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## SCHEDULE 14A INFORMATION

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

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Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

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

## BioDelivery Sciences International, Inc.

(Name of Registrant as Specified In Its Charter)

N/A

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

Payment of Filing Fee (Check the appropriate box):

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

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

2) Aggregate number of securities to which transaction applies:

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

4) Proposed maximum aggregate value of transaction:

5) Total fee paid:

Fee paid previously with preliminary materials.

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

1) Amount Previously Paid:

2) Form, Schedule or Registration Statement No.:

3) Filing Party:

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4) Date Filed:

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June , 2019

To the Stockholders of BioDelivery Sciences International, Inc.:

BioDelivery Sciences International, Inc. (the "**Company**") is pleased to send you the enclosed notice of the 2019 Annual Meeting of Stockholders of the Company (the "**Meeting**") to be held at 11 a.m. on Thursday, July 25, 2019 at The Hilton Garden Inn, 3912 Arrow Drive, Raleigh, NC 27612.

The items of business for the Meeting are listed in the following Notice of Annual Meeting and are more fully addressed in the attached Proxy Statement. The Proxy Statement is first being mailed to stockholders of the Company on or about June , 2019.

**Your vote is important—please date, sign and return your proxy card in the enclosed envelope or vote online as soon as possible to ensure that your shares will be represented and voted at the Meeting even if you cannot attend.** If you attend the Meeting, you may vote your shares in person even though you have previously signed and returned your proxy.

If you have any questions regarding this material, please do not hesitate to call me at (919) 582-9050.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Herm Cukier", is written over a horizontal line.

Herm Cukier  
Chief Executive Officer  
BioDelivery Sciences International, Inc.

**WHETHER OR NOT YOU EXPECT TO ATTEND THE MEETING, PLEASE COMPLETE THE ENCLOSED PROXY CARD AND PROMPTLY MAIL IT IN THE ENCLOSED ENVELOPE OR VOTE ONLINE IN ORDER TO ASSURE REPRESENTATION OF YOUR SHARES AT THE MEETING.**

**BIODELIVERY SCIENCES INTERNATIONAL, INC.**  
**4131 ParkLake Ave., Suite #225**  
**Raleigh, North Carolina 27612**

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS**

**To be held on Thursday, July 25, 2019**

The 2019 Annual Meeting of Stockholders (the “**Meeting**”) of BioDelivery Sciences International, Inc. (the “**Company**”) will be held at 11 a.m. on Thursday, July 25, 2019 at The Hilton Garden Inn, 3912 Arrow Drive, Raleigh, NC 27612, for the following purposes:

1. To elect Peter S. Greenleaf (our current Chairman of the Board), Todd C. Davis (a current director), Herm Cukier (our current Chief Executive Officer and a director), Mark A. Sirgo (our current Vice Chairman of the Board) and Kevin Kotler (a current director) as directors to the Board of Directors (the “**Board**”), each to hold office until the 2020 annual meeting of the Company and until each such director’s successor shall have been duly elected and qualified or until his earlier resignation or removal (“**Proposal 1**”);
2. To ratify the appointment by the Audit Committee of the Board of Cherry Bekaert LLP as the Company’s registered public accounting firm for the fiscal year ending December 31, 2019 (“**Proposal 2**”);
3. To approve the Company’s 2019 Stock Option and Incentive Plan (“**Proposal 3**”);
4. To conduct a non-binding advisory vote on our 2018 executive compensation (“**Proposal 4**”);
5. To conduct a non-binding advisory vote on the frequency of future advisory votes on executive compensation (“**Proposal 5**”);
6. To approve an amendment to the Company’s Certificate of Incorporation, as amended (the “**Charter**”), to increase the number of authorized shares of the Company’s common stock, par value \$0.001 per share (“**Common Stock**”), from 125,000,000 shares to 175,000,000 shares (“**Proposal 6**”); and
7. To transact any other business that may properly come before the Meeting or any adjournment or postponement thereof.

Stockholders are cordially invited to attend the Meeting in person. **However, to assure your representation at the Meeting, please complete and sign the enclosed proxy card and return it promptly.** Even if you have previously submitted a proxy card, you may choose to vote in person at the Meeting. Whether or not you expect to attend the Meeting, please read the attached Proxy Statement and then promptly complete, date, sign and return the enclosed proxy card in order to ensure your representation at the Meeting. You may cast your vote by visiting [www.proxyvote.com](http://www.proxyvote.com). You may also have access to the materials for the Meeting by visiting the website <http://www.bdsiproxy.com>.

**THE BOARD RECOMMENDS THAT YOU VOTE “FOR” PROPOSALS 1, 2, 3, 4 AND 6, AND VOTE TO HAVE FUTURE NON-BINDING ADVISORY VOTES ON EXECUTIVE COMPENSATION OCCUR EVERY THREE YEARS.**

BY ORDER OF THE BOARD OF DIRECTORS,

James Vollins  
General Counsel, Chief Compliance  
Officer and Corporate Secretary  
Raleigh, North Carolina

June , 2019

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BIODELIVERY SCIENCES INTERNATIONAL, INC.  
4131 ParkLake Ave., Suite #225  
Raleigh, North Carolina 27612  
919-582-9050

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PROXY STATEMENT

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ANNUAL MEETING OF STOCKHOLDERS

to be held on Thursday, July 25, 2019, 11 a.m.  
The Hilton Garden Inn  
3912 Arrow Drive, Raleigh, NC 27612

The accompanying proxy card, mailed together with this proxy statement (this “**Proxy Statement**”) and our Annual Report on Form 10-K for the year ended December 31, 2018 (the “**Annual Report**”), is solicited by and on behalf of the board of directors (the “**Board of Directors**” or the “**Board**”) of BioDelivery Sciences International, Inc., a Delaware corporation (which we refer to in this Proxy Statement as the “**Company**”), for use at the 2019 annual meeting of the stockholders of the Company (the “**Meeting**”) and at any adjournment or postponement thereof. References in this Proxy Statement to “we,” “us,” “our” or like terms also refer to the Company, and references in this Proxy Statement to “you” refer to the stockholders of the Company. The principal executive offices of the Company are located at 4131 ParkLake Ave., Suite #225, Raleigh, North Carolina 27612. The Company’s telephone number at such address is (919) 582-9050. This Proxy Statement, the accompanying proxy card, Notice of Annual Meeting and our 2018 Annual Report were first mailed to our stockholders on or about June 13, 2019.

**ALL PROXIES RECEIVED WILL BE VOTED IN ACCORDANCE WITH THE CHOICES SPECIFIED ON SUCH PROXIES. PROXIES WILL BE VOTED IN FAVOR OF A PROPOSAL IF NO CONTRARY SPECIFICATION IS MADE. ALL VALID PROXIES OBTAINED WILL BE VOTED AT THE DISCRETION OF THE PERSONS NAMED IN THE PROXY WITH RESPECT TO ANY OTHER BUSINESS THAT MAY COME BEFORE THE MEETING.**

**THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” THE APPROVAL OF PROPOSALS 1, 2, 3, 4 AND 6, AND A VOTE TO HAVE FUTURE NON-BINDING ADVISORY VOTES ON EXECUTIVE COMPENSATION OCCUR EVERY THREE YEARS.**

QUESTIONS AND ANSWERS ABOUT THESE PROXY MATERIALS

**Why am I receiving this Proxy Statement?**

This Proxy Statement describes the proposals on which our Board of Directors (the “**Board**”) would like you, as a stockholder, to vote at our 2019 Annual Meeting, which will take place on Thursday, July 25, 2019 at 11 a.m. local time at The Hilton Garden Inn, 3912 Arrow Drive, Raleigh, NC 27612. This Proxy Statement also gives you information on these proposals so that you can make an informed decision.

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

If our records show that you were a holder of shares of our common stock, par value \$0.001 per share (“**Common Stock**”), at the close of business on June 13, 2019 (the “**Record Date**”), you are entitled to receive notice of the Meeting and to vote the shares of Common Stock that you held on the Record Date.

**How many shares can vote?**

As of the close of business on the Record Date, \_\_\_\_\_ shares of Common Stock were issued and outstanding and entitled to vote. There is no other class of voting securities outstanding. You are entitled to one vote for each

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share of Common Stock you held as of the close of business on the Record Date. The proxy card shows the number of shares of our Common Stock you are entitled to vote. Information about the stockholdings of our directors and executive officers is contained in the section of this Proxy Statement entitled “Beneficial Ownership of Principal Stockholders, Officers and Directors” of this Proxy Statement.

### **What constitutes a quorum?**

A quorum refers to the number of shares that must be in attendance at a meeting to lawfully conduct business. The presence in person or by proxy of stockholders entitled to cast a majority of all of the votes entitled to be cast will constitute a quorum for the transaction of business at the meeting. If a share is represented for any purpose at the special meeting it is deemed to be present for quorum purposes and for all other matters as well. Abstentions and broker non-votes, if any, will be counted for purposes of determining the existence of a quorum.

### **What is the proxy card?**

The proxy card enables you to appoint Herm Cukier, our Chief Executive Officer, and/or Terry Coelho, our Chief Financial Officer, as your representative at the Meeting. By completing and returning the proxy card or voting online as described herein, you are authorizing these persons to vote your shares at the Meeting in accordance with your instructions on the proxy card. This way, your shares will be voted whether or not you attend the Meeting. Even if you plan to attend the Meeting, we think that it is a good idea to complete and return your proxy card before the Meeting date just in case your plans change. If a proposal comes up for vote at the Meeting that is not on the proxy card, the proxies will vote your shares, under your proxy, according to their best judgment.

### **What am I voting on?**

You are being asked to vote on:

1. The election of Peter S. Greenleaf (our current Chairman of the Board), Todd C. Davis (a current director), Herm Cukier (our current Chief Executive Officer and a director), Mark A. Sirgo (our current Vice Chairman of the Board) and Kevin Kotler (a current director) as directors to the Board, each to hold office until the 2020 annual meeting of the Company and until each such director’s successor shall have been duly elected and qualified or until his earlier resignation or removal (“**Proposal 1**”);
2. Ratification of the appointment by the Audit Committee of the Board of Cherry Bekaert LLP as the Company’s registered public accounting firm for the fiscal year ending December 31, 2019 (“**Proposal 2**”); and
3. Approval of the Company’s 2019 Stock Option and Incentive Plan (“**Proposal 3**”);
4. Our 2018 executive compensation as part of a non-binding advisory vote (“**Proposal 4**”);
5. The frequency of advisory votes on executive compensation as part of a non-binding advisory vote (“**Proposal 5**”); and
6. An amendment to the Charter to increase the number of authorized shares from 125,000,000 shares to 175,000,000 shares (“**Proposal 6**”).

We will also transact any other business that properly comes before the Meeting.

### **How does the Board recommend that I vote?**

Our Board unanimously recommends that the stockholders vote “FOR” Proposals 1, 2, 3, 4 and 6, and vote to have future non-binding advisory votes on executive compensation occur every three years.

### **What is the difference between holding shares as a stockholder of record and as a beneficial owner?**

Most of our stockholders hold their shares in an account at a brokerage firm, bank or other nominee holder, rather than holding share certificates in their own name. As summarized below, there are some distinctions between shares held of record and those owned beneficially.

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### *Stockholder of Record*

If, on the Record Date, your shares were registered directly in your name with our transfer agent, American Stock Transfer & Trust Company, you are a “stockholder of record” who may vote at the Meeting, and we are sending these proxy materials directly to you. As the stockholder of record, you have the right to direct the voting of your shares by returning the enclosed proxy card to us or to vote in person at the Meeting. Whether or not you plan to attend the Meeting, please complete, date and sign the enclosed proxy card to ensure that your vote is counted.

### *Beneficial Owner*

If, on the Record Date, your shares were held in an account at a brokerage firm or at a bank or other nominee holder, you are considered the beneficial owner of shares held “in street name,” and these proxy materials are being forwarded to you by your broker or nominee who is considered the stockholder of record for purposes of voting at the Meeting. As the beneficial owner, you have the right to direct your broker on how to vote your shares and to attend the Meeting. However, since you are not the stockholder of record, you may not vote these shares in person at the Meeting unless you receive a valid proxy from your brokerage firm, bank or other nominee holder. To obtain a valid proxy, you must make a special request of your brokerage firm, bank or other nominee holder. If you do not make this request, you can still vote by using the voting instruction card enclosed with this proxy statement; however, you will not be able to vote in person at the Meeting.

### **How do I vote?**

**(1) You may vote by mail.** You may vote by mail by completing, signing and dating your proxy card and returning it in the enclosed, postage-paid and addressed envelope. If we receive your proxy card prior to the Meeting and if you mark your voting instructions on the proxy card, your shares will be voted:

- as you instruct, and
- according to the best judgment of the proxies if a proposal comes up for a vote at the Meeting that is not on the proxy card.

If you return a signed card, but do not provide voting instructions, your shares will be voted “FOR” Proposals 1, 2, 3, 4 and 6, and for future non-binding advisory votes on executive compensation to occur every three years, and according to the best judgment of either Mr. Cukier or Ms. Coelho for any proposal that comes up for a vote at the Meeting that is not on the proxy card.

**(2) You may vote in person at the Meeting.** We will pass out written ballots to anyone who wants to vote at the Meeting. However, if you hold your shares in street name, you must bring to the Meeting a valid proxy from the broker, bank or other nominee holding your shares that confirms your beneficial ownership of the shares and gives you the right to vote your shares. Holding shares in street name means you hold them through a brokerage firm, bank or other nominee, and therefore the shares are not held in your individual name. We encourage you to examine your proxy card closely to make sure you are voting all of your shares in the Company.

**(3) You may vote online.** You may also have access to the materials for the Meeting by visiting the website <http://www.bdsiproxy.com>. You may also cast your vote by visiting [www.proxyvote.com](http://www.proxyvote.com). Votes cast via internet may be submitted at any time prior to 11:59 p.m. Eastern Time on July 24, 2019.

For those stockholders with internet access, we encourage you to authorize a proxy to vote your shares via the internet, a convenient means of authorizing a proxy that also provides cost savings to us. In addition, when you authorize a proxy to vote your shares via the internet or by telephone prior to the Meeting date, your proxy authorization is recorded immediately and there is no risk that postal delays will cause your vote by proxy to arrive late and, therefore, not be counted. For further instructions on authorizing a proxy to vote your shares, see your proxy card. You may also vote your shares at the Meeting. If you attend the Meeting, you may vote in person, and any proxies that you authorized by mail or by internet or telephone will be superseded by the vote that you cast at the Meeting.

### **What does it mean if I receive more than one proxy card?**

You may have multiple accounts at the transfer agent and/or with brokerage firms. Please sign and return all proxy cards to ensure that all of your shares are voted.

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**What if I change my mind after I return my proxy?**

You may revoke your proxy and change your vote at any time before the polls close at the Meeting. You may do this by:

- sending a written notice to the Secretary of the Company stating that you would like to revoke your proxy of a particular date;
- signing another proxy card with a later date and returning it before the polls close at the Meeting; or
- attending the Meeting and voting in person.

Please note, however, that if your shares are held of record by a brokerage firm, bank or other nominee, you must instruct your broker, bank or other nominee that you wish to change your vote by following the procedures on the voting form provided to you by the broker, bank or other nominee. If your shares are held in street name, and you wish to attend and vote at the Meeting, you must bring to the Meeting a legal proxy from the broker, bank or other nominee holding your shares, confirming your beneficial ownership of the shares and giving you the right to vote your shares.

**Will my shares be voted if I do not sign and return my proxy card?**

If your shares are held in street name or in your name and you do not sign and return your proxy card, your shares will not be voted unless you vote in person at the Meeting.

**How are votes counted?**

You may vote “for,” “against,” or “abstain” on each of the proposals being placed before our stockholders. Abstentions and broker non-votes (*i.e.*, shares held by brokers on behalf of their customers, which may not be voted on certain matters because the brokers have not received specific voting instructions from their customers with respect to such matters) will be counted solely for the purpose of determining whether a quorum is present at the Meeting.

**What vote of stockholders is required to approve the proposals?**

*Proposal 1:* The affirmative vote of a majority of the votes cast at the Meeting is required to elect each of Peter S. Greenleaf, Todd C. Davis, Herm Cukier, Mark A. Sirgo and Kevin Kotler as directors. Abstentions and broker non-votes will have no effect on the outcome of this proposal.

*Proposal 2:* The affirmative vote of a majority of the votes cast at the Meeting is required to ratify the appointment of Cherry Bekaert LLP as the Company’s registered public accounting firm for the fiscal year ending December 31, 2019. Abstentions and broker non-votes will have no direct effect on the outcome of this proposal.

*Proposal 3:* The affirmative vote of a majority of the votes cast at the Meeting is required to approve the Company’s 2019 Stock Option and Incentive Plan. Abstentions and broker non-votes will have no effect on the outcome of this proposal.

*Proposal 4:* An affirmative vote of a majority of the votes cast at the Meeting is required to approve the non-binding, advisory resolution on our executive compensation. Abstentions and broker non-votes will have no direct effect on the outcome of this proposal.

*Proposal 5:* The non-binding, advisory approval of the frequency of future non-binding advisory votes on executive compensation being held every one year, two years or three years in Proposal 5 requires a vote of the majority of the votes cast at the Meeting. For this proposal, stockholders are entitled to vote for one of the four provided choices: every year, every two years, every three years, or abstain from voting. If none of these frequency alternatives receive a majority vote, we will consider the frequency that receives the highest number of votes by the stockholders to be the frequency that has been selected by the stockholders. However, because your vote is advisory and not binding on the Board, the Board may decide that it is in our and our stockholders’ best interests to hold an advisory vote on executive compensation more or less frequently than the alternative selected by our stockholders.

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*Proposal 6:* The affirmative vote of a majority of the votes entitled to vote at the Meeting is required to approve an amendment to the Charter to increase the number of authorized shares of common stock from 125,000,000 shares to 175,000,000 shares. Abstentions and broker non-votes will have no effect on the outcome of this proposal.

**How many votes are required to approve other matters that may come before the stockholders at the Meeting?**

An affirmative vote of a majority of the votes cast at the Meeting is required for approval of all other items being submitted to the stockholders for their consideration.

**What happens if I don't indicate how to vote my proxy?**

If you just sign your proxy card without providing further instructions, your shares will be counted as a "FOR" vote for all of the proposals being placed before our stockholders at the Meeting.

**Is my vote kept confidential?**

Proxies, ballots and voting tabulations identifying stockholders are kept confidential and will not be disclosed except as may be necessary to meet legal requirements.

**Where do I find the voting results of the Meeting?**

We will announce voting results at the Meeting and file a Current Report on Form 8-K announcing the voting results of the Meeting.

**Who can help answer my questions?**

You can contact our General Counsel, Chief Compliance Officer and Corporate Secretary, Mr. James Vollins, at (919) 582-9050 or by sending a letter to Mr. Vollins at offices of the Company at 4131 ParkLake Avenue, Suite 225, Raleigh, North Carolina 27612, with any questions about proposals described in this Proxy Statement or how to execute your vote.

**PROPOSAL 1**  
**ELECTION OF DIRECTORS**

*Introduction*

The Board currently consists of the following directors, whose term expires as noted below:

<u>Director(s)</u>	<u>Term Expires</u>
Peter S. Greenleaf	2019
Todd C. Davis	2019
Herm Cukier	2019
Mark A. Sirgo, Pharm.D.	2019
Kevin Kotler	2019
Francis E. O'Donnell Jr.	2020
William Mark Watson	2020

At the 2018 annual meeting, shareholders voted to completely declassify the Board by 2020. All directors elected at the Meeting will serve a one-year term.

The Board has nominated Peter S. Greenleaf (our current Chairman of the Board), Todd C. Davis (a director), Herm Cukier (our current Chief Executive Officer and a director), Mark A. Sirgo (our current Vice Chairman of the Board) and Kevin Kotler (a director) to stand for election at the Meeting. At the Meeting, stockholders will be asked to elect each of Peter S. Greenleaf, Todd C. Davis, Herm Cukier, Mark A. Sirgo, and Kevin Kotler to serve as directors on the Board, each to hold office until the 2020 annual meeting of the Company and until each such director's successor shall have been duly elected and qualified or until his earlier resignation or removal.

The enclosed proxy, if returned, and unless indicated to the contrary, will be voted for the election of Messrs. Greenleaf, Davis, Cukier, Sirgo and Kotler. Proxies cannot be voted for a greater number of persons than the number of nominees named.

We have been advised by each of Messrs. Greenleaf, Davis, Cukier, Sirgo and Kotler that they are willing to be named as nominees and each are willing to serve as a director if elected. If some unexpected occurrence should make necessary, in the discretion of the Board, the substitution of some other person for the nominees, it is the intention of the persons named in the proxy to vote for the election of such other person as may be designated by the Board.

*Directors*

Listed below are the names of the directors of the Company, their ages as of the Record Date, their positions held and the year they commenced service with the Company:

<u>Name</u>	<u>Age</u>	<u>Position(s) Held</u>	<u>Year of Service Commencement</u>
Herm Cukier	53	Chief Executive Officer and Director	2018
Peter S. Greenleaf	49	Chairman of the Board	2018
Mark A. Sirgo, Pharm.D.	65	Vice Chairman and Director	2004
Francis E. O'Donnell, Jr.	69	Director	2002
William Mark Watson	68	Director	2017
Todd C. Davis	58	Director	2018
Kevin Kotler	48	Director	2018

*Herm Cukier* has been our Chief Executive Officer and a member of our Board of Directors since May 2018. From December 2013 to April 2018, he served in various capacities at Allergan plc, a global pharmaceutical company, ultimately as Senior Vice President, Head of Commercial Strategy and Innovation. He also served as the Senior Vice President of Allergan's Eye Care division and as Senior Vice President of Allergan's Woman's Healthcare division. From 2010 to 2013, he served as Vice President of Bayer HealthCare, a pharmaceutical company, and from 2009 to 2010, he served as President, Chief Executive Officer, and board member at Reverion Pharmaceuticals, Inc., a start-up company associated with Weill Cornell Medical College. From 2005 to 2008, he

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served as Chief Marketing Officer and member of the Executive Committee at Organon Biosciences, which was acquired by Schering-Plough. He began his career in 1992 at Pfizer and later served as Executive Director of Global Marketing at Bristol-Myers Squibb. Mr. Cukier received an MBA from the Columbia Business School and a BSE in Bioengineering from the University of Pennsylvania.

