriate box on the proxy card included with this Proxy Statement. Shareholders of record voting via telephone or over the Internet can choose this option by following the instructions provided by telephone or over the Internet, as applicable. Once given, a shareholder's consent will remain in effect until he or she revokes it by notifying our Corporate Secretary as described above. If you revoke your consent, we will begin sending you individual copies of future mailings of these documents within 30 days after we receive your revocation notice. Shareholders of record who elect to participate in householding may also request a separate copy of future proxy statements and annual reports by writing to Intrexon Corporation, 20374 Seneca Meadows Parkway, Germantown, Maryland 20876.

Separate Copies for Beneficial Owners

Institutions that hold shares in street name for two or more beneficial owners with the same address are permitted to deliver a single proxy statement and annual report to that address. Any such beneficial owner can request a separate copy of this Proxy Statement or the Annual Report on Form 10-K by contacting our Corporate Secretary as described below. Beneficial owners with the same address who receive more than one Proxy Statement and Annual Report on Form 10-K may request delivery of a single Proxy Statement and Annual Report on Form 10-K by contacting the Corporate Secretary in writing at Intrexon Corporation, 20374 Seneca Meadows Parkway, Germantown, Maryland 20876.

OTHER MATTERS

The Board is not aware of any other matters to be presented for action at the Annual Meeting other than as set forth in this Proxy Statement. However, if other matters properly come before the Annual Meeting, or any adjournment or postponement thereof, the person or persons voting the proxies will vote them in accordance with their best judgment.

By Order of the Board of Directors
DONALD P. LEHR
Chief Legal Officer and Corporate Secretary

Germantown, Maryland

April 29, 2016

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INTREXON CORPORATION
20374 SENECA MEADOWS PARKWAY
GERMANTOWN, MD 20876

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 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 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.

The Board of Directors recommends you vote FOR all of the following director nominees:

1. Election of Directors

| Nominees | For | Against | Abstain | | For | Against | Abstain |
|-----------------------|-----|---------|---------|---|-----|---------|---------|
| 1A Randal J. Kirk | .. | .. | .. | <p>The Board of Directors recommends you vote FOR the following proposals:</p> <p>2. To ratify the appointment by the Audit Committee of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2016.</p> <p>3. To approve a non-binding advisory resolution approving the compensation of the named executive officers.</p> <p>4. To approve the Amendment to the Amended and Restated Intrexon Corporation 2013 Omnibus Incentive Plan, which provides for the issuance of an additional three million shares of Common Stock under the plan.</p> | | | |
| 1B Cesar L. Alvarez | .. | .. | .. | | .. | .. | .. |
| 1C Steven Frank | .. | .. | .. | | | | |
| 1D Jeffrey B. Kindler | .. | .. | .. | | | | |
| 1E Dean J. Mitchell | .. | .. | .. | | .. | .. | .. |
| 1F Robert B. Shapiro | .. | .. | .. | | | | |
| 1G James S. Turley | .. | .. | .. | | .. | .. | .. |

NOTE: The undersigned hereby authorizes the Company's designated proxies to vote, in their discretion, on such other business as may properly come before the meeting or any adjournment thereof.

Yes No

Please indicate if you plan to attend this meeting

.. ..

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.

Signature [PLEASE SIGN WITHIN BOX]

Signature (Joint Owners)

Date

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Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:

The Notice and Proxy Statement and Annual Report are available at www.proxyvote.com

**INTREXON CORP
2016 Annual Meeting of Shareholders
June 9, 2016 9:00 AM
This proxy is solicited by the Board of Directors**

The undersigned hereby appoints Mr. Randal J. Kirk, Mr. Donald P. Lehr and Mr. Rick Sterling, or any of them, as proxies, each with the full power of substitution, and hereby authorizes them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common stock of INTREXON CORP that the undersigned is entitled to vote at the Annual Meeting of Shareholders to be held at 9:00 AM, ET on June 9, 2016, at the Esperante Conference Center, 222 Lakeview Avenue, West Palm Beach, FL, 33401, 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 FOR all nominees named in the proxy, FOR Proposals 2, 3 and 4 and according to the discretion of the proxy holders on any other matters that may properly come before the meeting or any and all adjournments or postponements thereof.

Continued and to be signed on reverse side