We believe Mr. Cukier's broad experience in the pharmaceuticals industry makes him well qualified to serve as a director.

*Peter S. Greenleaf* has been our Chairman of the Board and a Director since May 2018. Mr. Greenleaf has served as the Chief Executive Officer of Aurina Pharmaceuticals, Inc., (NASDAQ: AUPH), a clinical stage biopharmaceutical company focused on disease areas of unmet medical need, since April 2019. Mr. Greenleaf previously served as the Chief Executive Officer of Cerecor, Inc. (NASDAQ: CERQ), an integrated biopharmaceutical company focused on pediatric healthcare, from March 2018 to April 2019. Mr. Greenleaf previously served as Chief Executive Officer of Sucampo Pharmaceuticals, Inc. (NASDAQ: SCMP), a biopharmaceutical company focused on medical applications of a class of ion channel modulators, from March 2014 to February 2018, when Sucampo was sold to Mallinckrodt PLC (NYSE: MNK). Prior to that, Mr. Greenleaf served as Chief Executive Officer of Histogenics Corporation, a regenerative medicine company, from June 2013 to March 2014, as President of MedImmune, Inc., a fully integrated biologics division of AstraZeneca Group and President of MedImmune Ventures, a venture capital fund within the AstraZeneca Group, a global, science-led biopharmaceutical business, from January 2010 to June 2013, and Senior Vice President, Commercial Operations of MedImmune from 2006 to 2010. Mr. Greenleaf also held senior commercial roles at Centocor Biotech, Inc. (now Janssen Biotechnology, Johnson & Johnson), a biotechnology company founded with the goal of developing new diagnostic assays using monoclonal antibody technology, from 1998 to 2006, and at Boehringer Mannheim G.m.b.H. (now Roche Holdings), a diagnostics and pharmaceuticals business, from 1996 to 1998. Mr. Greenleaf has served on the board of directors of Cerecor since May 2017. Mr. Greenleaf currently chairs the Maryland Venture Fund Authority, whose vision is to oversee implementation of InvestMaryland, a public-private partnership to spur venture capital investment in the state. He is also a member of the board of directors of the Biotechnology Industry Organization, the largest trade organization in the world representing the biotechnology industry, where he serves on the Governing Boards of the Emerging Companies and Health Sections. Mr. Greenleaf previously served on the boards of PhARMA, the Tech Council of Maryland, a technology trade association for companies with operations in Maryland, Washington, DC, and Virginia, and the University of Maryland Baltimore Foundation, Inc., which advises the President of the University of Maryland, Baltimore on matters affecting programs, students, faculty, employees, and the community. Mr. Greenleaf earned an MBA degree from St. Joseph's University and a BS degree from Western Connecticut State University.

We believe that Mr. Greenleaf's extensive management and financial experience makes him well qualified to serve as a director.

*Mark A. Sirgo, Pharm.D.* has been a Director since August 2005 and Vice Chairman of the Board since October 2016. He served as our President from January 2005 to January 2018 and Chief Executive Officer from August 2005 to January 2018. He joined our company in August 2004 as Senior Vice President of Commercialization and Corporate Development upon our acquisition of Arius Pharmaceuticals, of which he was a co-founder and Chief Executive Officer. He also previously served as our Executive Vice President, Corporate and Commercial Development and our Chief Operating Officer. Dr. Sirgo has over 30 years of experience in the pharmaceutical industry, including 16 years in clinical drug development, 7 years in marketing, sales, and business development, and 12 years in executive management positions. Prior to his involvement with Arius Pharmaceuticals, from 2003 to 2004, he spent 16 years in a variety of positions of increasing responsibility in both clinical development and marketing at Glaxo, Glaxo Wellcome, and GlaxoSmithKline, including Vice President of International OTC Development and Vice President of New Product Marketing. Dr. Sirgo was responsible for managing the development and FDA approval of Zantac 75 while at Glaxo Wellcome, among other accomplishments. From 1996 to 1999, Dr. Sirgo was Senior Vice President of Global Sales and Marketing at Pharmaceutical Product Development, Inc., a leading contract service provider to the pharmaceutical industry. Dr. Sirgo served on the Board of Directors and as Chairman of the Compensation Committee of Salix Pharmaceuticals, Inc. (NASDAQ:SLXP), a specialty pharmaceutical company specializing in gastrointestinal products, from 2008 until its sale in 2015. Dr. Sirgo was added to the Board of Directors of Biomerica, Inc. (NASDAQ: BMRA), a diagnostics and therapeutic company, in July 2016 and as Chairman of the Board of RRD

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Pharma, a private gastrointestinal development company, in April 2018. In January 2019, Dr. Sirgo was appointed Chief Executive Officer of ArunA Bio, a private central nervous system and neurodegenerative disorder development company. Dr. Sirgo received his BS in Pharmacy from The Ohio State University and his Doctorate from Philadelphia College of Pharmacy and Science.

We believe Dr. Sirgo's experience in the pharmaceutical industry and his experience leading the Company make him well qualified to serve as a director.

*Francis E. O'Donnell Jr, MD* has served as a member of our Board of Directors since March 2002 and served as Chairman of the Board until May 2018. Dr. O'Donnell also served as our President and Chief Executive Officer until 2005. Until November 2016, Dr. O'Donnell served as a Manager of The Hopkins Capital Group, an affiliation of limited liability companies that engage in private equity and venture capital investing in disruptive technologies in healthcare. Dr. O'Donnell is Chairman of Defender Pharmaceuticals, Inc., a privately held company developing pharmaceuticals for national defense. Until November 2016, Dr. O'Donnell was also Chairman of the Board of Directors of Hedgepath Pharmaceuticals, Inc., which is developing oncology drugs for an orphan indication. Dr. O'Donnell is a graduate of The Johns Hopkins School of Medicine and received his residency training at the Wilmer Ophthalmological Institute, Johns Hopkins Hospital. Dr. O'Donnell is a former professor and Chairman of the Department of Ophthalmology, St. Louis University School of Medicine. He is a trustee of St. Louis University.

We believe Dr. O'Donnell's previous experience with the Company and his extensive experience in healthcare transactions make him well qualified to serve as a director.

*William Mark Watson, CPA* joined our Board of Directors as an independent member in December 2017 and is Chairman of the Audit Committee. Mr. Watson is a Certified Public Accountant with over 40 years of experience in public accounting and auditing, having spent his entire career from January 1973 to June 2013 at Deloitte Touche Tohmatsu, the multinational professional services network, and its predecessor, most recently as Central Florida Marketplace Leader. Among other industries, he has a particular expertise in the health and life sciences sector, having played a significant role in the development of Deloitte's audit approach for health and life sciences companies and leading its national healthcare regulatory and compliance practice. He has served as lead audit partner and advisory partner on the accounts of many public companies ranging from middle market firms to Fortune 500 enterprises. Mr. Watson is a member of the American Institute of Certified Public Accountants and the Florida Institute of Certified Public Accountants. Mr. Watson is a member of the Board of Directors of Sykes Enterprises, Inc. (NASDAQ: SYKE). He is also Chairman of the Board of Directors and Chairman of the Audit Committee of Hedgepath Pharmaceuticals, Inc. (OTCQX:HPPI). He received his undergraduate degree in Accounting from Marquette University.

We believe Mr. Watson's extensive experience as a Certified Public Accountant focused on health and life sciences companies makes him well qualified to serve as a director.

*Todd C. Davis* has served as a member of our Board of Directors since May 2018. Mr. Davis is the Founder and Managing Partner of RoyaltyRx Capital, a special opportunities investment firm. From 2006 until 2018, Mr. Davis was a Founder and Managing Partner of Cowen/HealthCare Royalty Partners, a global healthcare investment firm. He has almost thirty years of experience in both operations and investing in the biopharmaceutical and life science industries. Mr. Davis has been involved in over \$3 billion in healthcare financings including growth equity, public equity turnarounds, structured debt and royalty acquisitions. He has also led, structured and closed over 40 additional intellectual property licenses, as well as hybrid royalty-debt deals. Previously, Mr. Davis was a partner at Paul Capital Partners, where he co-managed that firm's royalty investments as a member of the Royalty Management Committee. He also served as a partner responsible for biopharmaceutical growth equity investments at Apax Partners. Mr. Davis began his business career in sales at Abbott Laboratories, where he held several commercial roles of increasing responsibility. He subsequently held general management, business development, and licensing roles at Elan Pharmaceuticals. Mr. Davis is a Navy veteran and holds a B.S. from the U.S. Naval Academy and an M.B.A. from Harvard University. He currently serves on the board of Palvella Therapeutics Inc., and Ligand Pharmaceuticals. He is also a board member of the Harvard Business School Healthcare Alumni Association.

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We believe that Mr. Davis’s deep experience with pharmaceutical and healthcare transactions makes him well qualified to serve as a director.

*Kevin Kotler* has served as a member of our Board of Directors since May 2018. Mr. Kotler has over 25 years of experience as an investor and analyst following the healthcare industry. He is the Founder and Managing Member of Broadfin Capital, which is the investment advisor for Broadfin Healthcare Master Fund, Ltd., a healthcare-focused investment fund that he launched in 2005. Mr. Kotler serves as a Director of Avadel Pharmaceuticals since 2018 and as a director of InnerSpace Neuro Solutions, Inc., a privately-held medical device company, since 2014. He served as Director of Novelson Therapeutics Inc., from 2016 to 2018. Mr. Kotler earned a BS in Economics from the Wharton School at the University of Pennsylvania in 1993.

We believe that Mr. Kotler’s substantial experience as an investor and analyst following the healthcare industry makes him well qualified to serve as a director.

*Certain Legal Proceedings*

None of the Company’s directors or executive officers have been involved, in the past ten years and in a manner material to an evaluation of such director’s or officer’s ability or integrity to serve as a director or executive officer, in any of those “Certain Legal Proceedings” more fully detailed in Item 401(f) of Regulation S-K, which include but are not limited to, bankruptcies, criminal convictions and an adjudication finding that an individual violated federal or state securities laws.

*Director Independence*

Our Board is composed of a majority of independent directors as required by NASDAQ Stock Market rules. We believe that our current Board members William Mark Watson, Peter S. Greenleaf, Todd C. Davis and Kevin Kotler qualify as independent directors for NASDAQ Stock Market purposes.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE ELECTION OF PETER S. GREENLEAF, TODD C. DAVIS, HERM CUKIER, MARK A. SIRGO AND KEVIN KOTLER TO THE BOARD OF DIRECTORS, EACH TO HOLD OFFICE UNTIL THE 2020 ANNUAL MEETING OF THE COMPANY AND UNTIL EACH SUCH DIRECTOR’S SUCCESSOR SHALL HAVE BEEN DULY ELECTED AND QUALIFIED OR UNTIL HIS EARLIER RESIGNATION OR REMOVAL.**

## CORPORATE GOVERNANCE

### *Meetings of the Board and Stockholders*

Our board of directors met in person and telephonically six times during 2018 and also acted by unanimous written consent. During 2018, each of our directors attended at least 75% of the aggregate number of board meetings and meetings of the committees on which he then served. It is our policy that all directors must attend all stockholder meetings, barring extenuating circumstances. All directors were present at the 2018 Annual Meeting of Stockholders.

### *Board Committees*

Our Board has established three standing committees: Audit, Compensation and Nominating and Corporate Governance. Historically, all independent directors have been members of each Board committee. All standing committees operate under a charter that has been approved by the Board.

#### *Audit Committee*

Our Board has an Audit Committee currently composed of William Mark Watson, Peter S. Greenleaf and Todd C. Davis, all of whom were independent directors as defined in accordance with section 3(a)(58)(A) of the Exchange Act and the rules of NASDAQ and all of whom became members of the Audit Committee in May 2018. Mr. Watson currently serves as chairman of the committee. The Board has determined that Mr. Watson is an "audit committee financial expert" as defined in Item 407(d)(5)(ii) of Regulation S-K.

The Audit Committee met four times during 2018. Each member of the Audit Committee was present at 100% of the Audit Committee meetings held during such director's tenure as a member of the Audit Committee.

Our Audit Committee oversees our corporate accounting, financial reporting practices and the audits and reviews of financial statements. For this purpose, the Audit Committee has a charter (which is reviewed annually). The charter is available on our website at: <https://bdsi.com/corporate-governance/>. As summarized below, the Audit Committee:

- evaluates the independence and performance of, and assesses the qualifications of, our independent auditor and engages such independent auditor;
- approves the plan and fees for the annual audit, quarterly reviews, tax and other audit-related services and approves in advance any non-audit service and related fee to be provided by the independent auditor;
- monitors the independence of the independent auditor and the rotation of partners of the independent auditor on our engagement team as required by law;
- reviews the financial statements to be included in our Annual Report on Form 10-K and Quarterly Reports on Form 10-Q and reviews with management and the independent auditor the results of the annual audit and reviews of our quarterly financial statements;
- oversees all aspects of our systems of internal accounting and financial reporting control and corporate governance functions on behalf of the Board; and
- provides oversight assistance in connection with legal, ethical and risk management compliance programs established by management and the Board, including compliance with requirements of Sarbanes-Oxley and makes recommendations to the Board regarding corporate governance issues and policy decisions.

#### *Nominating and Corporate Governance Committee*

Our Board has a Nominating and Corporate Governance Committee currently composed of Kevin Kotler, William Mark Watson and Todd C. Davis, all of whom became members of the Nominating and Corporate Governance Committee in May 2018. Mr. Kotler currently serves as the chairman of the committee. The

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Nominating and Corporate Governance Committee is charged with the responsibility of reviewing our corporate governance policies and with proposing potential director nominees to the Board for consideration. The Nominating and Corporate Governance Committee met three times in 2018 and has a charter which is reviewed annually. The charter is available on our website at: <https://bdsi.com/corporate-governance/>. Each member of the Nominating and Corporate Governance Committee was present at 100% of the Nominating and Corporate Governance Committee meetings held during such director's tenure as a member of the Nominating and Corporate Governance Committee. All members of the Nominating and Corporate Governance Committee are independent directors as defined by the rules of the NASDAQ Stock Market.

The Nominating and Corporate Governance Committee will consider director nominees recommended by security holders. To recommend a nominee please write to the Nominating and Corporate Governance Committee c/o James Vollins, BioDelivery Sciences International, Inc., 4131 ParkLake Avenue, Suite #225, Raleigh, NC. 27612. The Nominating and Corporate Governance Committee has established nomination criteria by which Board candidates are to be evaluated. The Nominating and Corporate Governance Committee will assess all director nominees using the same criteria.

In 2010, the Nominating and Corporate Governance Committee adopted a set of criteria by which it seeks to evaluate candidates to serve on our Board. The evaluation methodology includes a scored system based on criteria including items such as experience in the biotechnology sector, experience with public companies, executive managerial experience, operations and commercial experience, fundraising experience and contacts in the investment banking industry, personal and skill set compatibility with current Board members, industry reputation, knowledge of our company generally, independence and ethnic and gender diversity. While diversity is considered as a Board qualification criteria, it would not be weighted any more or less in an evaluation process than any other criteria. The established criteria do not distinguish Board candidates based on whether the candidate is recommended by a stockholder of our company.

### *Compensation Committee*

Our Board also has a Compensation Committee, which reviews or recommends the compensation arrangements for our management and employees and also assists the Board in reviewing and approving matters such as company benefit and insurance plans, including monitoring the performance thereof. The Compensation Committee has a charter (which is reviewed annually). The Compensation Committee is currently composed of Todd C. Davis, Peter S. Greenleaf and Kevin Kotler. Mr. Davis serves as chairman of this committee. The charter is available on our website at: <https://bdsi.com/corporate-governance/>. The Compensation Committee met six times during 2018. Each member of the Compensation Committee was present at 100% of the Compensation Committee meetings held during such director's tenure as a member of the Compensation Committee.

The Compensation Committee has the authority to directly engage, at our expense, any compensation consultants or other advisers as it deems necessary to carry out its responsibilities in determining the amount and form of employee, executive and director compensation. In 2017, the Compensation Committee engaged Radford, an AON Consulting Company, to obtain market data against which it has measured the competitiveness of our compensation programs. In determining the amount and form of employee, executive and director compensation, the Compensation Committee has reviewed and discussed historical salary information as well as salaries for similar positions at comparable companies. We paid consultant fees to Radford of \$0.1 million in 2018.

### *Board Leadership Structure and Role in Risk Oversight*

The current Chairman of the Board is Peter S. Greenleaf. Our Board recognizes that it is important to determine an optimal board leadership structure to ensure the independent oversight of management of the Company. We separate the roles of Chief Executive Officer and Chairman of the Board in recognition of the differences between the two roles. The Chief Executive Officer is responsible for the day-to-day leadership and performance of the Company as well as, in conjunction with the Board, setting the strategic direction of the Company, while the Chairman of the Board provides guidance to the Chief Executive Officer, presides over meetings of the full Board and is generally responsible for the efficient operation of the Board. We believe that this separation of responsibilities provides a balanced approach to managing the Board and overseeing the Company.

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### *Delinquent Section 16(a) Reports*

Section 16(a) of the Exchange Act, requires that our directors and executive officers and persons who beneficially own more than 10% of our common stock (referred to herein as the “reporting persons”) file with the SEC various reports as to their ownership of and activities relating to our common stock. Such reporting persons are required by the SEC regulations to furnish us with copies of all Section 16(a) reports they file.

Based solely upon a review of copies of Section 16(a) reports and representations received by us from reporting persons, and without conducting any independent investigation of our own, in fiscal year 2018, all Forms 3, 4 and 5 were timely filed with the SEC by such reporting persons, with the exception of Mark A. Sirgo, who filed a Form 4, which was due January 5, 2018 on January 19, 2018, Scott Plesha, Ernest De Paolantonio and Francis E. O’Donnell, who filed Form 4s, which were due on February 21, 2018 on February 23, 2018, Ernest De Paolantonio, who filed a Form 4, which was due on April 5, 2018 on April 6, 2018, Mark A. Sirgo, who filed a Form 4, which was due April 10, 2018 on April 13, 2018, and Scott Plesha, who filed a Form 4, which was due October 19, 2018 on October 25, 2018.

### *Code of Ethics*

We have adopted a code of ethics that applies to all employees, as well as each member of our Board. Our code of ethics is posted on our website, and we intend to satisfy any disclosure requirement under Item 5.05 of Form 8-K regarding an amendment to, or waiver from, a provision of our code of ethics by posting such information on our website, [www.bdsi.com](http://www.bdsi.com). A copy of our code of ethics is also available in print, without charge, upon written request to 4131 ParkLake Ave., Suite #225 Raleigh, NC, 27612 Attn: James Vollins.

## Audit Committee Report

*The Audit Committee of the Board of Directors has furnished the following report on its activities during the year ended December 31, 2018. The report is not deemed to be “soliciting material” or “filed” with the Securities and Exchange Commission or subject to the Securities and Exchange Commission’s proxy rules or to the liabilities of Section 18 of the Exchange Act, and the report shall not be deemed to be incorporated by reference into any prior or subsequent filing under the Securities Act of 1933, as amended, or the Exchange Act except to the extent that the Company specifically incorporates it by reference into any such filing.*

The Audit Committee of the Board (the “**Audit Committee**”) during 2018 was composed of the following three directors: William Mark Watson, Peter S. Greenleaf and Todd C. Davis, all of whom were independent directors as defined in accordance with section 3(a)(58)(A) of the Exchange Act and the rules of NASDAQ and all of whom became members of the Audit Committee in May 2018.

The Board has adopted a written Audit Committee Charter, which was filed as Appendix A to the Company’s 2003 Proxy Statement and was updated most recently in January 2019.

Management is responsible for the Company’s financial statements, financial reporting process and systems of internal accounting and financial reporting control. The Company’s independent auditor is responsible for performing an independent audit of the Company’s financial statements in accordance with auditing standards generally accepted in the United States and for issuing a report thereon. The Audit Committee’s responsibility is to oversee all aspects of the financial reporting process on behalf of the Board. The responsibilities of the Audit Committee also include engaging and evaluating the performance of the accounting firm that serves as the Company’s independent auditor.

The Audit Committee discussed with the Company’s independent auditor, with and without management present, such auditor’s judgments as to the quality, not just acceptability, of the Company’s accounting principles, along with such additional matters required to be discussed under the Statement on Auditing Standards No. 61, “Communication with Audit Committees.” The Audit Committee has discussed with the independent auditor, the auditor’s independence from the Company and its management, including the written disclosures and the letter submitted to the Audit Committee by the independent auditor as required by the Independent Standards Board Standard No. 1, “Independence Discussions with Audit Committees.”

In reliance on such discussions with management and the independent auditor, review of the representations of management and review of the report of the independent auditor to the Audit Committee, the Audit Committee recommended (and the Board approved) that the Company’s audited financial statements be included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2018. The Audit Committee and the Board have also, respectively, recommended and approved the selection of the Company’s current independent auditor, which approval is subject to ratification by the Company’s stockholders.

Submitted by:

*Audit Committee of the Board*

William Mark Watson (Chair)

Peter S. Greenleaf

Todd C. Davis

**Compensation Committee Report**

Our Compensation Committee has reviewed and discussed with management the Compensation Discussion and Analysis (“CD&A”) included in this proxy statement. Based on that review and discussion, the Compensation Committee has recommended to the Board that the CD&A be included in this proxy statement.

Submitted by:

Compensation Committee of the Board

Todd C. Davis (Chair)

Kevin Kotler

Peter S. Greenleaf

## Compensation Discussion and Analysis

The Compensation Committee of our board of directors has the responsibility to review, determine and approve the compensation for our executive officers. Further, the Compensation Committee oversees our overall compensation strategy, including compensation policies, plans and programs that cover all employees.

In 2018, we employed seven executive officers, each of whom served as a “Named Executive Officer” (or NEO) for purposes of SEC reporting during 2018: (1) Herm Cukier, our Chief Executive Officer; (2) Mark A. Sirgo, Pharm.D., our former President and Chief Executive Officer who retired on January 2, 2018 and who continues to serve as Vice Chairman of our board of directors; (3) Ernest R. De Paolantonio, CPA, MBA, our former Treasurer and Chief Financial Officer who retired on April 30, 2019; (4) Scott Plesha, our President and Chief Commercial Officer; (5) Dr. Thomas Smith, our Chief Medical Officer; (6) James Vollins, our General Counsel, Chief Compliance Officer and Corporate Secretary and (7) Niraj Vasisht, Ph.D., our former Senior Vice President and Chief Technology Officer who retired on February 4, 2018.

This Compensation Discussion and Analysis sets forth a discussion of the compensation for our NEOs as of December 31, 2018 as well as a discussion of our philosophies underlying the compensation for our NEOs and our employees generally.

### Objectives of Our Compensation Program

The Compensation Committee’s philosophy seeks to align the interests of our stockholders, officers and employees by tying compensation to individual performance and the Company’s performance, both short-term in the form of salary and annual cash bonus payments, and long-term in the form of incentive equity awards. The objectives of our compensation program enhance our ability to:

- attract and retain qualified and talented individuals;
- share the risks and rewards of our business with our NEOs and employees; and
- provide reasonable and appropriate incentives and rewards to our team for building long-term value within our company, in each case in a manner comparable to companies similar to ours.

In addition, we strive to be competitive with other similarly-situated companies in our industry. The process of developing and commercializing pharmaceutical products is a long-term proposition and outcomes may not be measurable for several years. Therefore, to build long-term value for our stockholders, and to achieve our business objectives, we believe that we must compensate our officers and employees in a competitive and fair manner that reflects our current activities but also reflects contributions to building long-term value.

We utilize the services of the Radford Group, an AON consulting company (which we refer to herein as Radford) to review compensation programs of peer companies to assist the Compensation Committee in determining the compensation levels for our NEOs, as well as for other employees of ours. Radford is a recognized independent consulting company and services clients throughout the United States.

The companies that comprise our peer group are selected and reviewed no less frequently than biennially. The current peer group used to evaluate compensation for the fiscal year ended December 31, 2018 was approved by the Compensation Committee in September 2017 and includes the following companies:

<u>Company</u>	<u>Location</u>
AcelRx Pharmaceuticals, Inc.	Redwood City, CA
Adamis Pharmaceuticals	San Diego, CA
Alimera Sciences, Inc.	Alpharetta, GA
Antares Pharma, Inc.	Ewing, NJ
BioCryst Pharmaceuticals, Inc.	Durham, NC
Collegium Pharmaceutical	Stoughton, MA.
Corium	Menlo Park, CA.
CTI BioPharma Corp.	Seattle, WA
Cumberland Pharmaceuticals, Inc.	Nashville, TN
DURECT Corporation	Cupertino, CA
KemPharm	Coralville, IA.
Neos Therapeutics, Inc.	Grand Prairie, TX
Recro Pharma	Malvern, PA
Sorrento Therapeutics	San Diego, CA
Strongbridge BioPharma plc	Treose, PA
Vivus, Inc.	Campbell, CA

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With respect to our employees and non-senior management, we will also take into consideration regional market data in determining appropriate compensation packages, and we have in the past relied on Radford to provide us with such data.

### **Elements of Our Compensation Program and Why We Chose Each**

#### *Main Compensation Components*

Our company-wide compensation program, including for our NEOs, is broken down into three main components: base salary, performance cash bonuses and potential long-term compensation in the form of stock options or restricted stock units (or RSUs). We believe these three components constitute the minimum essential elements of a competitive compensation package in our industry.

#### *Salary*

Base salary is used to recognize the experience, skills, knowledge and responsibilities required of our NEOs as well as recognizing the competitive nature of the biopharmaceutical industry. This is determined partially by evaluating our peer companies as well as the degree of responsibility and experience levels of our NEOs and their overall contributions to our company. Base salary is one component of the compensation package for NEOs; the other components being cash bonuses, annual equity grants and our benefit programs. Base salary is determined in advance whereas the other components of compensation are awarded in varying degrees following an assessment of the performance of a NEO. This approach to compensation reflects the philosophy of our board of directors and its Compensation Committee to emphasize and reward, on an annual basis, performance levels achieved by our NEOs, and to provide appropriate retention incentives based on future performance.

#### *Performance Cash Bonus Plan*

We have a performance cash bonus plan under which bonuses are paid to our NEOs based on achievement of our performance goals and objectives established by the Compensation Committee and/or our board of directors as well as on individual performance. The bonus program is discretionary and is intended to: (i) strengthen the connection between individual compensation and our achievements; (ii) encourage teamwork among all disciplines within our company; (iii) reinforce our pay-for-performance philosophy by awarding higher bonuses to higher performing employees; and (iv) help ensure that our cash compensation is competitive. Depending on our company's cash position, the Compensation Committee and our board of directors have the discretion after consulting with our NEOs to not pay (or pay more limited) cash bonuses in order that we may conserve cash and support ongoing development programs and commercialization efforts. Regardless of our cash position, we consistently grant annual stock options (and, more recently in the case of senior executives, RSUs) to continue incentivizing both our senior management and our employees.

Based on their employment agreements, each NEO is assigned a target payout under the performance cash bonus plan, expressed as a percentage of base salary for the year. Actual payouts under the performance cash bonus plan are based on the achievement of corporate performance goals and an assessment of individual performance. For the NEOs, the corporate goals receive the highest weighting to ensure that the bonus system for our management team is closely tied to our corporate performance. Each employee also has specific individual goals and objectives as well that are tied to the overall corporate goals. For employees, mid-year and end-of-year progress is reviewed with the employees' managers.

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### *Equity Incentive Compensation*

We view long-term compensation, currently in the form of stock options and RSUs, which generally vest in annual increments over three years (other than performance based awards as described below), as a tool to align the interests of our NEOs and employees generally with the creation of stockholder value, to motivate our employees to achieve and exceed corporate and individual objectives and to encourage them to remain employed by us. While cash compensation is a significant component of employees' overall compensation, the Compensation Committee and our board of directors (as well as our NEOs) believe that the driving force of any employee working in a growing pharmaceutical company should be strong equity participation. We believe that this not only creates the potential for substantial longer term corporate value but also serves to motivate employees and retain their loyalty and commitment with appropriate personal compensation over a longer period of time. Our equity awards are granted under our 2011 Equity Incentive Plan (as the same may be amended, supplemented or superseded from time to time, which we refer to herein as the Plan).

During 2018, we granted equity incentive awards with two types of vesting: time-based and performance-based.

*Time-based vesting.* The Compensation Committee believes that because time-vested stock options and RSUs have a three-year vesting schedule that begins one year after the date of the award, the equity grants constitute a significant retention incentive and a tool to foster continuity of management, an important factor for a company with a relatively low number of employees.

*Performance-based vesting.* Based on the Compensation Committee's review in 2017 of market practices, pronouncements by corporate governance advisory services and discussions with our institutional investors, beginning with the annual equity awards granted to senior executives (including our NEOs) in February 2017 and February 2018, one-half of the RSUs granted in 2017 and 2018 were performance-based and vest over a three-year period based on the level of achievement of specified predetermined net revenue and operating income targets, with the remaining one-half being time-vested as described above.

### *Other Compensation*

In addition to the main components of compensation outlined above, we also provide contractual severance benefits to our NEOs named above as well as to Terry Coelho, who was appointed as our Chief Financial Officer as of January 15, 2019, (see "Appointment of Chief Financial Officer" below), Joseph Lockhart, our Senior Vice President Operations and Albert J. Medwar, our former Senior Vice President, Corporate and Business Development (who retired from our company on April 1, 2018 and received a retirement benefits package that included equity features). Ernest R. De Paolantonio, our former Treasurer and Chief Financial Officer, executed a transitional service and separation agreement with us on January 23, 2019 and received contractual severance benefits as a condition of his retirement (see "De Paolantonio Retirement Agreement"). We also provide contractual change in control benefits to certain of those NEOs and current and former officers. The change in control benefits for all applicable persons has a "double trigger." A double-trigger means that the executive officers will receive the change in control benefits described in the agreements only if there is both (1) a Change in Control of our company (as defined in the agreements) and (2) a termination by us of the applicable person's employment "without cause" or a resignation by the applicable persons for "good reason" (as defined in the agreements) within a specified time period prior to or following the Change in Control. We believe this double trigger requirement creates the potential to maximize stockholder value because it prevents an unintended windfall to management as no benefits are triggered solely in the event of a Change in Control while providing appropriate incentives to act in furtherance of a change in control that may be in the best interests of the stockholders. We believe these severance or change in control benefits are important elements of our compensation program that assist us in retaining talented individuals at the executive and senior management levels and that these arrangements help to promote stability and continuity of our executives and senior management team. We also believe that the interests of our stockholders will be best served if the interests of these members of our management are aligned with theirs. Furthermore, we believe that providing

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change in control benefits lessens or eliminates any potential reluctance of members of our management to pursue potential change in control transactions that may be in the best interests of the stockholders. Finally, we believe that it is important to provide severance benefits to members of our management to promote stability and to focus on the job at hand.

We also provide benefits to the executive officers that are generally available to all regular full-time employees of ours, including our medical and dental insurance, life insurance and a 401(k) match for all individuals who participate in the 401(k) plan. Currently, we do not provide any perquisites to any of our NEOs. Further, we do not have pension arrangements or post-retirement health coverage for our executive officers or employees. We also do not have deferred compensation plans other than allowing senior executive recipients of RSUs to defer payment of RSUs that may vest in future years, subject to compliance with Section 409A of the Internal Revenue Code (or the Code) and related rules.

All our employees not specifically under contract are “at-will” employees, which means that their employment can be terminated at any time for any reason by either us or the employee. Our NEOs (as well as certain of our senior managers) have employment agreements that provide lump sum compensation in the event of their termination without cause or, under certain circumstances, upon a Change of Control.

### *Determination of Compensation Amounts*

Many factors impact the determination of compensation amounts for our NEOs, including the individual’s role in our company and individual performance, length of service with us, competition for talent, individual compensation package, assessments of internal pay equity and industry data. Stock price performance has generally not been a significant factor in determining annual compensation because the price of our common stock is subject to a variety of factors outside of our control.

### *Industry Survey Data*

In collaboration with our compensation advisor, our Compensation Committee establishes a list of peer companies to best ensure that we are compensating our executives on a fair and reasonable basis, as set forth above under the heading “Objectives of our Compensation Program.” We also utilize data for below-executive level personnel, which data focuses on similarly-sized life science companies in the Southeastern region of the United States. The availability of peer data is used by the Compensation Committee strictly as a guide in determining compensation levels regarding salaries, cash bonuses and annual equity grants to all employees. However, the availability of this data does not imply that the Compensation Committee is under any obligation to exactly follow peer companies in compensation matters.

### *Determination of Base Salaries*

As a guideline for NEO base salary, we perform formal benchmarking against respective comparable positions in our established peer group. Our guideline is to set targeted NEO salary ranges between the 25th and 50th percentile for comparable positions within our peer group. We then adjust salaries based on our assessment of our NEOs’ levels of responsibility, experience, overall compensation structure and individual performance. The Compensation Committee has the discretion if it believes circumstances warrant, to go above the 50th percentile of the peer group. The Compensation Committee is not obliged to raise salaries purely on the availability of data. Merit-based increases to salaries of executive officers are based on our assessment of individual performance and the relationship to applicable salary ranges. Cost of living adjustments may also be a part of that assessment. The Compensation Committee, in recent years, has tended to maintain cash compensation levels at or near the 50th percentile but to exceed that level in determining equity compensation. The emphasis on equity compensation reflects the Committee’s objective, given that we have only recently engaged in revenue generating operations, to incentivize personnel and to preserve cash in a prudent manner and yet reward personnel for outstanding performance. In early 2019, the Compensation Committee revised its cash compensation philosophy and determined that our cash compensation practices should be around the 25th percentile of our peer group while our equity compensation should align with the 75th percentile of our peer group. This change aligns with our general belief that the driving force of any employee working in a growing pharmaceutical company should be strong equity participation, which we believe creates the potential for substantial longer term corporate value and serves to motivate employees and retain their loyalty and commitment with appropriate personal compensation over a longer period of time.

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### *Performance Cash Bonus Plan*

Concurrently with the beginning of each calendar year, preliminary corporate goals that reflect our business priorities for the coming year are prepared by our NEOs with input from other officers. The draft goals are presented to the Compensation Committee and our full board at the beginning of each year and discussed, revised as necessary, and then approved by our board of directors. The Compensation Committee then reviews the final goals to determine and confirm their appropriateness for use as performance measurements for purposes of the bonus program. The goals may be re-visited during the year and potentially restated in the event of significant changes in corporate strategy or the occurrence of significant corporate events. Following the agreement of our board of directors on the corporate objectives, the goals are then shared with all employees in a formal meeting(s) and are reviewed periodically throughout the year at monthly staff meetings and quarterly board of director meetings.

The performance cash bonus plan for our executive officers and employees in 2018 was adopted by the Compensation Committee in February 2018. The plan sets forth target bonus opportunities, as a percentage of salary, based on the level of responsibility of the position, ranging up to 55% of salary for Herm Cukier, our CEO, up to 45% of salary for our NEOs and up to 30% of salary for certain other officers. In setting these percentages, the Compensation Committee determined that the above percentages were reasonable and in line with our peer group. Each employee has the opportunity to achieve a targeted amount, depending on how corporate goals and objectives are achieved, with variances on an “employee by employee” basis to be determined by our Compensation Committee in consultation with senior executives and employees’ direct reports.

### *Determination of Equity Incentive Compensation*

To assist us in assessing the reasonableness of our equity grant amounts, historically we have reviewed information supplied by our compensation consultant. Such information included equity data from a cross-section of the companies in the above-mentioned surveys. Initially, on-hire stock option grant amounts have generally been targeted at the 25th to 50th percentile for that position or similar industry position, adjusted for internal equity, experience level of the individual and the individual’s total mix of compensation and benefits provided in his or her offer package. Initial on-hire grants typically vest over three years.

Beginning in January 2016, the Compensation Committee expanded its criteria for equity awards, considering not only the financial value of awards, but also the “burn rate” (meaning the number of shares awarded as a percentage of total outstanding shares). These two criteria (i.e. financial value and burn rate) often result in disparate computations when contrasted to peer group criteria. Accordingly, the Compensation Committee has attempted to equitably balance those two factors to achieve appropriate equity awards.

In early 2017 and early 2018, with respect to equity awards to senior executives, including NEOs, one-half of the RSUs were awarded in the form of time-based RSUs, as have been exclusively awarded to those executives in recent years, and for the first time, one-half of the RSUs were in the form of performance-based RSUs as described above. In early 2019, the Compensation Committee further expanded upon its prior equity grant philosophy and decided to make award decisions that were more in line with the market practices of our peer group and would put us in a competitive position to retain key talent. The Compensation Committee decided that our equity compensation should align with the 75<sup>th</sup> percentile of our peer group.

For a discussion of equity awards made in early 2018, see “Equity Awards in February 2018” under “Compensation Decisions For Performance in 2018” below.

### *Equity Grant Practices*

All stock options and/or RSUs granted to the NEOs and other executives are approved by the Compensation Committee. Exercise prices for options are set using a 30-day volume weighted average price method, which we define as the closing price of our common stock on the Nasdaq Capital Market on the trading day of the date of grant and the 30 trading days preceding that date. RSU grants are valued on the day of issuance and are vested (in

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the case of either time-based or performance-based vesting), if earned on the last day preceding an open trading window after filing our Annual Report on Form 10-K. Grants are generally made: (i) on the employee's start date and (ii) at board of director meetings held each January or February and following annual performance reviews. However, grants have been made at other times during the year. The size of year-end grants for each NEO is assessed against our internal equity guidelines. Current market conditions for grants for comparable positions and internal equity may also be assessed. Also, grants may be made relating to promotions or job-related changes in responsibilities. In addition, on occasion, the Compensation Committee may make special awards for extraordinary individual or our company performance. In early 2019, the Compensation Committee revised its existing equity grant philosophy to provide the board of directors, executives and non-executive employees with equity compensation in line with the 75<sup>th</sup> percentile of our peer group. As part of that decision, the Compensation Committee also decided all future equity awards to the board of directors, executives and executive directors would be comprised of 75% options and 25% RSUs.

### *Compensation Setting Process*

At the first of the year, meetings of our board of directors and the Compensation Committee, overall corporate performance and relative achievement of the corporate goals for the prior year are assessed. The relative achievement of each goal is assessed, and the summation of the individual components results in an overall corporate goal rating, expressed as a percentage.

Also, near the end of the year, the CEO evaluates the individual performance of each NEO (other than himself) and provides the Compensation Committee with an assessment of the performance of such NEO. In determining the individual performance ratings of the NEOs, we assess performance against many factors, including each NEO's relative contributions to our corporate goals, demonstrated career growth, level of performance in the face of available resources and other challenges, and the respective officer's department's overall performance. This assessment is conducted in a holistic fashion, in contrast to the summation of individual components as is done to arrive at the corporate goal rating.

Following a qualitative assessment of each individual NEO's performance, our policies provide guidelines for translating this performance assessment into a numerical rating. Both the initial qualitative assessment and the translation into a numerical rating are made by the Compensation Committee on a discretionary basis. We believe that conducting a discretionary assessment for the individual component of the NEOs' performance provides for flexibility in the evaluation of our NEOs and their adaptability to addressing potential changes in our priorities throughout the year.

The Compensation Committee looks to the CEO's performance assessments of the other NEOs and his recommendations regarding a performance rating for each, as well as input from the other members of our board of directors. These recommendations may be adjusted by the Compensation Committee prior to finalization. For the CEO, the Compensation Committee evaluates his performance, taking into consideration input from the other members of our board of directors, and considers the achievement of overall corporate objectives by both the CEO specifically and our company generally. The CEO is not present during the Compensation Committee's deliberations regarding his compensation.

The CEO may also present any recommended changes to base salary and recommendations for annual equity grant amounts for NEOs and other senior executives.

The Compensation Committee has the authority to directly engage, at our expense, any compensation consultants or other advisors (such as Radford) that it deems necessary to determine the amount and form of employee, executive and director compensation. In determining the amount and form of employee, executive and director compensation, the Compensation Committee has reviewed and discussed historical salary information as well as salaries for similar positions at comparable companies. However, the availability of this data does not imply that the Compensation Committee is under any obligation to exactly follow peer companies' compensation practices.

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We paid consultant fees to Radford of \$0.1 million in 2018. NEOs may have indirect input in the compensation results for other executive officers by virtue of their participation in the performance review and feedback process for the other executive officers.

### **Compensation Decisions for Performance in 2018**

#### *General Assessment of Management Performance in 2018*

The Compensation Committee and our board of directors conducted the performance and compensation review for 2018 in January 2019. The Compensation Committee compared performance as elaborated below.

The key corporate objectives for 2018 included the following:

(1) Key financial objectives including targeted revenue and cash on hand, (2) commercial objectives including BELBUCA sales and preferred coverage, (3) organizational objectives including hiring of key NEOs and sales team expansions, (4) operational objectives including cost of goods reductions and improve production and inventory efficiencies, (5) medical objectives including development of medical communication and data generation plans, and (6) legal objectives including continued success in ongoing and prospective litigation with respect to our intellectual property and patent portfolio.

The Compensation Committee determined that the Company had achieved all 2018 key objectives as established and exceeded expectations of targeted performance measures

#### *2018 Cash Bonus Calculations*

After reviewing the achievement of the corporate goals and objectives for 2018 as noted above, the Compensation Committee determined that all NEOs should be awarded a cash bonus at 110% of their target, adjusting for time-served during 2018 for newly hired NEOs. A cash bonus pool, equal to 110% of the aggregate of individual bonus opportunities of all other employees, was established with our executives having the authority to award individual bonuses from that pool with respect to these employees who reported to them. The cost of all such cash bonuses for 2018 performance (but paid in March 2019) was approximately \$0.8 million for NEOs and approximately \$0.7 million for employees.

#### *Equity Awards in January 2019*

On January 31, 2019, the total amount of stock options awarded to our NEOs and senior executives was 1,120,000, which options vest annually in one-third equal increments beginning one year after the date of grant and had an approximate Black Scholes value of \$4.4 million.

The total amount of the RSUs awarded to our NEOs and senior executives was 190,250, having an approximate value on the date preceding the grant of \$0.9 million based on a share price of \$4.50.

All RSUs and stock options awarded in January 2019 were granted pursuant to the Plan, as amended.

#### *Individual Compensation of Herm Cukier, our Chief Executive Officer*

Mr. Cukier, who joined our Company May 2018, received a base salary of \$570,000 in 2018.

Mr. Cukier was awarded a cash bonus for 2018 in the amount of \$231,050, which is 110% of his target bonus of 55% of his base salary in 2018, after further adjustment for time served during 2018, a calculation consistent with our cash bonus policy. Mr. Cukier was also granted in January 2019, 540,000 stock options and 93,750 RSUs, which are subject to time-based vesting.

#### *Individual Compensation of Ernest R. De Paolantonio, our Chief Financial Officer during 2018.*

Mr. De Paolantonio's received a base salary of \$370,000 in 2018.

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Mr. De Paolantonio was awarded a cash bonus for 2018 in the amount of \$162,800, which is 110% of his target bonus of 40% of his base salary in 2018, a calculation consistent with our cash bonus policy.

### *Individual Compensation of Scott Plesha, our President and Chief Commercial Officer*

Mr. Plesha, who joined our Company in August 2015 and promoted to President in January 2018, received a base salary of \$365,000 in 2018.

Mr. Plesha was awarded a cash bonus for 2018 in the amount of \$180,675, which is 110% of his target bonus of 40% of his base salary in 2018, a calculation consistent with our cash bonus policy. Mr. Plesha was also granted in January 2019, 245,000 stock options and 40,000 RSUs, which are subject to time-based vesting.

### *Individual Compensation of Dr. Thomas Smith, our Chief Medical Officer*

Dr. Smith, who joined our Company in July 2018, received a base salary of \$345,000 in 2018.

Dr. Smith was awarded a cash bonus for 2018 in the amount of \$50,094, which is 110% of his target bonus of 40% of his base salary in 2018, after further adjustment for time served during 2018, a calculation consistent with our cash bonus policy. Dr. Smith was also granted in January 2019, 130,000 stock options and 23,000 RSUs, which are subject to time-based vesting.

### *Individual Compensation of James Vollins, our General Counsel, Chief Compliance Officer and Corporate Secretary*

Mr. Vollins, who joined our Company in November 2018, received a base salary of \$310,000 in 2018.

Mr. Vollins' target bonus is 40% of his base salary in 2018, a calculation consistent with our cash bonus policy. Mr. Vollins was also granted in January 2019, 65,000 stock options and 11,500 RSUs, which are subject to time-based vesting.

### *Appointment of Chief Financial Officer*

Ms. Coelho joined our Company in January 2019 and receives a base salary of \$385,000. Ms. Coelho's target bonus is 45% of her base salary for 2019, a calculation consistent with our cash bonus policy.

### *De Paolantonio Retirement Agreement*

On January 23, 2019, we entered into a Transitional Service and Separation Agreement (the "Separation Agreement") with Mr. De Paolantonio, our former Chief Financial Officer and Treasurer. Mr. De Paolantonio retired on April 30, 2019 (the "Retirement Date").

The Separation Agreement provided for, among other things, Mr. De Paolantonio to (i) continue to receive his current base salary through the Retirement Date, (ii) remain eligible to participate in our group employee benefit plans as a regular full-time employee until his Retirement Date, and (iii) continue to vest in his outstanding equity awards until his Retirement Date. At the termination of his employment with us, Mr. De Paolantonio received (a) a one-time cash payment of \$0.36 million, subject to applicable deductions and withholdings, which represented one full year of his current base salary, (b) his target annual incentive compensation for 2018, and (c) a monthly cash payment for three months in an amount equal to the actual costs of continuation of Mr. De Paolantonio's group health and dental insurance under the Consolidated Omnibus Reconciliation Act of 1985.

Additionally, the option exercise period for the vested incentive stock options granted to Mr. De Paolantonio on October 1, 2013 was extended through the remainder of the option period which ends on October 17, 2023. All time-based restricted stock units held by Mr. De Paolantonio that would have vested had Mr. De Paolantonio remained employed by us through December 31, 2020 were deemed vested as of the Retirement Date, and all time-based restricted stock units held by Mr. De Paolantonio that by their terms vest after December 31, 2020 were forfeited as of the Retirement Date. All performance-based restricted stock units remained outstanding and eligible to vest with respect to our performance through December 31, 2020 and any performance-based restricted stock units that do not vest based upon performance through December 31, 2020 shall be forfeited.

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### *Accounting and Tax Considerations*

*ASC 718.* On January 1, 2006, we began accounting for share-based payments in accordance with the requirements of Accounting Standards Codification 718 (ASC 718), Share-Based Payments. To date, the adoption of ASC 718 has not impacted our stock option granting practices.

*Internal Revenue Code Section 162(m).* Generally, Section 162(m) of the Code (“Section 162(m)”) disallows a federal income tax deduction for public corporations of remuneration in excess of \$1 million paid in any fiscal year to certain specified executive officers. For taxable years beginning before January 1, 2018 (i) these executive officers consisted of a public corporation’s chief executive officer and up to three other executive officers (other than the chief financial officer) whose compensation is required to be disclosed to stockholders under the Exchange Act because they are our most highly-compensated executive officers and (ii) qualifying “performance-based compensation” was not subject to this deduction limit if specified requirements are met.

Pursuant to the Tax Cuts and Jobs Act of 2017 (the “Tax Act”), for taxable years beginning after December 31, 2017, the remuneration of a public corporation’s chief financial officer is also subject to the deduction limit. In addition, subject to certain transition rules (which apply to remuneration provided pursuant to written binding contracts which were in effect on November 2, 2017 and which are not subsequently modified in any material respect), for taxable years beginning after December 31, 2017, the exemption from the deduction limit for “performance-based compensation” is no longer available. Consequently, for fiscal years beginning after December 31, 2017, all remuneration in excess of \$1 million paid to a specified executive will not be deductible. These changes will cause more of our compensation to be non-deductible under Section 162(m) in the future and will eliminate the Company’s ability to structure performance-based awards to be exempt from Section 162(m).

In designing our executive compensation program and determining the compensation of our executive officers, including our named executive officers, our compensation committee considers a variety of factors, including the potential impact of the Section 162(m) deduction limit. However, our compensation committee will not necessarily limit executive compensation to that which is or may be deductible under Section 162(m). The deductibility of some types of compensation depends upon the timing of an executive officer’s vesting or exercise of previously granted rights. Further, interpretations of and changes in the tax laws, and other factors beyond our compensation committee’s control also affect the deductibility of compensation. Our compensation committee will consider various alternatives to preserving the deductibility of compensation payments and benefits to the extent consistent with its compensation goals and will continue to monitor developments under Section 162(m).

To maintain flexibility to compensate our executive officers in a manner designed to promote our short-term and long-term corporate goals, our compensation committee has not adopted a policy that all compensation must be deductible. Our compensation committee believes that our stockholders’ interests are best served if its discretion and flexibility in awarding compensation is not restricted, even though some compensation awards may result in non-deductible compensation expense.

*Section 409A.* Section 409A of the Code generally changed the tax rules that affect most forms of deferred compensation that were not earned and vested prior to 2005. Under Section 409A, deferred compensation is defined broadly and may potentially cover compensation arrangements such as severance or change in control pay outs and the extension of the post-termination exercise periods of stock options. We take Code Section 409A into account, where applicable, in determining the timing of compensation paid to our executive officers in order to comply with, or be exempt from, its requirements.

### **Executive Compensation**

The following table sets forth all compensation paid to our named executive officers at the end of the fiscal years ended December 31, 2018, 2017 and 2016. Individuals we refer to as our “named executive officers” include our Vice Chairman (formerly served as our Chief Executive Officer), our former Chief Financial Officer, our former Senior Vice President and Chief Technology Officer and our most highly compensated executive officers whose salary and bonus for services rendered in all capacities exceeded \$100,000 during the fiscal year ended December 31, 2018.

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Name and principal position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)(17)	Option Awards (\$)(17)	Non-Equity Incentive Plan Compensation (\$)	Nonqualified Deferred Compensation Earnings (\$)	All Other Compensation (\$)	Total (\$)
Mark A. Sirgo, Pharm.D. Vice Chairman and Director <sup>(1)</sup>	2018	68,385 <sup>(2)</sup>	—	792,000	—	—	—	978,249 <sup>(3)</sup>	1,838,643
	2017	590,000	247,800	1,387,500	—	—	—	847,714	3,073,014
	2016	571,154	264,000	1,045,000	—	—	—	19,485	1,899,639
Herm Cukier, Chief Executive Officer and Director	2018	359,539 <sup>(4)</sup>	281,050 <sup>(5)</sup>	526,000	1,288,000	—	—	14,459 <sup>(6)</sup>	2,469,048
	2017	—	—	—	—	—	—	—	—
	2016	—	—	—	—	—	—	—	—
Scott M. Plesha, President and Chief Commercial Officer <sup>(7)</sup>	2018	371,080	180,675	332,813	—	—	—	34,423 <sup>(8)</sup>	918,991
	2017	296,920	83,138	92,500	—	—	—	32,466	505,024
	2016	308,340	89,076	280,000	—	—	—	33,062	710,478
Thomas Smith, M.D., Chief Medical Officer	2018	139,327 <sup>(9)</sup>	75,094 <sup>(5)</sup>	—	165,944	—	—	3,441 <sup>(10)</sup>	383,806
	2017	—	—	—	—	—	—	—	—
	2016	—	—	—	—	—	—	—	—
James Vollins, General Counsel, Chief Compliance Officer and Corporate Secretary	2018	41,731 <sup>(11)</sup>	35,000 <sup>(5)</sup>	—	210,269	—	—	351 <sup>(12)</sup>	287,351
	2017	—	—	—	—	—	—	—	—
	2016	—	—	—	—	—	—	—	—
Ernest R. De Paolantonio, CPA MBA Former Chief Financial Officer and Treasurer <sup>(13)</sup>	2018	370,000	162,800	294,000	—	—	—	32,790 <sup>(14)</sup>	859,590
	2017	350,000	98,000	351,500	—	—	—	32,632	832,132
	2016	363,461	112,000	342,000	—	—	—	33,269	850,730
Niraj Vasisht, Ph.D. Former Senior VP and Chief Technology Officer <sup>(15)</sup>	2018	58,078	—	525,000	—	—	—	358,823 <sup>(16)</sup>	941,901
	2017	310,000	86,800	601,250	—	—	—	32,508	1,030,558
	2016	321,923	99,200	570,000	—	—	—	32,435	1,023,558

- (1) Mark A. Sirgo served as our President, Chief Executive Officer, Director and Vice Chairman until his retirement date of January 2, 2018. Upon retirement, Dr. Sirgo now serves as a Director and Vice Chairman.
- (2) Includes compensation in the amount of \$52,500 for serving as Vice Chairman and Director post-retirement.
- (3) Includes: Second and final gross, retirement payment in 2018 of \$787,000, \$131,625 of payments made through consulting company post-retirement during 2018, \$40,846 of accrued vacation paid in 2018, \$5,528 of health insurance premiums paid and 401(k) matching of \$13,250 paid in 2018.
- (4) Herm Cukier was hired as our Chief Executive Officer and Director on May 8, 2018. As such, the salary compensation presented in this table has been annualized.
- (5) Includes a new hire sign-on bonus in 2018.
- (6) Includes: \$709 of health insurance premiums and 401(k) matching of \$13,750 paid in 2018.
- (7) Scott Plesha was promoted to our President, and therefore a reporting officer, on January 2, 2018.
- (8) Includes: \$18,919 of health insurance premiums paid, \$1,754 telephone reimbursement and 401(k) matching of \$13,750 paid in 2018.
- (9) Thomas Smith M.D. was hired as our Chief Medical Officer on July 30, 2018. As such, the salary compensation presented in this table has been annualized.
- (10) Includes: \$3,090 of health insurance premiums paid and \$351 telephone reimbursement paid in 2018.
- (11) James Vollins was hired as our General Counsel, Chief Compliance Officer and Corporate Secretary on November 5, 2018. As such, the salary compensation presented in this table reflects the salary earned for his partial year of employment.
- (12) Includes: \$351 telephone reimbursement paid in 2018. As such, the salary compensation presented in this table has been annualized.

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- (13) Ernest De Paolantonio served as our Chief Financial Officer and Treasurer until December 31, 2018 and executed a transitional service and separation agreement with an effective date of retirement of April 30, 2019.
- (14) Includes: \$18,689 of health insurance premiums paid, \$351 telephone reimbursement and 401(k) matching of \$13,750 paid in 2018.
- (15) Niraj Vasisht served as our Senior Vice President and Chief Technology Officer until his retirement date of February 5, 2018.
- (16) Includes: retirement payment in 2018 of \$330,000, \$15,723 of accrued vacation paid in 2018, \$3,254 of health insurance premiums paid and 401(k) matching of \$9,846 paid in 2018.
- (17) The reported amounts represent the aggregate grant date fair value of the awards computed in accordance with Financial Accounting Standards Board Account Standards Codification Topic 718, Stock Compensation, as modified or supplemented, or FASB ASC Topic 718.

### ***Narrative Disclosure to Summary Compensation Table***

#### *Employment Agreements*

Except as set forth below, we currently have no written employment agreements with any of our officers, directors, or key employees. All directors and officers have executed confidentiality and noncompetition agreements with us.

The following is a description of our current executive employment agreements:

*Herm Cukier, Chief Executive Officer*—Mr. Cukier's employment agreement, dated May 2, 2018 includes a base salary of \$570,000, target bonus of up to 55% of his base salary (which is subject to modification by our Compensation Committee), and other employee benefits. Under the terms of his agreement, Mr. Cukier also received in 2018 a sign-on bonus of \$50,000.

We or Mr. Cukier may terminate his agreement for any reason or no reason upon sixty (60) days prior written notice to the other. Solely in the case of an event of cause, we cannot terminate Mr. Cukier for cause unless we have provided written notice to Mr. Cukier of the existence of the circumstances providing grounds for termination for a cause capable of cure, and Mr. Cukier has had at least thirty (30) days from the date on which such notice is provided to cure such circumstances to the reasonable satisfaction of us.

Mr. Cukier cannot terminate his employment for Good Reason unless he has provided written notice to us of the existence of the circumstances providing grounds for termination for good reason within sixty (60) days (thirty (30) days in the event of the grounds of the date Mr. Cukier learns of the initial existence of such grounds and we have had at least thirty (30) days from the date on which such notice is provided to cure such circumstances.) If Mr. Cukier does not terminate his employment for good reason within ninety (90) days after the date Mr. Cukier learns of the first occurrence of the applicable grounds, then Mr. Cukier will be deemed to have waived his right to terminate for good reason with respect to such grounds.

In the event of a termination by us for Cause or Mr. Cukier's resignation without good reason, we will pay Mr. Cukier (i) the base salary earned and expenses reimbursable incurred through the date of Mr. Cukier's termination, (ii) the prior year bonus (if applicable), and (iii) all amounts otherwise required to be paid or provided by law and shall thereafter have no further responsibility for termination or other payments to Mr. Cukier.

In the event of a termination by us without Cause, resignation by Mr. Cukier for good reason, or a non-renewal by us: we shall pay Mr. Cukier a one-time cash severance payment equal to two (2) times the amount of his then current annual base salary (or, in the event of a resignation by Mr. Cukier for good reason as a result of a reduction in Mr. Cukier's base salary, two (2) times the amount of his annual base salary prior to the reduction that gave rise to grounds for good reason). We shall pay Mr. Cukier on the payment date his pro-rated bonus through the date of termination and his prior year bonus (if applicable). In addition, all unvested option awards shall immediately become fully vested and exercisable and shall be exercisable over a period of three (3) years, and any RSUs shall continue to vest and settle upon the achievement of the applicable annual financing or performance objectives. Mr. Cukier's employment agreement will terminate prior to its scheduled expiration date in the event of Mr. Cukier's death or disability.

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In the event that Mr. Cukier's employment with the Company is terminated by the Company or its successor without Cause, or by Mr. Cukier for good reason, in any case in anticipation of, upon, or within twelve (12) months following the occurrence of a "Change of Control" (as defined in the employment agreement), Mr. Cukier will be entitled to receive a one-time severance payment equal to two (2) times the sum of (i) his base salary plus (ii) his bonus for the applicable year (calculated at 100% of target). In addition, all unvested option awards shall immediately become fully vested and exercisable and shall be exercisable over a period of three (3) years, and the continued service requirements and performance objectives for any performance-based equity awards shall be deemed satisfied and the RSUs shall be settled.

Mr. Cukier's employment agreement also includes 5-year non-competition and non-solicitation and confidentiality covenants. Under the terms of this agreement, he was also entitled to the following benefits: medical, dental, life, disability and 401(k).

*Scott M. Plesha, President*—Mr. Plesha was promoted to the role as our President and his current employment agreement, dated December 20, 2017 includes a base salary of \$365,000, target bonus of up to 45% of his base salary (which is subject to modification by our Compensation Committee), and other employee benefits. Under the terms of his agreement, Mr. Plesha received a bonus in 2018 of \$83,138, which bonus was related to 2017 performance.

We may terminate Mr. Plesha's employment agreement without cause and Mr. Plesha may resign without notice. We may immediately terminate Mr. Plesha's employment agreement for Good Cause (as defined in the agreement). Upon the termination of Mr. Plesha's employment for any reason, Mr. Plesha will continue to receive payment of any base salary earned but unpaid through the date of termination and any other payment or benefit to which he is entitled under the applicable terms of any applicable company arrangements. If Mr. Plesha is terminated during the term of the employment agreement other than for Good Cause (as defined in the employment agreement), or if Mr. Plesha terminates his employment for Good Reason (as defined in the employment agreement), Mr. Plesha is entitled to a lump sum severance payment equal to 1 times the amount of his annual base salary. In the event that such termination is within six months following a Change of Control (as defined in the employment agreement), the lump sum paid to Mr. Plesha will equal to one times the amount of his then current annual base salary. In the event of Mr. Plesha's death or disability, the amount owed to Mr. Plesha will be a one-time cash severance payment equal to one times his then current base salary.

Mr. Plesha's employment agreement also includes 2-year non-competition and non-solicitation and confidentiality covenants. Under the terms of this agreement, he is also entitled to the following benefits: medical, dental, life, disability and 401(k).

*Thomas Smith, M.D., Chief Medical Officer*—Dr. Smith's employment agreement, dated July 30, 2018 includes a base salary of \$345,000, target bonus of up to 40% of his base salary (which is subject to modification by our Compensation Committee), and other employee benefits. Under the terms of his agreement, Dr. Smith also received in 2018 a sign-on bonus of \$25,000.

We may terminate Dr. Smith's employment agreement without cause and Dr. Smith may resign without notice. We may immediately terminate Dr. Smith's employment agreement for Cause (as defined in his agreement). Upon the termination of Dr. Smith's employment for any reason, Dr. Smith will continue to receive payment of any base salary earned but unpaid through the date of termination and any other payment or benefit to which he is entitled under the applicable terms of any applicable company arrangements. If Dr. Smith is terminated during the term of the employment agreement other than for Cause (as defined in the employment agreement) Dr. Smith is entitled to a lump sum severance payment equal to one times the amount of his annual base salary. In the event that such termination is within six months following a Change of Control (as defined in the employment agreement), the lump sum paid to Dr. Smith will equal to one times the amount of his then current annual base salary.

In the event that Dr. Smith's employment with the Company is terminated by the Company or its successor without Cause within six (6) months following the occurrence of a "Change of Control" (as defined in the employment agreement), Dr. Smith will be entitled to receive a one-time severance payment equal to a one-time cash severance payment equal to his then current annual base salary. In addition, all unvested time-based options, RSUs or other equity securities to acquire shares of Company common stock shall immediately become fully vested and shall be exercisable to the extent provided for in the Plan.

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Dr. Smith's employment agreement also includes 2-year non-competition and non-solicitation and confidentiality covenants. Under the terms of this agreement, he is also entitled to the following benefits: medical, dental, life, disability and 401(k).

*James Vollins, General Counsel, Chief Compliance Officer and Corporate Secretary*- Mr. Vollins' employment agreement, dated November 5, 2018 includes a base salary of \$310,000, target bonus of up to 40% of his base salary (which is subject to modification by our Compensation Committee), and other employee benefits. Under the terms of his agreement, Mr. Vollins also received in 2018 a sign-on bonus of \$35,000.

We may terminate Mr. Vollins' employment agreement without cause and Mr. Vollins may resign without notice. We may immediately terminate Mr. Vollins' employment agreement for Cause (as defined in his agreement). Upon the termination of Mr. Vollins' employment for any reason, Mr. Vollins will continue to receive payment of any base salary earned but unpaid through the date of termination and any other payment or benefit to which he is entitled under the applicable terms of any applicable company arrangements. If Mr. Vollins is terminated during the term of the employment agreement other than for Cause (as defined in the employment agreement) Mr. Vollins is entitled to a lump sum severance payment equal to one times the amount of his annual base salary. In the event that such termination is within six months following a Change of Control (as defined in the employment agreement), the lump sum paid to Mr. Vollins will equal to one times the amount of his then current annual base salary.

In the event that Mr. Vollins' employment with the Company is terminated by the Company or its successor without Cause within six (6) months following the occurrence of a "Change of Control" (as defined in the employment agreement), Mr. Vollins will be entitled to receive a one-time severance payment equal to a one-time cash severance payment equal to his then current annual base salary. In addition, all unvested time-based options, RSUs or other equity securities to acquire shares of Company common stock shall immediately become fully vested and shall be exercisable to the extent provided for in the Plan.

Mr. Vollins' employment agreement also includes 2-year non-competition and non-solicitation and confidentiality covenants. Under the terms of this agreement, he is also entitled to the following benefits: medical, dental, life, disability and 401(k).

*Ernest R. De Paolantonio, CPA, MBA, Former Chief Financial Officer, Secretary and Treasurer*—Mr. De Paolantonio's prior employment agreement, dated October 1, 2013, included a base salary of \$300,000, target bonus of up to 40% of his base salary (which was subject to modification by our Compensation Committee), and other employee benefits. Under the terms of his agreement in 2018, Mr. De Paolantonio received a base salary of \$370,000 and a bonus of \$98,000, which bonus was related to 2017 performance.

On January 23, 2019, the Company entered into a transitional service and separation agreement with Mr. De Paolantonio. Mr. De Paolantonio will served as a senior advisor to us until April 30, 2019, at which time his employment with us ended. (See Compensation Discussion and Analysis for details on Mr. De Paolantonio's separation agreement.)

Mr. De Paolantonio's transitional service and separation agreement also includes 2-year non-competition and non-solicitation and confidentiality covenants on terms identical to the prior employment agreement. Under the terms of this agreement, he was also entitled to the following benefits: medical, dental, life, disability and 401(k).

### ***Outstanding equity awards***

The following table summarizes outstanding unexercised options, unvested stocks and equity incentive plan awards held by each of our name executive officers, as of December 31, 2018.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

Name	OPTION AWARDS(1)					STOCK AWARDS			Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not vested (\$)
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options (#)	Options Exercise Prices (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested (\$)	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	
Mark A. Sirgo, Pharm.D(7)	—	—	—	—	—	—	—	327,170(2)	1,210,529
	25,000	—	—	3.47	7/20/21	—	—	—	—
	22,369	—	—	3.55	2/25/21	—	—	—	—
	37,348	—	—	3.90	1/21/20	—	—	—	—
	25,000	—	—	5.40	7/22/19	—	—	—	—
	100,000	—	—	4.83	4/30/19	—	—	—	—
	9,175	—	—	3.05	1/22/19	—	—	—	—
Herm Cukier	—	800,000	—	2.18	6/14/28	—	—	—	—
	—	—	—	—	—	—	—	200,000(3)	740,000
Scott Plesha	—	—	—	—	—	—	—	11,666(4)	43,164
	—	—	—	—	—	16,667(5)	—	16,667(5)	123,336
	—	—	—	—	—	62,500(6)	—	62,500(6)	462,500
Thomas Smith, M.D.	—	117,691	—	2.93	8/1/28	—	—	—	—
James Vollins	—	89,476	—	3.46	11/5/28	—	—	—	—
Ernest R. De Paolantonio, CPA MBA	—	—	—	—	—	—	—	31,781(2)	117,590
	—	—	—	—	—	—	—	30,000(4)	111,000
	—	—	—	—	—	63,333(5)	—	63,333(5)	468,664
	55,659	—	—	5.39	10/17/23	70,000(6)	—	70,000(6)	518,000
Niraj Vasisht, Ph.D.(8)	14,297	—	—	1.96	2/15/22	—	—	—	—
	12,105	—	—	3.55	2/25/21	—	—	—	—
	25,000	—	—	3.47	1/25/21	—	—	—	—
	17,686	—	—	3.90	1/21/20	—	—	—	—

- (1) All time-based stock options vest ratably over three years.
- (2) Unvested stock awards consist of Restricted Stock Units (RSUs) from our Long-Term Incentive Plan (as defined under our 2011 Equity Incentive Plan, the “2011 EIP”) and which we refer to as Performance RSUs, which are rights to acquire shares of our common stock.
- (3) Unvested stock awards consist of RSU (as defined under the 2011 EIP) which are rights to acquire shares of our common stock. These performance-based RSUs provide for vesting if specified net revenue and operating income goals are achieved with respect to the annual fiscal years 2019 through 2021.
- (4) Unvested stock awards consist of RSUs (as defined under the 2011 EIP) which are rights to acquire shares of our common stock. These unvested RSUs vest in thirds beginning March 2017.
- (5) Unvested stock awards consist of RSUs (as defined under the 2011 EIP) which are rights to acquire shares of our common stock. One-half of which are time-based and one-half of which are performance-based, all of which vest over a three-year period beginning in March 2018. The performance-based RSUs provide for vesting if specified net revenue and operating income goals are achieved with respect to the annual fiscal years 2017 through 2019.
- (6) Unvested stock awards consist of RSUs (as defined under the 2011 EIP) which are rights to acquire shares of our common stock. One-half of which are time-based and one-half of which are performance-based, all of which vest over a three-year period beginning in March 2019. The performance-based RSUs provide for vesting if specified net revenue and operating income goals are achieved with respect to the annual fiscal years 2018 through 2020.

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***Outstanding Equity Awards Narrative Disclosure***

*Amended and Restated 2001 Incentive Plan*

In July 2011, our original Amended and Restated 2001 Incentive Plan expired. Options to purchase 578,645 shares of common stock were outstanding and exercisable as of December 31, 2018 under the Amended and Restated 2001 Incentive Plan. In April 2011, our board approved, and in July 2011, our stockholders approved a new 2011 Equity Incentive Plan, which is discussed below.

*2011 Equity Incentive Plan*

Our 2011 Equity Incentive Plan was originally comprised of 4,200,000 shares of our common stock. The purpose of the 2011 Equity Incentive Plan is: (i) to align our interests and recipients of options under the plan by increasing the proprietary interest of such recipients in our growth and success, and (ii) to advance our interests by providing additional incentives to officers, key employees and well-qualified non-employee directors and consultants who provide services to us, who are responsible for our management and growth, or otherwise contribute to the conduct and direction of our business, operations and affairs. The Compensation Committee of our board of directors administers our incentive plan, selects the persons to whom options are granted and fixes the terms of such options. In July 2013, 2014, 2015 and in December 2017, our stockholders approved increases to our 2011 Equity Incentive Plan in the amounts of 2,600,000, 2,000,000, 2,250,000 and 7,100,000, respectively.

Options may be awarded during the ten-year term of the plan to our employees, directors, or consultants who are not employees and our other affiliates. Our plan provides for the grant of options that qualify as incentive stock options, or Incentive Stock Options, under Section 422 of the Internal Revenue Code of 1986, as amended, and options which are not Incentive Stock Options, or Non-Statutory Stock Options, as well as restricted stock and other awards. Only our employees may be granted Incentive Stock Options. Our affiliates or consultants or others as may be permitted by our board of directors, may be granted Non-Statutory Stock Options.

Options to purchase 4,406,004 shares of our common stock at prices ranging from \$1.78 to \$16.47 are outstanding at December 31, 2018.

Options issued during 2018 to directors and employees under the 2011 Equity Incentive Plan totaled 2,549,177 shares, at exercise prices ranging from \$2.07 to \$3.72.

**Option Exercises and Stock Vested**

The following information sets forth stock options exercised by the executive officers during the year ended December 31, 2018:

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 (\$)
Mark A. Sirgo, Pharm.D.	—	—	1,799,782	4,664,266
Herm Cukier	—	—	—	—
Scott Plesha	—	—	124,400	261,240
Thomas Smith, M.D.	—	—	—	—
James Vollins	—	—	—	—
Ernest R. De Paolantonio, CPA MBA	—	—	107,307	306,109
Niraj Vasisht, Ph.D.	61,908	31,043	622,586	1,874,667

*Pension Benefits*

None of our employees participate in or have account balances in qualified or non-qualified defined benefit plans sponsored by us. Our Compensation Committee may elect to adopt qualified or non-qualified benefit plans in the future if it determines that doing so is in our company's best interests.

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*Nonqualified Deferred Compensation*

None of our employees participate in or have account balances in nonqualified defined contribution plans or other nonqualified deferred compensation plans maintained by us. Our Compensation Committee may elect to provide our officers and other employees with non-qualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our company's best interests.

**Grants of Plan-Based Awards in 2018**

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards			Estimated Future Payouts Under Equity Incentive Plan Awards			All Other Stock Awards: Number of Shares of Stocks or Units (#)	All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Awards (\$/Sh)	Closing stock price on Award date (\$/Sh)	Grant Date Fair Value of Stock and Option Awards (\$)
		Threshold (\$)	Target (\$)	Maximum (\$)	Threshold (#)	Target (#)	Maximum (#)					
Mark A. Sirgo, Pharm.D.	3/23/18(1)							285,305				\$ 613,406
Herm Cukier	5/8/18(2)											\$ 526,000
	6/4/18						200,000		800,000	\$ 2.18	\$ 2.60	\$1,288,000
Scott Plesha	2/18/18(3)					62,500						\$ 262,500
	10/17/18(4)					18,750		62,500				\$ 70,313
Thomas Smith, M.D.	8/1/18								117,691	\$ 2.93	\$ 2.55	\$ 165,944
James Vollins	11/5/18								89,476	\$ 3.46	\$ 3.85	\$ 210,269
Ernest R. De Paolantonio, CPA MBA	2/18/18(3)					70,000		70,000				\$ 294,000
Niraj Vasisht, Ph.D.	2/18/18(1)							198,129				\$ 416,071

- (1) As of each of the Retirement Dates, the stock awards disclosed in this item during 2018 related to one-half time-vesting and one-half performance-based RSUs issued to each of Dr. Sirgo and Dr. Vasisht pursuant to the Plan for 2017 performance, then terminated. In lieu thereof, Dr. Sirgo and Dr. Vasisht each received a one-time issuance of fully vested shares of Common Stock under the Plan, the number of which was determined with reference to the time-vesting RSUs by dividing (A) the Net Present Value of such time-vesting RSUs by (B) the 30-day VWAP as of the Retirement Date and with reference to the performance-based RSUs by multiplying the remaining half by 66%. Dr. Sirgo deferred this stock award to March 2018.
- (2) The stock awards disclosed in this item consists of performance-based RSUs issued under our 2011 Equity Incentive Plan with a FMV of \$2.63, which vest under certain performance criteria beginning May 2019.
- (3) The stock awards disclosed in this item consists of half time-based RSUs and half performance based RSUs issued under our 2011 Equity Incentive Plan with a FMV of \$2.10, which vest ratably in thirds beginning March 2019.
- (4) The stock awards disclosed in this item consists of performance-based RSUs issued under our 2011 Equity Incentive Plan with a FMV of \$3.75, which vested under certain performance criteria in October 2018.

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**Narrative to Grants of Plan Based Awards Table**

See Compensation Discussion and Analysis above for complete description of the targets for payment of annual incentives, as well as performance criteria on which such payments were based.

Options granted to employees vest over 36 months beginning on the first anniversary of the grant date at which time 33% of such options vest. These options expire in 10 years and are outstanding for as long as the individual is an active employee. Employee options qualify as Incentive Stock Options.

*Potential Payments Under Severance/Change in Control Arrangements*

The table below sets forth potential payments payable to our current executive officers in the event of a termination of employment under various circumstances. For purposes of calculating the potential payments set forth in the table below, we have assumed that (i) the date of termination was December 31, 2018 and (ii) the stock price was \$3.70, which was the closing market price of our common stock on December 31, 2018, the last business day of the 2018 fiscal year.

Name	If Company Terminates Executive Without Cause or Executive Resigns with Good Reason(\$)	Termination Following a Change in Control without Cause or Executive Resigns with Good Reason(\$)
<b>Mark A. Sirgo, Pharm.D.(1)</b>	—	—
<b>Total Sirgo cash and benefits</b>	\$ —	\$ —
<b>Herm Cukier</b>		
Cash severance payment	\$1,140,000	\$1,140,000
Pro-rata bonus	203,560	517,060
Accrued and unused vacation time	21,923	21,923
Acceleration of options(2)	1,216,000	1,216,000
Acceleration of restricted stock units(3)	—	740,000
<b>Total Cukier cash and benefits</b>	<b>\$2,581,483</b>	<b>\$3,634,983</b>
<b>Scott Plesha</b>		
Cash severance payment	\$ 365,000	\$ 365,000
Pro-rata bonus	164,250	164,250
Accrued and unused vacation time	14,038	14,038
Acceleration of options	—	—
Acceleration of restricted stock units(3)	—	629,000
<b>Total Plesha cash and benefits</b>	<b>\$ 543,288</b>	<b>\$1,172,288</b>
<b>Ernest R. De Paolantonio, CPA</b>		
Cash severance payment	\$ 360,000	\$ 360,000
Pro-rata bonus	144,000	144,000
Accrued and unused vacation time	13,846	13,846
Acceleration of options	—	—
Acceleration of restricted stock units(3)	—	1,215,254
<b>Total De Paolantonio cash and benefits</b>	<b>\$ 517,846</b>	<b>\$1,733,100</b>
<b>Thomas Smith, MD.</b>		
Cash severance payment	\$ 0	\$ 345,000
Pro-rata bonus	58,225	58,225
Accrued and unused vacation time	5,268	5,268
Acceleration of options(2)	90,622	90,622
Acceleration of restricted stock units	—	—
<b>Total Smith cash and benefits</b>	<b>\$ 154,115</b>	<b>\$ 499,115</b>

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<u>Name</u>	<u>If Company Terminates Executive Without Cause or Executive Resigns with Good Reason(\$)</u>	<u>Termination Following a Change in Control without Cause or Executive Resigns with Good Reason(\$)</u>
<b>James Vollins</b>		
Cash severance payment	\$ —	\$ 310,000
Pro-rata bonus	19,025	19,025
Accrued and unused vacation time	3,672	3,672
Acceleration of options <sup>(2)</sup>	21,474	21,474
Acceleration of restricted stock units	—	—
<b>Total Vollins cash and benefits</b>	<b>\$ 44,171</b>	<b>\$ 354,171</b>
<b>Niraj Vasisht, Ph.D.<sup>(4)</sup></b>	<b>—</b>	<b>—</b>
<b>Total Vasisht cash and benefits</b>	<b>\$ —</b>	<b>\$ —</b>

- (1) Pursuant to retirement on January 2, 2018, Dr. Sirgo was not party to an employment agreement or change of control benefits as of December 31, 2018.
- (2) Determined by taking the excess of the fair market value of our common stock on December 31, 2018, less the exercise price of each accelerated option, multiplied by the number of unvested shares subject to outstanding options.
- (3) Determined by taking the fair market value of our common stock on December 31, 2018, multiplied by the number of shares subject to invested RSUs.
- (4) Pursuant to retirement on April 4, 2018, Dr. Vasisht was not party to an employment agreement or change of control benefits as of December 31, 2018.

For each of our executive officers, in their employment agreements the term “change of control” means the occurrence of any one or more of the following events (it being agreed that, with respect to paragraphs (i) and (iii) of this definition below, a “change of control” shall not be deemed to have occurred if the applicable third party acquiring party is an “affiliate” of our company within the meaning of Rule 405 promulgated under the Securities Act of 1933, as amended):

(i) An acquisition (whether directly from our company or otherwise) of any voting securities of our company by any person or entity, immediately after which such person or entity has beneficial ownership of forty percent (40%) or more of the combined voting power of our then outstanding voting securities.

(ii) The individuals who, as of the date hereof, are members of our board of directors’ cease, by reason of a financing, merger, combination, acquisition, takeover or other non-ordinary course transaction affecting our company, to constitute at least fifty-one percent (51%) of the members of our board of directors; or

(iii) Approval by our board of directors and, if required, our stockholders of, or our execution of any definitive agreement with respect to, or the consummation of (it being understood that the mere execution of a term sheet, memorandum of understanding or other non-binding document shall not constitute a change of control):

(A) A merger, consolidation or reorganization involving our company, where either or both of the events described in clauses (i) or (ii) above would be the result;

(B) A liquidation or dissolution of or appointment of a receiver, rehabilitator, conservator or similar person for, or the filing by a third party of an involuntary bankruptcy against, our company; or

(C) An agreement for the sale or other disposition of all or substantially all of the assets of our company to any person or entity (other than a transfer to a subsidiary of our company).

The cash component (as opposed to option accelerations) of any change of control payment would be structured as a one-time cash severance payment.

*CEO Pay Ratio – 21:1*

We believe our executive compensation program must be consistent and internally equitable to motivate our employees to perform in ways that enhance stockholder value. We are committed to internal pay equity, and the Compensation Committee monitors the relationship between the pay of our executive officers and the pay of our

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non-executive employees. The Compensation Committee reviewed a comparison of Herm Cukier's, our Chief Executive Officer (which we refer to for these purposes as the CEO), annual total compensation in fiscal year 2018 to that of all other company employees for the same period. The calculation of annual total compensation of all employees was determined in the same manner as the "Total Compensation" shown for our CEO in the "Summary Compensation Table" on page 23 of this Report. Pay elements that were included in the annual total compensation for each employee are:

- salary received in fiscal year 2018;
- annual bonus payment received for performance in fiscal year 2018;
- grant date fair value of stock option exercises and RSU awards vested in fiscal year 2018;
- company-paid 401(k) Plan match made during fiscal year 2018;
- company-paid life insurance premiums during fiscal year 2018; and
- auto allowance paid in fiscal year 2018.

Our calculation includes all employees as of December 31, 2018. The annual total compensation of our CEO for 2018 includes a retirement payment (pursuant to his retirement agreement) and legal fees paid by our company in connection with the execution of the CEO's retirement agreement.

We determined our median employee by: (i) calculating the annual total compensation described above for each of our employees, (ii) ranking the annual total compensation of all employees except for the CEO from lowest to highest (a list of 157 employees), and (iii) since we have an odd number of employees when not including the CEO, we used ranked employee number 79 on the list as our ("Median Employee"). In 2018, we experienced a substantial increase in our headcount. Accordingly, we determined it was appropriate to re-calculate our Median Employee for 2018.

The annualized total compensation for fiscal year 2018 for our CEO was \$2,679,509 and for the Median Employee was \$125,563. We estimate that the resulting ratio of our CEO's pay to the pay of our Median Employee for fiscal year 2018 is 21 to 1.

### Compensation of Directors Summary Table

#### DIRECTOR COMPENSATION

Name (a)	Fees Earned or Paid in Cash (\$)	Stock Awards (\$)(12)	Option Awards (\$)(12)	Non-Equity Incentive Plan Compensation (\$)	Non-Qualified Deferred Compensation Earnings (\$)	All Other Compensation (\$)	Total (\$)
Peter S. Greenleaf $\pm$	27,088	300,931(1)	90,472(2)	—	—	—	418,491
Frank E. O'Donnell, Jr.	62,052(3)	189,000(4)	—	—	—	11,728(5)	262,780
William M. Watson	66,997	293,405(6)	77,183(7)	—	—	—	437,584
Todd C. Davis $\pm$	28,022	257,941(8)	67,854(9)	—	—	—	353,817
Kevin Kotler $\pm$	23,352	257,941(8)	67,854(9)	—	—	—	349,147
Samuel P. Sears, Jr.*	74,375	26,813(10)	9,694(12)	—	—	—	110,882
Thomas W. D'Alonzo*	53,750	26,813(10)	9,694(12)	—	—	—	90,257
Barry I. Feinberg*	61,875	26,813(10)	9,694(12)	—	—	—	98,382
Timothy C. Tyson*	48,750	26,813(10)	9,694(12)	—	—	—	85,257

$\pm$  Newly elected directors as of May 17, 2018

\* Retired directors as of May 17, 2018

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- (1) The stock awards disclosed in this item consists of 112,288 RSUs issued in 2018 with a FMV of \$2.68 for serving on the board which vested ratably from 2018-2022. Mr. Greenleaf holds 108,644 shares of unvested RSUs which vest ratably from August 2019 to August 2022.
- (2) The stock options disclosed in this item consists of 64,164 options granted in 2018 with a FMV of \$1.41 for serving on the board which vest ratably from 2018-2022. Mr. Greenleaf holds options to purchase 2,082 shares of common stock, all of which are currently exercisable. Mr. Greenleaf also holds options to purchase 62,082 shares of common stock, none of which are currently exercisable.
- (3) Compensation for serving as Chairman through May 2018. Dr. O'Donnell now serves as Director.
- (4) The stock awards disclosed in this item consists of 90,000 RSUs issued as executive grants in 2018 with a FMV of \$2.10 which half vest in ratably in thirds beginning in 2019 and half vest pursuant to achievement of certain performance criteria. Dr. O'Donnell holds options to purchase 107,500 shares of our common stock, all of which is currently exercisable. Dr. O'Donnell holds an aggregate of 216,000 shares of unvested RSUs which vest in thirds from March 2019 to March 2021. Does not include 170,000 shares of unvested RSUs potentially issuable in thirds if certain pre-determined company revenue targets are achieved. Dr. O'Donnell also holds 164,022 shares of unvested RSUs potentially issuable under our LTIP if certain pre-determined company revenue targets are achieved.
- (5) Includes \$11,728 in health benefits paid in 2018.
- (6) The stock awards disclosed in this item consists of 109,479 RSUs issued in 2018 with a FMV of \$2.68 for serving on the board which vest ratably from 2018-2022. Mr. Watson holds 99,739 shares of unvested RSUs which vest ratably from August 2019 to August 2022.
- (7) The stock options disclosed in this item consists of 54,740 options granted in 2018 with a FMV of \$1.41 for serving on the board which vest ratably from 2018-2022. Mr. Watson holds options to purchase 4,870 shares of common stock, all of which are currently exercisable. Mr. Watson also holds options to purchase 49,870 shares of common stock, none of which are currently exercisable.
- (8) The stock awards disclosed in this item consists of 96,247 RSUs issued in 2018 with a FMV of \$2.68 for serving on the board which vest ratably from 2018-2022. Mr. Kotler holds 93,123 shares of unvested RSUs which vest ratably from August 2019 to August 2022. Mr. Davis holds 93,123 shares of unvested RSUs which vest ratably from August 2019 to August 2022.
- (9) The stock options disclosed in this item consists of 48,123 options granted in 2018 with a FMV of \$1.41 for serving on the board which vest ratably from 2018-2022. Mr. Davis holds options to purchase 1,561 shares of common stock, all of which are currently exercisable. Mr. Davis also holds options to purchase 46,562 shares of common stock, none of which are currently exercisable. Mr. Kotler holds options to purchase 1,561 shares of common stock, all of which are currently exercisable. Mr. Kotler also holds options to purchase 46,562 shares of common stock, none of which are currently exercisable.
- (10) The stock awards disclosed in this item consists of 13,750 RSUs issued in 2018 with a FMV of \$1.95 pursuant to retirement from the board which half vested in 2018 and the remaining half vest in 2019.
- (11) The stock options disclosed in this item consists of 6,875 options granted in 2018 with a FMV of \$1.41 pursuant to retirement from the board which half vested in 2018 and the remaining half vest in 2019.
- (12) The reported amounts represent the aggregate grant date fair value of the awards computed in accordance with Financial Accounting Standards Board Account Standards Codification Topic 718, Stock Compensation, as modified or supplemented, or FASB ASC Topic 718.

### ***Narrative to Director Compensation***

The Compensation Committee of our board of directors reviews the Director Remuneration Policy, which establishes the compensation our directors earn for serving on our board of directors and individual committees. The policy during 2018 follows (all annual cash retainers are paid quarterly in arrears):

- \$45,000 annual cash retainer to each board member.
- \$10,000 annual cash retainer to the Lead Director.
- \$20,000 annual cash retainer to the Chairman of the Audit Committee.
- \$15,000 annual cash retainer to the Chairman of the Compensation Committee.
- \$10,000 annual cash retainer to the Chairman of the Nominating & Corporate Governance Committee.
- \$10,000 annual cash retainer to each non-Chairman Audit Committee member.
- \$7,500 annual cash retainer to each non-Chairman Compensation Committee member.
- \$5,000 annual cash retainer to each non-Chairman Nominating & Corporate Governance Committee member.
- \$7,500 annual cash retainer to each Special Committee member.
- 30,000 restricted stock units of our common stock per year, to each director.
- 5,000 additional restricted stock units of our common stock per year to the Lead Director.
- 15,000 stock options of our common stock per year, to each director.
- 5,000 additional stock options of our common stock per year to the Lead Director.
- New directors will earn a pro-rated portion (based on months to be served in the fiscal year in which they join) of cash and restricted stock units.

In August 2018, we granted Messrs. Watson, Greenleaf, Davis and Kotler upfront awards of options and restricted stock units to cover the options and restricted stock units they would be entitled to receive over the next four years, subject to vesting over such four-year period. Options granted to directors expire in 10 years and are outstanding for the life of the option, as long as service criteria is met. Director options qualify as Non-Statutory Stock Options. The total number of options granted to members of our board of directors during the year ended December 31, 2018 was 242,650, which vests ratably during the first open window upon issuance in August 2018 to August 2022.

The total number of RSUs granted to members of our board of directors during the year ended December 31, 2018 was 469,261 which vests ratably during the first open window upon issuance in August 2018 to August 2022.

In early 2019, the Compensation Committee revised its existing equity grant philosophy to provide the board of directors with equity compensation in line with the 75<sup>th</sup> percentile of our peer group. As part of that decision, the Compensation Committee also decided all future equity awards to the board of directors would be comprised of 75% options and 25% RSUs. The Compensation Committee also increased the annual cash retainer for the Lead Director from \$10,000 to \$25,000.

### **Compensation Committee Interlocks and Insider Participation**

Our Compensation Committee is currently composed of Todd C. Davis, Peter S. Greenleaf and Kevin Kotler. None of our executive officers serves as a member of the Compensation Committee of our Board of Directors, or other committee serving an equivalent function. None of the members of our Compensation Committee has ever been our employee or one of our officers.

**PROPOSAL 2**

**RATIFICATION OF THE APPOINTMENT OF THE  
COMPANY'S REGISTERED PUBLIC ACCOUNTING FIRM FOR FISCAL 2019**

On April 16, 2019, the Audit Committee of the Board appointed the firm of Cherry Bekaert LLP (“CB”) to serve as our registered public accounting firm for our fiscal year ended December 31, 2019. The independent accountant’s report of CB on our consolidated financial statements for the year ended December 31, 2018 contained no adverse opinion or disclaimer of opinion and was not qualified or modified as to uncertainty, audit scope or accounting principles.

**Audit Fees.** The aggregate fees billed by CB for professional services rendered for the audit of our annual financial statements, review of the financial information included in our Forms 10-Q for the respective periods and other required filings with the SEC for the years ended December 31, 2018 and 2017 totaled \$216,000 and \$188,500, respectively. The above amounts include interim procedures and audit fees, as well as attendance at audit committee meetings.

**Audit-Related Fees.** The aggregate fees billed by CB for audit-related fees for the years ended December 31, 2018 and 2017 were \$131,776 and \$149,839, respectively. The fees were provided in consideration of services consisting of review and update procedures associated with registration statements and other SEC filings.

**Tax Fees.** The aggregate fees billed by CB for professional services rendered for tax compliance for the years ended December 31, 2018 and 2017 were \$34,600 and \$42,460, respectively. The fees were provided in consideration of services consisting of preparation of tax returns and related tax advice.

**All Other Fees.** None

The Audit Committee of our Board has established its pre-approval policies and procedures, pursuant to which the Audit Committee approved the foregoing audit and non-audit services provided by CB in 2018. Consistent with the Audit Committee’s responsibility for engaging our independent auditors, all audit and permitted non-audit services require pre-approval by the Audit Committee. The full Audit Committee approves proposed services and fee estimates for these services. The Audit Committee chairperson has been designated by the Audit Committee to approve any audit-related services arising during the year that were not pre-approved by the Audit Committee. Any non-audit service must be approved by the full Audit Committee. Services approved by the Audit Committee chairperson are communicated to the full Audit Committee at its next regular meeting and the Audit Committee reviews services and fees for the fiscal year at each such meeting. Pursuant to these procedures, the Audit Committee approved the foregoing services provided by CB.

**Changes In and Disagreements with Accountants on Accounting and Financial Disclosure.** None.

A representative of CB is expected to attend the Meeting, will have the opportunity to make a statement should they desire to do so and to respond to appropriate questions.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE RATIFICATION OF THE AUDIT COMMITTEE’S APPROVAL OF THE APPOINTMENT OF CHERRY BEKAERT LLP AS THE COMPANY’S REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2019.**

## PROPOSAL 3

### TO APPROVE THE COMPANY'S 2019 STOCK OPTION AND INCENTIVE PLAN

#### Proposal

The Board believes that stock-based incentive awards can play an important role in the success of the Company by encouraging and enabling the employees, officers, non-employee directors and consultants of the Company and its subsidiaries upon whose judgment, initiative and efforts the Company largely depends for the successful conduct of its business to acquire a proprietary interest in the Company. The Board believes that providing such persons with a direct stake in the Company assures a closer identification of the interests of such individuals with those of the Company and its stockholders, thereby stimulating their efforts on the Company's behalf and strengthening their desire to remain with the Company.

On June [7], 2019 the Board adopted, subject to stockholder approval, the BioDelivery Sciences International, Inc. 2019 Stock Option and Incentive Plan (the "Plan"). The Plan is designed to enhance the flexibility to grant equity awards to our officers, employees, non-employee directors and consultants and to ensure that we can continue to grant equity awards to eligible recipients at levels determined to be appropriate by the Board of Directors and/or the Compensation Committee. A copy of the Plan is attached as Appendix A to this proxy statement and is incorporated herein by reference.

As of June 4, 2019, there were stock options to acquire 6,138,600 shares of common stock outstanding under our equity compensation plans, with a weighted average exercise price of \$3.53 and a weighted average remaining term of 8.10 years. In addition, as of June 4, 2019, there were 969,880 unvested full value awards with time-based vesting and 787,808 unvested full value awards with performance-based vesting outstanding under our equity compensation plans. Other than the foregoing, no awards under our equity compensation plans were outstanding as of June 4, 2019. As of June 4, 2019, there were 166,461 shares of common stock available for awards under our equity compensation plans.

#### Summary of Material Features of the Plan

The material features of the Plan are:

- The maximum number of shares of common stock to be issued under the Plan is 14,000,000;
- The award of stock options (both incentive and non-qualified options), stock appreciation rights, restricted stock, restricted stock units, unrestricted stock, cash-based awards, and dividend equivalent rights and is permitted;
- Shares tendered or held back for taxes will not be added back to the reserved pool under the Plan. Upon the exercise of a stock appreciation right that is settled in shares of common stock, the full number of shares underlying the award will be charged to the reserved pool. Additionally, shares we reacquire on the open market will not be added to the reserved pool under the Plan;
- Stock options and stock appreciation rights will not be repriced in any manner without stockholder approval;
- The value of all awards awarded under the Plan and all other cash compensation paid by us to any non-employee director in any calendar year may not exceed \$750,000;
- Any material amendment to the Plan is subject to approval by our stockholders; and
- The term of the Plan will expire on July 25, 2029.

Based solely on the closing price of our common stock as reported by NASDAQ on June 4, 2019 and the maximum number of shares that would have been available for awards as of such date under the Plan, the maximum

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aggregate market value of the common stock that could potentially be issued under the Plan is \$60,200,000. The shares of common stock underlying any awards that are forfeited, canceled or otherwise terminated, other than by exercise, under the Plan will be added back to the shares of common stock available for issuance under the Plan. Shares tendered or held back upon exercise of a stock option or settlement of an award under the Plan to cover the exercise price or tax withholding and (ii) shares subject to a stock appreciation right that are not issued in connection with the stock settlement of the stock appreciation right upon exercise thereof, will not be added back to the shares of common stock available for issuance under the Plan. In addition, shares of common stock repurchased on the open market will not be added back to the shares of common stock available for issuance under the Plan.

### **Rationale for Share Increase**

The Plan is critical to our ongoing effort to build stockholder value. Equity incentive awards are an important component of our executive and non-executive employees' compensation. Our Compensation Committee and the Board believe that we must continue to offer a competitive equity compensation program in order to attract, retain and motivate the talented and qualified employees necessary for our continued growth and success.

**We manage our long-term stockholder dilution by limiting the number of equity incentive awards granted annually. The Compensation Committee carefully monitors our annual net burn rate, total dilution and equity expense in order to maximize stockholder value by granting only the number of equity incentive awards that it believes are necessary and appropriate to attract, reward and retain our employees. Our compensation philosophy reflects broad-based eligibility for equity incentive awards for high performing employees. By doing so, we link the interests of those employees with those of our stockholders and motivate our employees to act as owners of the business.**

Our Compensation Committee determined the size of reserved pool under the Plan based on projected equity awards to anticipated new hires, projected annual equity awards to existing employees and an assessment of the magnitude of increase that our institutional investors and the firms that advise them would likely find acceptable. We anticipate that if our request to increase the share reserve is approved by our stockholders, it will be sufficient to provide equity incentives to attract, retain, and motivate employees for the next three years.

### **Summary of the Plan**

The following description of certain features of the Plan is intended to be a summary only. The summary is qualified in its entirety by the full text of the Plan, which is attached hereto as Appendix A.

*Administration.* The Plan will be administered by the Compensation Committee. The Compensation Committee has full power to select, from among the individuals eligible for awards, the individuals to whom awards will be granted, to make any combination of awards to participants, and to determine the specific terms and conditions of each award, subject to the provisions of the Plan. The Compensation Committee may delegate to our Chief Executive Officer the authority to grant awards to employees who are not subject to the reporting and other provisions of Section 16 of the Exchange Act, subject to certain limitations and guidelines.

*Eligibility; Plan Limits.* All full-time and part-time officers, employees, non-employee directors and consultants are eligible to participate in the Plan, subject to the discretion of the administrator. As of June 4, 2019, approximately 174 individuals would have been eligible to participate in the Plan had it been effective on such date, which includes 5 executive officers, 163 employees who are not executive officers, 6 non-employee directors and no directors. There are certain limits on the number of awards that may be granted under the Plan. For example, no more than 14,000,000 shares of common stock may be granted in the form of incentive stock options.

*Director Compensation Limit.* The Plan provides that the value of all awards awarded under the Plan and all other cash compensation paid by the Company to any non-employee director in any calendar year shall not exceed \$750,000.

*Stock Options.* The Plan permits the granting of (1) options to purchase common stock intended to qualify as incentive stock options under Section 422 of the Code and (2) options that do not so qualify. Options granted under the Plan will be non-qualified options if they fail to qualify as incentive options or exceed the annual limit on

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incentive stock options. Incentive stock options may only be granted to employees of the Company and its subsidiaries. Non-qualified options may be granted to any persons eligible to receive incentive options and to non-employee directors and consultants. The option exercise price of each option will be determined by the Compensation Committee but may not be less than 100% of the fair market value of the common stock on the date of grant. Fair market value for this purpose will be the last reported sale price of the shares of common stock on **NASDAQ** on the date immediately preceding the grant date. The exercise price of an option may not be reduced after the date of the option grant, other than to appropriately reflect changes in our capital structure.

The term of each option will be fixed by the Compensation Committee and may not exceed ten years from the date of grant. The Compensation Committee will determine at what time or times each option may be exercised. Options may be made exercisable in installments and the exercisability of options may be accelerated by the Compensation Committee. In general, unless otherwise permitted by the Compensation Committee, no option granted under the Plan is transferable by the optionee other than by will or by the laws of descent and distribution or pursuant to a domestic relations order, and options may be exercised during the optionee's lifetime only by the optionee, or by the optionee's legal representative or guardian in the case of the optionee's incapacity.

Upon exercise of options, the option exercise price must be paid in full either in cash, by certified or bank check or other instrument acceptable to the Compensation Committee or by delivery (or attestation to the ownership) of shares of common stock that are beneficially owned by the optionee and that are not subject to risk of forfeiture. Subject to applicable law, the exercise price may also be delivered to the Company by a broker pursuant to irrevocable instructions to the broker from the optionee. In addition, the Compensation Committee may permit non-qualified options to be exercised using a net exercise feature which reduces the number of shares issued to the optionee by the number of shares with a fair market value equal to the exercise price.

To qualify as incentive options, options must meet additional federal tax requirements, including a \$100,000 limit on the value of shares subject to incentive options that first become exercisable by a participant in any one calendar year.

*Stock Appreciation Rights.* The Compensation Committee may award stock appreciation rights subject to such conditions and restrictions as the Compensation Committee may determine. Stock appreciation rights entitle the recipient to shares of common stock equal to the value of the appreciation in the stock price over the exercise price. The exercise price is the fair market value of the common stock on the date of grant. The term of a stock appreciation right may not exceed ten years.

*Restricted Stock.* The Compensation Committee may award shares of common stock to participants subject to such conditions and restrictions as the Compensation Committee may determine. These conditions and restrictions may include the achievement of certain performance goals and/or continued employment with us through a specified restricted period. During the vesting period, restricted stock awards may be credited with dividend equivalent rights (but dividend equivalents payable with respect to restricted stock awards with vesting tied to the attainment of performance criteria shall not be paid unless and until such performance conditions are attained).

*Restricted Stock Units.* The Compensation Committee may award restricted stock units to participants. Restricted stock units are ultimately payable in the form of shares of common stock subject to such conditions and restrictions as the Compensation Committee may determine. These conditions and restrictions may include the achievement of certain performance goals and/or continued employment with the Company through a specified vesting period. In the Compensation Committee's sole discretion, it may permit a participant to make an advance election to receive a portion of his or her future cash compensation otherwise due in the form of a restricted stock unit award, subject to the participant's compliance with the procedures established by the Compensation Committee and requirements of Section 409A of the Code. During the deferral period, the deferred stock awards may be credited with dividend equivalent rights.

*Unrestricted Stock Awards.* The Compensation Committee may also grant shares of common stock which are free from any restrictions under the Plan. Unrestricted stock may be granted to any participant in recognition of past services or other valid consideration and may be issued in lieu of cash compensation due to such participant.

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*Dividend Equivalent Rights.* The Compensation Committee may grant dividend equivalent rights to participants, which entitle the recipient to receive credits for dividends that would be paid if the recipient had held specified shares of common stock. Dividend equivalent rights granted as a component of another award (other than a stock option or stock appreciation right) may be paid only if the related award becomes vested. Dividend equivalent rights may be settled in cash, shares of common stock or a combination thereof, in a single installment or installments, as specified in the award.

*Cash-Based Awards.* The Compensation Committee may grant cash bonuses under the Plan to participants. The cash bonuses may be subject to the achievement of certain performance goals.

*Change of Control Provisions.* The Plan provides that upon the effectiveness of a “sale event,” as defined in the Plan, the parties may cause the assumption, continuation or substitution of outstanding awards by the successor entity. In the event awards are not assumed, continued or substituted, except as otherwise provided by the Compensation Committee in the award agreement, all awards with time-based conditions will become vested and exercisable upon the sale event and awards with conditions and restrictions relating to the attainment of performance goals may become vested and non-forfeitable in connection with a sale event in the Compensation Committee’s discretion or to the extent specified in the relevant award agreement. In addition, the Company may make or provide for payment, in cash or in kind, to participants holding options and stock appreciation rights equal to the difference between the per share cash consideration and the exercise price of the options or stock appreciation rights. The Compensation Committee shall also have the option to make or provide for a payment, in cash or in kind, to grantees holding other awards in an amount equal to the per share cash consideration multiplied by the number of vested shares under such awards.

*Adjustments for Stock Dividends, Stock Splits, Etc.* The Plan requires the Compensation Committee to make appropriate adjustments to the number of shares of common stock that are subject to the Plan, to certain limits in the Plan, and to any outstanding awards to reflect stock dividends, stock splits, extraordinary cash dividends and similar events.

*Tax Withholding.* Participants in the Plan are responsible for the payment of any federal, state or local taxes that the Company is required by law to withhold upon the exercise of options or stock appreciation rights or vesting of other awards. Subject to approval by the Compensation Committee, participants may elect to have their tax withholding obligations satisfied by authorizing the Company to withhold shares of common stock to be issued pursuant to exercise or vesting. The Compensation Committee may also require awards to be subject to mandatory share withholding up to the required withholding amount.

*Amendments and Termination.* The Board of Directors may at any time amend or discontinue the Plan and the Compensation Committee may at any time amend or cancel any outstanding award for the purpose of satisfying changes in the law or for any other lawful purpose. However, no such action may adversely affect any rights under any outstanding award without the holder’s consent. To the extent required under the rules of NASDAQ, any amendments that materially change the terms of the Plan will be subject to approval by our stockholders. Amendments shall also be subject to approval by our stockholders if and to the extent determined by the Compensation Committee to be required by the Code to preserve the qualified status of incentive options.

*Effective Date of Plan.* The Plan was approved by our Board of Directors on June [7], 2019. Awards of incentive options may be granted under the Plan until June [7], 2029. No other awards may be granted under the Plan after the date that is ten years from the date of stockholder approval.

### **New Plan Benefits**

### **Tax Aspects Under the Code**

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The following is a summary of the principal federal income tax consequences of certain transactions under the Plan. It does not describe all federal tax consequences under the Plan, nor does it describe state or local tax consequences.

*Incentive Options.* No taxable income is generally realized by the optionee upon the grant or exercise of an incentive option. If shares of common stock issued to an optionee pursuant to the exercise of an incentive option are sold or transferred after two years from the date of grant and after one year from the date of exercise, then (i) upon sale of such shares, any amount realized in excess of the option price (the amount paid for the shares) will be taxed to the optionee as a long-term capital gain, and any loss sustained will be a long-term capital loss, and (ii) the Company will not be entitled to any deduction for federal income tax purposes. The exercise of an incentive option will give rise to an item of tax preference that may result in alternative minimum tax liability for the optionee.

If shares of common stock acquired upon the exercise of an incentive option are disposed of prior to the expiration of the two-year and one-year holding periods described above (a “disqualifying disposition”), generally (i) the optionee will realize ordinary income in the year of disposition in an amount equal to the excess (if any) of the fair market value of the shares of common stock at exercise (or, if less, the amount realized on a sale of such shares of common stock) over the option price thereof, and (ii) we will be entitled to deduct such amount. Special rules will apply where all or a portion of the exercise price of the incentive option is paid by tendering shares of common stock.

If an incentive option is exercised at a time when it no longer qualifies for the tax treatment described above, the option is treated as a non-qualified option. Generally, an incentive option will not be eligible for the tax treatment described above if it is exercised more than three months following termination of employment (or one year in the case of termination of employment by reason of disability). In the case of termination of employment by reason of death, the three-month rule does not apply.

*Non-Qualified Options.* No income is realized by the optionee at the time a non-qualified option is granted. Generally (i) at exercise, ordinary income is realized by the optionee in an amount equal to the difference between the option price and the fair market value of the shares of common stock on the date of exercise, and we receive a tax deduction for the same amount, and (ii) at disposition, appreciation or depreciation after the date of exercise is treated as either short-term or long-term capital gain or loss depending on how long the shares of common stock have been held. Special rules will apply where all or a portion of the exercise price of the non-qualified option is paid by tendering shares of common stock. Upon exercise, the optionee will also be subject to Social Security taxes on the excess of the fair market value over the exercise price of the option.

*Other Awards.* The Company generally will be entitled to a tax deduction in connection with other awards under the Plan in an amount equal to the ordinary income realized by the participant at the time the participant recognizes such income. Participants typically are subject to income tax and recognize such tax at the time that an award is exercised, vests or becomes non-forfeitable, unless the award provides for a further deferral.

*Parachute Payments.* The vesting of any portion of an award that is accelerated due to the occurrence of a change in control (such as a sale event) may cause a portion of the payments with respect to such accelerated awards to be treated as “parachute payments” as defined in the Code. Any such parachute payments may be non-deductible to the Company, in whole or in part, and may subject the recipient to a non-deductible 20% federal excise tax on all or a portion of such payment (in addition to other taxes ordinarily payable).

*Limitation on Deductions.* Under Section 162(m) of the Code, the Company’s deduction for awards under the Plan may be limited to the extent that any “covered employee” (as defined in Section 162(m) of the Code) receives compensation in excess of \$1 million a year.

### **Equity Compensation Plan Information**

The following table provides information as of December 31, 2018 regarding shares of common stock that may be issued under our 2011 Equity Incentive Plan (the “2011 Plan”).

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<u>Plan category</u>	<u>Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)(1)</u>	<u>Weighted Average exercise price of outstanding options, warrants and rights (b)(2)</u>	<u>Number of securities remaining available for future issuance under equity compensation plan (excluding securities referenced in column (a))(c)</u>
Equity compensation plans approved by security holders:	8,708,126	\$ 2.73	1,874,086(3)
Equity compensation plans not approved by security holders:	—	—	—
<b>Total</b>	<b>8,708,126</b>	<b>\$ 2.73</b>	<b>1,874,086</b>

- (1) Includes 578,645 shares of common stock underlying options previously granted under our Amended and Restated 2001 Incentive Plan, which are still exercisable despite the fact that such plan expired July 2011. Since restricted stock units do not have any exercise price, such units are not included in the weighted average exercise price calculation.
- (2) Weighted average exercise price does not include restricted stock units.

**THE BOARD RECOMMENDS THAT THE STOCKHOLDERS VOTE “FOR” THE APPROVAL OF THE COMPANY’S 2019 STOCK OPTION AND INCENTIVE PLAN.**

## PROPOSAL 4

### ADVISORY VOTE ON OUR 2018 EXECUTIVE COMPENSATION

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 requires public companies to provide stockholders with periodic advisory (non-binding) votes on executive compensation, also referred to as “say-on-pay” proposals.

As described under the heading, “Compensation Discussion and Analysis,” in this Proxy Statement, our executive compensation programs are designed to attract, motivate and retain our executive officers, who are critical to our success. Under these programs, our executive officers are rewarded for the achievement of annual, long-term and strategic goals, and corporate goals. Please read the section entitled “Compensation Discussion and Analysis” section beginning on page 15 for additional details about our executive compensation programs, including information about the fiscal year 2018 compensation of our Chief Executive Officer, our Chief Financial Officer, and the other officers identified as named executive officers during 2018 (collectively, the “**Named Executive Officers**”).

We are asking our stockholders to indicate their support for our Named Executive Officers’ compensation as described in this Proxy Statement. This proposal gives our stockholders the opportunity to express their views on our Named Executive Officers’ compensation. This vote is not intended to address any specific item of compensation, but rather to address the overall compensation of our Named Executive Officers and the philosophy, policy and practices as described in this Proxy Statement. Accordingly, we will ask our stockholders to vote “FOR” the following resolution at the 2019 Annual Meeting:

**“RESOLVED, that the compensation paid to the Company’s Named Executive Officers for the fiscal year ended December 31, 2018, as disclosed pursuant to Item 402 of Regulation S-K, including the Compensation Discussion and Analysis, compensation tables and narrative discussion, is hereby approved.”**

Pursuant to the Exchange Act and the rules promulgated thereunder, this vote will not be binding on the Board or the Compensation Committee and may not be construed as overruling a decision by the Board or the Compensation Committee, creating or implying any change to the fiduciary duties of the Board or the Compensation Committee or any additional fiduciary duty by the Board or the Compensation Committee or restricting or limiting the ability of stockholders to make proposals for inclusion in proxy materials related to executive compensation. The Board and the Compensation Committee, however, may in their discretion take into account the outcome of the vote when considering future executive compensation arrangements.

#### **Required Vote**

In voting to approve the above resolution, stockholders may vote for the resolution, against the resolution or abstain from voting. This matter will be decided by the affirmative vote of a majority of the votes cast at the Meeting. Abstentions and broker non-votes will have no direct effect on the outcome of this proposal.

**THE BOARD RECOMMENDS A VOTE “FOR” THE APPROVAL OF THE COMPENSATION OF THE COMPANY’S NAMED EXECUTIVE OFFICERS AS DISCLOSED IN THIS PROXY STATEMENT.**

**PROPOSAL 5**

**ADVISORY VOTE ON THE FREQUENCY OF ADVISORY VOTES ON EXECUTIVE COMPENSATION**

In Proposal 5, we are asking our stockholders to cast a non-binding, advisory vote regarding the frequency of future executive compensation advisory votes. Stockholders may vote for a frequency of every one, two or three years, or may abstain. The Board recommends that you vote for every three (3) years as the desired frequency for the Company to hold a non-binding, advisory vote of the stockholders on executive compensation. We believe this frequency is appropriate for the reasons set forth below:

1. Our equity compensation program for the named executive officers is designed to support long-term value creation, and a vote every three years will allow the stockholders to better judge the equity compensation program in relation to our long-term performance. We strive to ensure management's interests are aligned with stockholders' interests to support long-term value creation through our equity compensation program. To that end, we grant equity awards to vest over multi-year periods of service to encourage our named executive officers to focus on long-term performance, and recommend a vote every three years, which would allow the equity compensation to be evaluated over a similar time-frame and in relation to long-term performance.

2. A vote every three (3) years will provide the Board and the Compensation Committee with the time to thoughtfully consider and thoroughly respond to stockholders' sentiments and to implement any necessary changes in light of the timing required therefor. The Board and the Compensation Committee will carefully review changes to the executive compensation to maintain the effectiveness and credibility of the program, which is important for aligning interests and for motivating and retaining our named executive officers.

3. We are open to input from stockholders regarding Board and governance matters, as well as the equity compensation program. We believe that the stockholders' ability to contact us and the Board at any time to express specific views on executive compensation holds us accountable to stockholders and reduces the need for and value of more frequent advisory votes on executive compensation.

Pursuant to the Exchange Act and the rules promulgated thereunder, this vote on the frequency of future advisory votes on named executive officer compensation is non-binding on the Board and its committees. This vote may not be construed as overruling a decision by the Board or its committees, creating or implying any change to the fiduciary duties of the Board or its committees or any additional fiduciary duty by the Board or its committees or restricting or limiting the ability of stockholders to make proposals for inclusion in proxy materials related to executive compensation. Notwithstanding the Board's recommendation and the outcome of the vote on this matter, the Board may, in the future, decide to conduct advisory votes on a more or less frequent basis and may vary its practice based on factors such as discussions with stockholders and the adoption of material changes to compensation programs.

**THE BOARD RECOMMENDS THAT STOCKHOLDERS VOTE TO HAVE THE NON-BINDING VOTE ON EXECUTIVE COMPENSATION OCCUR EVERY THREE YEARS.**

## PROPOSAL 6

### APPROVAL OF A CHARTER AMENDMENT TO INCREASE THE NUMBER OF AUTHORIZED SHARES OF COMMON STOCK

Our Charter currently authorizes the issuance of 125,000,000 shares of Common Stock. The Company's Board of Directors has declared advisable, adopted and is submitting for stockholder approval an amendment to the Charter to increase the number of authorized shares of Common Stock from 125,000,000 to 175,000,000 ("**Charter Amendment**").

#### Form of the Amendment

If stockholders approve this proposal, the Charter will be amended to increase the number of shares of Common Stock the Company is authorized to issue from 125,000,000 to 175,000,000. The par value of the common stock will remain at \$0.001 per share. The amendment would amend the first sentence of Article FIFTH of the Charter to read in its entirety as follows:

"FIFTH. The total number of shares of capital stock which the Corporation shall have authority to issue is 180,000,000 shares, consisting of 175,000,000 (One-Hundred Seventy-Five Million) shares of common stock, each of par value one-thousandths of one cent (\$0.001) (the "**Common Stock**"), and 5,000,000 (Five Million) shares of preferred stock, each of par value one-thousandths of one cent (\$0.001) (the "**Preferred Stock**")."

The remaining text of Article FIFTH of the Company's Certificate of Incorporation will remain unchanged.

#### Purpose for the Increase in Authorized Shares

Our Board of Directors has approved, and we are seeking stockholder approval of, an increase of 50,000,000 shares of Common Stock. Our Board believes it is in the best interest of our Company to increase the number of authorized shares of Common Stock to give our Company greater flexibility in considering and planning for future potential business needs. We do not currently have any definitive agreements or arrangements to issue any of the proposed additional authorized shares of common stock that will become available for issuance if this proposal is approved. Having the additional authorized shares available will provide additional flexibility to use our Common Stock for business and financial purposes in the future as well as to have sufficient shares available to provide appropriate equity incentives for our employees.

We are also seeking approval for our Plan, for which we plan to reserve 14,000,000 shares for issuance.

As of June 4, 2019, there were 89,444,307 shares of our Common Stock issued and 89,428,816 outstanding. In addition, as of June 4, 2019, we had (i) 7,896,288 shares of Common Stock subject to outstanding stock options and RSUs, (ii) 2,093,155 shares of Common Stock issuable upon conversion of Series A preferred stock, (iii) 9,533,335 shares of Common Stock issuable upon conversion of Series B non-voting convertible preferred stock, (iv) 2,136,020 shares of Common Stock issuable upon the exercise of outstanding warrants, and (v) 166,461 shares available for additional equity awards under our stock incentive plans. Accordingly, after adjusting for full-value awards granted under our stock incentive plans as of June 4, 2019, we had only 13,912,386 shares of our Common Stock available for issuance out of the 125,000,000 shares of Common Stock currently authorized.

#### Rights of Additional Authorized Shares

The additional authorized shares of Common Stock, if and when issued, would be part of the existing class of Common Stock and would have the same rights and privileges as the shares of Common Stock currently outstanding. The Company's stockholders do not have preemptive rights with respect to its Common Stock. Accordingly, should the Board of Directors elect to issue additional shares of Common Stock, existing stockholders would not have any preferential rights to purchase the shares.

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**Potential Adverse Effects of the Amendment**

Future issuances of Common Stock or securities convertible into common stock could have a dilutive effect on the earnings per share, book value per share, voting power and percentage interest of holdings of current stockholders. In addition, the availability of additional shares of Common Stock for issuance could, under certain circumstances, discourage or make more difficult efforts to obtain control of the Company. The Board is not aware of any attempt, or contemplated attempt, to acquire control of the Company. This proposal is not being presented with the intent that it be used to prevent or discourage any acquisition attempt, but nothing would prevent the Board from taking any appropriate actions not inconsistent with its fiduciary duties.

**Effectiveness of the Amendment and Required Vote**

The above description of the Charter Amendment is only a summary and is qualified in its entirety by reference to the complete text of the Certificate of Amendment, which is attached to this proxy statement as Appendix B. If the proposed amendment is adopted, it will become effective upon the filing of a certificate of amendment to the Company's Certificate of Incorporation with the Secretary of State of the State of Delaware. The adoption of this amendment requires the approval of a majority of the outstanding shares of Common Stock entitled to vote.

**THE BOARD RECOMMENDS A VOTE "FOR" THE APPROVAL OF A CHARTER AMENDMENT TO INCREASE THE NUMBER OF AUTHORIZED SHARES OF COMMON STOCK.**

## OTHER INFORMATION

### Proxy Solicitation

The expense of preparing, printing and mailing this Proxy Statement, exhibits and the proxies solicited hereby will be borne by the Company. In addition to these proxy materials, our directors, officers and employees may solicit proxies by telephone, e-mail, facsimile and in person, without additional compensation. We have also retained \_\_\_\_\_ to solicit proxies by mail, courier, telephone and facsimile and to request brokers, custodians and fiduciaries to forward proxy soliciting materials to the owners of stock held in their names. For these services, we paid a fee of approximately \$ \_\_\_\_\_, plus expenses. We may reimburse brokers or persons holding stock in their names, or in the names of their nominees, for their expenses in sending proxies and proxy materials to beneficial owners.

### Proxies

A stockholder may revoke his, her or its proxy at any time prior to its use by giving written notice to our Secretary, by executing a revised proxy at a later date or by attending the Meeting and voting in person. Proxies in the form enclosed, unless previously revoked, will be voted at the Meeting in accordance with the specifications made thereon or, in the absence of such specifications in accordance with the recommendations of our Board.

### Securities Outstanding; Votes Required

As of the close of business on the Record Date there were \_\_\_\_\_ shares of Common Stock outstanding. As of the Record Date, \_\_\_\_\_ shares of Series A preferred stock, and \_\_\_\_\_ shares of Series B non-voting convertible preferred stock were outstanding. The Series B shares are convertible into \_\_\_\_\_ shares of common stock and such time after conversion, no Reporting Person would beneficially own more than 9.98% of the Common Stock outstanding immediately after giving effect to such conversion. Stockholders are entitled to one vote for each share of Common Stock owned. The affirmative vote of a majority of the shares of Common Stock present at the Meeting, in person or by proxy, is required for approval of the proposals. Shares of the Common Stock represented by executed proxies received by the Company will be counted for purposes of establishing a quorum at the Meeting, regardless of how or whether such shares are voted on any specific proposal.

**Other Business**

Our Board knows of no other matter to be presented at the Meeting. If any additional matter should properly come before the Meeting, it is the intention of the persons named in the enclosed proxy to vote such proxy in accordance with their judgment on any such matters.

**Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.**

The following table sets forth, as of June 4, 2019, by: (i) each of our directors, (ii) all persons who, to our knowledge, are the beneficial owners of more than 5% of the outstanding shares of common stock, (iii) each of the executive officers, and (iv) all of our directors and executive officers, as a group. Each person named in this table has sole investment power and sole voting power with respect to the shares of common stock set forth opposite such person's name, except as otherwise indicated. Unless otherwise indicated, the address for each person listed below is in care of BioDelivery Sciences International, Inc., 4131 ParkLake Avenue, Suite #225, Raleigh, NC 27612.

<u>Name and Address of Beneficial Owner</u>	<u>Amount and Nature of Beneficial Ownership</u>	<u>Percentage of Class as of Beneficially Owned(1)</u>
Broadfin Capital, LLC <sup>(2)</sup>	4,375,066	9.98%
Avoro Capital Advisors LLC <sup>(3)</sup>	7,424,867	8.30%
Biopharma Credit PLC <sup>(4)</sup>	5,000,000	5.59%
Herm Cukier <sup>(5)</sup>	36,381	*
Scott M. Plesha <sup>(6)</sup>	282,336	*
Mary Theresa Coelho <sup>(7)</sup>	—	*
Thomas Smith, M.D. <sup>(8)</sup>	—	*
James Vollins <sup>(9)</sup>	—	*
Peter S. Greenleaf <sup>(10)</sup>	5,726	*
Mark A. Sirgo, Pharm.D. <sup>(11)</sup>	2,643,422	2.95%
Francis E. O'Donnell, Jr., M.D. <sup>(12)</sup>	720,254	*
William M. Watson <sup>(13)</sup>	16,110	*
Todd C. Davis <sup>(14)</sup>	421,352	*
Kevin Kotler <sup>(15)</sup>	4,376,276	4.89%
All Directors and Officers as a group (9 persons)	8,502,208	9.48%

\* Less than 1%

- (1) Based on 89,428,816 shares of Common Stock outstanding as of June 4, 2019 and shares beneficially owned by the referenced parties as described below.
- (2) Based on 13F filed by Broadfin Capital, LLC, or Broadfin, with the SEC on May 15, 2019 for the quarter ended March 31, 2019. Does not include 8,422,223 shares of Common Stock issuable upon conversion of 1,516 shares of Series B non-voting convertible preferred stock beneficially owned by Broadfin. The Series B non-voting convertible preferred stock owned by Broadfin is subject to a beneficial ownership limitation that prohibits Broadfin from converting its shares of Series B non-voting convertible preferred stock into shares of common stock to the extent that, as a result of such conversion, Broadfin and its affiliates would beneficially own more than 9.98% of the total number of shares of Common Stock then issued and outstanding.
- (3) Based on 13F filed by Avoro Capital Advisors LLC (formerly known as venBio Select Advisor LLC) with the SEC on May 15, 2019 for the quarter ended March 31, 2019.
- (4) Based on information provided by Biopharma Credit PLC.
- (5) Mr. Cukier is our Chief Executive Officer and a director. Does not include 133,334 shares of unvested RSUs potentially issuable in thirds if certain pre-determined company revenue targets are achieved. Also, does not include 93,750 shares of unvested RSUs which vest in thirds from January 2020 to January 2022. Does not include options to purchase 1,340,000 shares of common stock, none of which are currently exercisable.
- (6) Mr. Plesha is our President. Does not include an aggregate of 90,001 shares of unvested RSUs which vest from March 2020 to January 2022. Also, does not include 50,001 shares of unvested RSUs potentially issuable

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- if certain pre-determined company revenue targets are achieved, which vest from March 2020 to March 2021. Does not include options to purchase 245,000 shares of common stock, none of which are currently exercisable.
- (7) Ms. Coelho became our Chief Financial Officer on January 15, 2019. Does not include 55,000 shares of unvested RSUs which vest in thirds from January 2020 to January 2022. Does not include options to purchase 107,109 shares of common stock, none of which are currently exercisable.
- (8) Dr. Smith is our Chief Medical Officer. Does not include 23,000 shares of unvested RSUs which vest in thirds from January 2020 to January 2022. Does not include options to purchase 247,691 shares of common stock, none of which are currently exercisable.
- (9) Mr. Vollins is our General Counsel, Chief Compliance Officer and Corporate Secretary. Does not include 11,500 shares of unvested RSUs which vest in thirds from January 2020 to January 2022. Does not include options to purchase 154,476 shares of common stock, none of which are currently exercisable.
- (10) Mr. Greenleaf is our Chairman of the Board and a director. Includes 3,644 shares owned by Mr. Greenleaf. Includes options to purchase 2,082 shares of common stock, all of which are currently exercisable. Does not include 108,644 shares of unvested RSUs which vest ratably from August 2019 to August 2022. Does not include options to purchase 62,082 shares of common stock, none of which are currently exercisable.
- (11) Includes 2,522,455 shares owned by Dr. Sirgo, our Vice Chairman. Includes options to purchase 120,967 shares of common stock, all of which are currently exercisable. Does not include options to purchase 11,250 shares of common stock, none of which are currently exercisable. Does not include 307,707 unvested RSUs potentially issuable under our LTIP if certain pre-determined company revenue targets are achieved. Does not include 22,500 unvested RSUs which will vest May 2020.
- (12) Dr. O'Donnell is a director. Excludes 167,500 shares owned by The Francis E. O'Donnell, Jr. Irrevocable Trust #1, of which Dr. O'Donnell's sister, Kathleen O'Donnell, is trustee, and as to which Dr. O'Donnell disclaims beneficial interest. This number includes 612,154 shares owned by Dr. O'Donnell and options to purchase 107,500 shares of our common stock, all of which is currently exercisable. Does not include options to purchase 11,250 shares of common stock, none of which are currently exercisable. Does not include an aggregate of 115,000 shares of unvested RSUs which vest in thirds from March 2020 to March 2021. Does not include 92,500 shares of unvested RSUs potentially issuable in thirds if certain pre-determined company revenue targets are achieved. Also, does not include 154,265 shares of unvested RSUs potentially issuable under our LTIP if certain pre-determined company revenue targets are achieved.
- (13) Mr. Watson is a director. Includes 11,240 shares owned. Includes options to purchase 4,870 shares of common stock, all of which are currently exercisable. Does not include 99,739 shares of unvested RSUs which vest ratably from August 2019 to August 2022. Does not include options to purchase 49,870 shares of common stock, none of which are currently exercisable.
- (14) Mr. Davis is a director. Includes 419,791 shares owned. Includes options to purchase 1,561 shares of common stock, all of which are currently exercisable. Does not include 93,123 shares of unvested RSUs which vest ratably from August 2019 to August 2022. Does not include options to purchase 46,562 shares of common stock, none of which are currently exercisable.
- (15) Mr. Kotler is a director. Does not include 8,422,223 shares of Common Stock issuable upon conversion of Series B non-voting convertible preferred stock which are held in the account of Broadfin Healthcare Master Fund, Ltd., a private investment fund managed by Broadfin Capital, LLC, and may be deemed to be beneficially owned by Mr. Kotler, managing member of Broadfin Capital, LLC. Includes 4,375,066 shares owned by Broadfin Capital, LLC. Includes options to purchase 1,561 shares of common stock, all of which are currently exercisable. Does not include 93,123 shares of unvested RSUs which vest ratably from August 2019 to August 2022. Does not include options to purchase 46,562 shares of common stock, none of which are currently exercisable.

### **Certain Relationships and Related Transactions**

As of December 31, 2001, our Board appointed an audit committee consisting of independent directors. This committee, among other duties, is charged to review, and if appropriate, ratify all agreements and transactions which had been entered into with related parties, as well as review and ratify all future related party transactions. From time to time, after compliance with our internal policies and procedures, we have entered into related party contracts, some of which were amended subsequently in accordance with the same policies and procedures.

The following is a listing of our related party transactions:

#### *Affiliates*

On May 17, 2018, we entered into an agreement with an affiliate of Broadfin Capital LLC, or Broadfin, pursuant to which Broadfin agreed to invest \$22,000,000 in the Company. We and Broadfin also agreed that Kevin Kotler, Broadfin's managing partner, Todd C. Davis and Peter S. Greenleaf would join our Board.

As a matter of corporate governance policy, we have not and will not make loans to officers or loan guarantees available to "promoters" as that term is commonly understood by the SEC and state securities authorities.

Since the election of the Board in May 2018, we have had four independent directors which constitute a majority as required by Nasdaq Stock Market rules.

All future transactions between us and our officers, directors or five percent stockholders, and respective affiliates will be on terms no less favorable than could be obtained from unaffiliated third parties and will be approved by a majority of our independent directors who do not have an interest in the transactions and who had access, at our expense, to our legal counsel or independent legal counsel.

Other than as set forth above, we have not been a participant in any transaction, nor is there any currently proposed transaction, that is currently reportable under Item 404(a) of Regulation S-K.

### **Legal Proceedings**

There are no material proceedings in which any of the Company's directors, officers or affiliates, or any associate of any such director, officer, affiliate of the Company, is a party adverse to the Company or any of its subsidiaries or has a material interest adverse to the Company or any of its subsidiaries.

### **Deadline for Submission of Stockholder Proposals for 2020 Annual Meeting of Stockholders**

Stockholders may present proposals intended for inclusion in our proxy statement for our 2020 Annual Meeting of Stockholders provided that such proposals are received by the Secretary of the Company after February 28, 2020 but before March 24, 2020 and in accordance by and otherwise in compliance with, applicable SEC regulations, and the Company's Amended and Restated Bylaws, as applicable. Proposals submitted not in accordance with such regulations or the Company's Amended and Restated Bylaws, will be deemed untimely or otherwise deficient; however, the Company will have discretionary authority to include such proposals in the 2020 Proxy Statement.

### **Stockholder Communications**

Stockholders wishing to communicate with the Board may direct such communications to the Board c/o the Company, Attn: James Vollins at 4131 ParkLake Avenue, Suite 225, Raleigh, North Carolina 27612. Mr. Vollins will present a summary of all stockholder communications to the Board at subsequent Board meetings. The directors will have the opportunity to review the actual communications at their discretion.

### **Householding of Proxy Materials**

The SEC has adopted rules that permit companies and intermediaries (such as banks and brokers) to satisfy the delivery requirements for notices of annual meetings, proxy statements and annual reports with respect to two or more stockholders sharing the same address by delivering a single proxy statement addressed to those stockholders. This process, which is commonly referred to as “householding,” potentially means extra convenience for stockholders and cost savings for companies. This year, a single notice of the annual meeting of stockholders, or copy of the proxy statement and annual report, will be delivered to multiple stockholders sharing an address unless contrary instructions have been received from the affected stockholders. Once you have received notice from your bank or broker that it will be householding communications to your address, householding will continue until you are notified otherwise or until you revoke your consent. If, at any time, you no longer wish to participate in householding and would prefer to receive a separate proxy statement and annual report, please notify your bank or broker, and direct your written request to James Vollins, General Counsel, Chief Compliance Officer and Corporate Secretary of the Company, at (919) 582-9050 or at offices of the Company at 4131 ParkLake Avenue, Suite 225, Raleigh, North Carolina 27612. Stockholders who currently receive multiple copies of the proxy statement at their address and would like to request householding of their communications should contact their bank or broker.

### **Additional Information**

Accompanying this Proxy Statement is a copy of our Annual Report on Form 10-K for the year ended December 31, 2018. Such Report constitutes our Annual Report to Stockholders for purposes of Rule 14a-3 under the Exchange Act. Such Report includes our audited financial statements for the fiscal year ended December 31, 2018 and certain other financial information, which is incorporated by reference herein. We are subject to the informational requirements of the Exchange Act and in accordance therewith file reports, proxy statements and other information with the SEC. Such reports, proxy statements and other information are available on the SEC’s website at [www.sec.gov](http://www.sec.gov). Stockholders who have questions in regard to any aspect of the matters discussed in this Proxy Statement should contact James Vollins, General Counsel, Chief Compliance Officer and Corporate Secretary, at (919) 582-9050.

**Appendix A**

**BIODELIVERY SCIENCES INTERNATIONAL, INC.  
2019 STOCK OPTION AND INCENTIVE PLAN**

SECTION 1. GENERAL PURPOSE OF THE PLAN; DEFINITIONS

The name of the plan is the BioDelivery Sciences International, Inc. 2019 Stock Option and Incentive Plan (the “Plan”). The purpose of the Plan is to encourage and enable the officers, employees, Non-Employee Directors and Consultants of BioDelivery Sciences International, Inc. (the “Company”) and its Affiliates upon whose judgment, initiative and efforts the Company largely depends for the successful conduct of its business to acquire a proprietary interest in the Company. It is anticipated that providing such persons with a direct stake in the Company’s welfare will assure a closer identification of their interests with those of the Company and its stockholders, thereby stimulating their efforts on the Company’s behalf and strengthening their desire to remain with the Company.

The following terms shall be defined as set forth below:

“*Act*” means the Securities Act of 1933, as amended, and the rules and regulations thereunder.

“*Administrator*” means either the Board or the compensation committee of the Board or a similar committee performing the functions of the compensation committee and which is comprised of not less than two Non-Employee Directors who are independent.

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

“*Award*” or “*Awards*,” except where referring to a particular category of grant under the Plan, shall include Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, Restricted Stock Units, Restricted Stock Awards, Unrestricted Stock Awards, Cash-Based Awards, and Dividend Equivalent Rights.

“*Award Certificate*” means a written or electronic document setting forth the terms and provisions applicable to an Award granted under the Plan. Each Award Certificate is subject to the terms and conditions of the Plan.

“*Board*” means the Board of Directors of the Company.

“*Cash-Based Award*” means an Award entitling the recipient to receive a cash-denominated payment.

“*Code*” means the Internal Revenue Code of 1986, as amended, and any successor Code, and related rules, regulations and interpretations.

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“*Consultant*” means a consultant or adviser who provides *bona fide* services to the Company or an Affiliate as an independent contractor and who qualifies as a consultant or advisor under Instruction A.1.(a)(1) of Form S-8 under the Act.

“*Dividend Equivalent Right*” means an Award entitling the grantee to receive credits based on cash dividends that would have been paid on the shares of Stock specified in the Dividend Equivalent Right (or other award to which it relates) if such shares had been issued to and held by the grantee.

“*Effective Date*” means the date on which the Plan becomes effective as set forth in Section 19.

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

“*Fair Market Value*” of the Stock on any given date means the fair market value of the Stock determined in good faith by the Administrator; provided, however, that if the Stock is listed on the National Association of Securities Dealers Automated Quotation System (“NASDAQ”), NASDAQ Global Market, The New York Stock Exchange or another national securities exchange or traded on any established market, the determination shall be made by reference to the closing sales price. If there is no closing sales price for such date, the determination shall be made by reference to the last date preceding such date for which there is a closing sales price.

“*Incentive Stock Option*” means any Stock Option designated and qualified as an “incentive stock option” as defined in Section 422 of the Code.

“*Non-Employee Director*” means a member of the Board who is not also an employee of the Company or any Subsidiary.

“*Non-Qualified Stock Option*” means any Stock Option that is not an Incentive Stock Option.

“*Option*” or “*Stock Option*” means any option to purchase shares of Stock granted pursuant to Section 5.

“*Restricted Shares*” means the shares of Stock underlying a Restricted Stock Award that remain subject to a risk of forfeiture or the Company’s right of repurchase.

“*Restricted Stock Award*” means an Award of Restricted Shares subject to such restrictions and conditions as the Administrator may determine at the time of grant.

“*Restricted Stock Units*” means an Award of stock units subject to such restrictions and conditions as the Administrator may determine at the time of grant.

“*Retirement*” means the fulfillment of each of the following conditions: (i) the Participant is good standing with the Company as determined by the Administrator; (ii) the voluntary termination by a Participant of such Participant’s employment or service to the Company and (B) that at the time of such voluntary termination, the sum of: (1) the Participant’s age (calculated to the nearest month, with any resulting fraction of a year being calculated as the number of months in the year divided by 12) and (2) the Participant’s years of employment or service with the Company (calculated to the nearest month, with any resulting fraction of a year being calculated as the number of months in the year divided by 12) equals at least 62 (provided that, in any case, the foregoing shall only be applicable if, at the time of Retirement, the Participant shall be at least 55 years of age and shall have been employed by or served with the Company for no less than 5 years).

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“*Sale Event*” shall mean (i) the sale of all or substantially all of the assets of the Company on a consolidated basis to an unrelated person or entity, (ii) a merger, reorganization or consolidation pursuant to which the holders of the Company’s outstanding voting power and outstanding stock immediately prior to such transaction do not own a majority of the outstanding voting power and outstanding stock or other equity interests of the resulting or successor entity (or its ultimate parent, if applicable) immediately upon completion of such transaction, (iii) the sale of all of the Stock of the Company to an unrelated person, entity or group thereof acting in concert, (iv) the individuals who constitute the members of the Board cease, by reason of a financing, merger, combination, acquisition, takeover or other non-ordinary course transaction affecting the Company, to constitute at least fifty-one percent (51%) of the members of the Board, or (v) any other transaction in which the owners of the Company’s outstanding voting power immediately prior to such transaction do not own at least a majority of the outstanding voting power of the Company or any successor entity immediately upon completion of the transaction other than as a result of the acquisition of securities directly from the Company.

“*Sale Price*” means the value as determined by the Administrator of the consideration payable, or otherwise to be received by stockholders, per share of Stock pursuant to a Sale Event.

“*Section 409A*” means Section 409A of the Code and the regulations and other guidance promulgated thereunder.

“*Service Relationship*” means any relationship as an employee, director or Consultant of the Company or any Affiliate (e.g., a Service Relationship shall be deemed to continue without interruption in the event an individual’s status changes from full-time employee to part-time employee or Consultant).

“*Stock*” means the Common Stock, par value \$0.001 per share, of the Company, subject to adjustments pursuant to Section 3.

“*Stock Appreciation Right*” means an Award entitling the recipient to receive shares of Stock (or cash, to the extent explicitly provided for in the applicable Award Certificate) having a value equal to the excess of the Fair Market Value of the Stock on the date of exercise over the exercise price of the Stock Appreciation Right multiplied by the number of shares of Stock with respect to which the Stock Appreciation Right shall have been exercised.

“*Subsidiary*” means any corporation or other entity (other than the Company) in which the Company has at least a 50 percent interest, either directly or indirectly.

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“*Ten Percent Owner*” means an employee who owns or is deemed to own (by reason of the attribution rules of Section 424(d) of the Code) more than 10 percent of the combined voting power of all classes of stock of the Company or any parent or subsidiary corporation.

“*Unrestricted Stock Award*” means an Award of shares of Stock free of any restrictions.

SECTION 2. ADMINISTRATION OF PLAN; ADMINISTRATOR AUTHORITY TO SELECT GRANTEES AND DETERMINE AWARDS

(a) Administration of Plan. The Plan shall be administered by the Administrator.

(b) Powers of Administrator. The Administrator shall have the power and authority to grant Awards consistent with the terms of the Plan, including the power and authority:

(i) to select the individuals to whom Awards may from time to time be granted;

(ii) to determine the time or times of grant, and the extent, if any, of Incentive Stock Options, Non-Qualified Stock Options, Stock Appreciation Rights, Restricted Stock Awards, Restricted Stock Units, Unrestricted Stock Awards, Cash-Based Awards, and Dividend Equivalent Rights, or any combination of the foregoing, granted to any one or more grantees;

(iii) to determine the number of shares of Stock to be covered by any Award;

(iv) to determine and modify from time to time the terms and conditions, including restrictions, not inconsistent with the terms of the Plan, of any Award, which terms and conditions may differ among individual Awards and grantees, and to approve the forms of Award Certificates;

(v) to accelerate at any time the exercisability or vesting of all or any portion of any Award;

(vi) subject to the provisions of Section 5(c), to extend at any time the period in which Stock Options may be exercised; and

(vii) at any time to adopt, alter and repeal such rules, guidelines and practices for administration of the Plan and for its own acts and proceedings as it shall deem advisable; to interpret the terms and provisions of the Plan and any Award (including related written instruments); to make all determinations it deems advisable for the administration of the Plan; to decide all disputes arising in connection with the Plan; and to otherwise supervise the administration of the Plan.

All decisions and interpretations of the Administrator shall be binding on all persons, including the Company and Plan grantees.

(c) Delegation of Authority to Grant Awards. Subject to applicable law, the Administrator, in its discretion, may delegate to a committee consisting of one or more officers of the Company including the Chief Executive Officer of the Company all or part of the Administrator’s authority and duties with respect to the granting of Awards to individuals who are (i) not subject to the reporting and other provisions of Section 16 of the Exchange Act and (ii) not members of the delegated committee. Any such delegation by the Administrator shall include a limitation as to the amount of Stock underlying Awards that may be granted during the period of the delegation and shall contain guidelines as to the determination of the exercise price and the vesting criteria. The Administrator may revoke or amend the terms of a delegation at any time but such action shall not invalidate any prior actions of the Administrator’s delegate or delegates that were consistent with the terms of the Plan.

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(d) Award Certificate. Awards under the Plan shall be evidenced by Award Certificates that set forth the terms, conditions and limitations for each Award which may include, without limitation, the term of an Award and the provisions applicable in the event employment or service terminates.

(e) Indemnification. Neither the Board nor the Administrator, nor any member of either or any delegate thereof, shall be liable for any act, omission, interpretation, construction or determination made in good faith in connection with the Plan, and the members of the Board and the Administrator (and any delegate thereof) shall be entitled in all cases to indemnification and reimbursement by the Company in respect of any claim, loss, damage or expense (including, without limitation, reasonable attorneys' fees) arising or resulting therefrom to the fullest extent permitted by law and/or under the Company's articles or bylaws or any directors' and officers' liability insurance coverage which may be in effect from time to time and/or any indemnification agreement between such individual and the Company.

(f) Foreign Award Recipients. Notwithstanding any provision of the Plan to the contrary, in order to comply with the laws in other countries in which the Company and its Subsidiaries operate or have employees or other individuals eligible for Awards, the Administrator, in its sole discretion, shall have the power and authority to: (i) determine which Subsidiaries shall be covered by the Plan; (ii) determine which individuals outside the United States are eligible to participate in the Plan; (iii) modify the terms and conditions of any Award granted to individuals outside the United States to comply with applicable foreign laws; (iv) establish subplans and modify exercise procedures and other terms and procedures, to the extent the Administrator determines such actions to be necessary or advisable (and such subplans and/or modifications shall be attached to this Plan as appendices); provided, however, that no such subplans and/or modifications shall increase the share limitations contained in Section 3(a) hereof; and (v) take any action, before or after an Award is made, that the Administrator determines to be necessary or advisable to obtain approval or comply with any local governmental regulatory exemptions or approvals. Notwithstanding the foregoing, the Administrator may not take any actions hereunder, and no Awards shall be granted, that would violate the Exchange Act or any other applicable United States securities law, the Code, or any other applicable United States governing statute or law.

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SECTION 3. STOCK ISSUABLE UNDER THE PLAN; MERGERS; SUBSTITUTION

(a) Stock Issuable. The maximum number of shares of Stock reserved and available for issuance under the Plan shall be 14,000,000 shares, subject to adjustment as provided in this Section 3. For purposes of this limitation, the shares of Stock underlying any awards under the Plan and under the Company's 2011 Equity Incentive Plan, as amended, that are forfeited, canceled or otherwise terminated (other than by exercise) shall be added back to the shares of Stock available for issuance under the Plan and, to the extent permitted under Section 422 of the Code and the regulations promulgated thereunder, the shares of Stock that may be issued as Incentive Stock Options. Notwithstanding the foregoing, the following shares shall not be added to the shares authorized for grant under the Plan: (i) shares tendered or held back upon exercise of an Option or settlement of an Award to cover the exercise price or tax withholding, and (ii) shares subject to a Stock Appreciation Right that are not issued in connection with the stock settlement of the Stock Appreciation Right upon exercise thereof. In the event the Company repurchases shares of Stock on the open market, such shares shall not be added to the shares of Stock available for issuance under the Plan. Subject to such overall limitations, shares of Stock may be issued up to such maximum number pursuant to any type or types of Award; provided, however, that no more than 14,000,000 shares of the Stock may be issued in the form of Incentive Stock Options. The shares available for issuance under the Plan may be authorized but unissued shares of Stock or shares of Stock reacquired by the Company.

(b) Changes in Stock. Subject to Section 3(c) hereof, if, as a result of any reorganization, recapitalization, reclassification, stock dividend, stock split, reverse stock split or other similar change in the Company's capital stock, the outstanding shares of Stock are increased or decreased or are exchanged for a different number or kind of shares or other securities of the Company, or additional shares or new or different shares or other securities of the Company or other non-cash assets are distributed with respect to such shares of Stock or other securities, or, if, as a result of any merger or consolidation, sale of all or substantially all of the assets of the Company, the outstanding shares of Stock are converted into or exchanged for securities of the Company or any successor entity (or a parent or subsidiary thereof), the Administrator shall make an appropriate or proportionate adjustment in (i) the maximum number of shares reserved for issuance under the Plan, including the maximum number of shares that may be issued in the form of Incentive Stock Options, (ii) the number and kind of shares or other securities subject to any then outstanding Awards under the Plan, (iii) the repurchase price, if any, per share subject to each outstanding Restricted Stock Award, and (iv) the exercise price for each share subject to any then outstanding Stock Options and Stock Appreciation Rights under the Plan, without changing the aggregate exercise price (i.e., the exercise price multiplied by the number of shares subject to Stock Options and Stock Appreciation Rights) as to which such Stock Options and Stock Appreciation Rights remain exercisable. The Administrator shall also make equitable or proportionate adjustments in the number of shares subject to outstanding Awards and the exercise price and the terms of outstanding Awards to take into consideration cash dividends paid other than in the ordinary course or any other extraordinary corporate event. The adjustment by the Administrator shall be final, binding and conclusive. No fractional shares of Stock shall be issued under the Plan resulting from any such adjustment, but the Administrator in its discretion may make a cash payment in lieu of fractional shares.

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(c) Mergers and Other Transactions. In the case of and subject to the consummation of a Sale Event, the parties thereto may cause the assumption or continuation of Awards theretofore granted by the successor entity, or the substitution of such Awards with new Awards of the successor entity or parent thereof, with appropriate adjustment as to the number and kind of shares and, if appropriate, the per share exercise prices, as such parties shall agree. To the extent the parties to such Sale Event do not provide for the assumption, continuation or substitution of Awards, upon the effective time of the Sale Event, the Plan and all outstanding Awards granted hereunder shall terminate. In such case, except as may be otherwise provided in the relevant Award Certificate, all Options and Stock Appreciation Rights with time-based vesting conditions or restrictions that are not vested and/or exercisable immediately prior to the effective time of the Sale Event shall become fully vested and exercisable as of the effective time of the Sale Event, all other Awards with time-based vesting, conditions or restrictions shall become fully vested and nonforfeitable as of the effective time of the Sale Event, and all Awards with conditions and restrictions relating to the attainment of performance goals may become vested and nonforfeitable in connection with a Sale Event in the Administrator's discretion or to the extent specified in the relevant Award Certificate. In the event of such termination, (i) the Company shall have the option (in its sole discretion) to make or provide for a payment, in cash or in kind, to the grantees holding Options and Stock Appreciation Rights, in exchange for the cancellation thereof, in an amount equal to the difference between (A) the Sale Price multiplied by the number of shares of Stock subject to outstanding Options and Stock Appreciation Rights (to the extent then exercisable at prices not in excess of the Sale Price) and (B) the aggregate exercise price of all such outstanding Options and Stock Appreciation Rights (provided that, in the case of an Option or Stock Appreciation Right with an exercise price equal to or less than the Sale Price, such Option or Stock Appreciation Right shall be cancelled for no consideration); or (ii) each grantee shall be permitted, within a specified period of time prior to the consummation of the Sale Event as determined by the Administrator, to exercise all outstanding Options and Stock Appreciation Rights (to the extent then exercisable) held by such grantee. The Company shall also have the option (in its sole discretion) to make or provide for a payment, in cash or in kind, to the grantees holding other Awards in an amount equal to the Sale Price multiplied by the number of vested shares of Stock under such Awards.

(d) Maximum Awards to Non-Employee Directors. Notwithstanding anything to the contrary in this Plan, the value of all Awards awarded under this Plan and all other cash compensation paid by the Company to any Non-Employee Director in any calendar year shall not exceed \$750,000. For the purpose of this limitation, the value of any Award shall be its grant date fair value, as determined in accordance with ASC 718 or successor provision but excluding the impact of estimated forfeitures related to service-based vesting provisions.

#### SECTION 4. ELIGIBILITY

Grantees under the Plan will be such employees, Non-Employee Directors or Consultants of the Company and its Affiliates as are selected from time to time by the Administrator in its sole discretion; provided that Awards may not be granted to employees, Directors or Consultants who are providing services only to any "parent" of the Company, as such term is defined in Rule 405 of the Act, unless (i) the stock underlying the Awards is treated as "service recipient stock" under Section 409A or (ii) the Company has determined that such Awards are exempt from or otherwise comply with Section 409A.

#### SECTION 5. STOCK OPTIONS

(a) Award of Stock Options. The Administrator may grant Stock Options under the Plan. Any Stock Option granted under the Plan shall be in such form as the Administrator may from time to time approve.

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Stock Options granted under the Plan may be either Incentive Stock Options or Non-Qualified Stock Options. Incentive Stock Options may be granted only to employees of the Company or any Subsidiary that is a “subsidiary corporation” within the meaning of Section 424(f) of the Code. To the extent that any Option does not qualify as an Incentive Stock Option, it shall be deemed a Non-Qualified Stock Option.

Stock Options granted pursuant to this Section 5 shall be subject to the following terms and conditions and shall contain such additional terms and conditions, not inconsistent with the terms of the Plan, as the Administrator shall deem desirable. If the Administrator so determines, Stock Options may be granted in lieu of cash compensation at the optionee’s election, subject to such terms and conditions as the Administrator may establish.

(b) Exercise Price. The exercise price per share for the Stock covered by a Stock Option granted pursuant to this Section 5 shall be determined by the Administrator at the time of grant but shall not be less than 100 percent of the Fair Market Value on the date of grant. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the exercise price of such Incentive Stock Option shall be not less than 110 percent of the Fair Market Value on the grant date. Notwithstanding the foregoing, Stock Options may be granted with an exercise price per share that is less than 100 percent of the Fair Market Value on the date of grant (i) pursuant to a transaction described in, and in a manner consistent with, Section 424(a) of the Code, (ii) to individuals who are not subject to U.S. income tax on the date of grant or (iii) the Stock Option is otherwise compliant with Section 409A.

(c) Option Term. The term of each Stock Option shall be fixed by the Administrator, but no Stock Option shall be exercisable more than ten years after the date the Stock Option is granted. In the case of an Incentive Stock Option that is granted to a Ten Percent Owner, the term of such Stock Option shall be no more than five years from the date of grant.

(d) Exercisability; Rights of a Stockholder. Stock Options shall become exercisable at such time or times, whether or not in installments, as shall be determined by the Administrator at or after the grant date. The Administrator may at any time accelerate the exercisability of all or any portion of any Stock Option. An optionee shall have the rights of a stockholder only as to shares acquired upon the exercise of a Stock Option and not as to unexercised Stock Options.

(e) Method of Exercise. Stock Options may be exercised in whole or in part, by giving written or electronic notice of exercise to the Company, specifying the number of shares to be purchased. Payment of the purchase price may be made by one or more of the following methods except to the extent otherwise provided in the Award Certificate:

(i) In cash, by certified or bank check or other instrument acceptable to the Administrator;

(ii) Through the delivery (or attestation to the ownership following such procedures as the Company may prescribe) of shares of Stock that are not then subject to restrictions under any Company plan. Such surrendered shares shall be valued at Fair Market Value on the exercise date;

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(iii) By the optionee delivering to the Company a properly executed exercise notice together with irrevocable instructions to a broker to promptly deliver to the Company cash or a check payable and acceptable to the Company for the purchase price; provided that in the event the optionee chooses to pay the purchase price as so provided, the optionee and the broker shall comply with such procedures and enter into such agreements of indemnity and other agreements as the Company shall prescribe as a condition of such payment procedure; or

(iv) With respect to Stock Options that are not Incentive Stock Options, by a “net exercise” arrangement pursuant to which the Company will reduce the number of shares of Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price.

Payment instruments will be received subject to collection. The transfer to the optionee on the records of the Company or of the transfer agent of the shares of Stock to be purchased pursuant to the exercise of a Stock Option will be contingent upon receipt from the optionee (or a purchaser acting in his stead in accordance with the provisions of the Stock Option) by the Company of the full purchase price for such shares and the fulfillment of any other requirements contained in the Award Certificate or applicable provisions of laws (including the satisfaction of any withholding taxes that the Company is obligated to withhold with respect to the optionee). In the event an optionee chooses to pay the purchase price by previously-owned shares of Stock through the attestation method, the number of shares of Stock transferred to the optionee upon the exercise of the Stock Option shall be net of the number of attested shares. In the event that the Company establishes, for itself or using the services of a third party, an automated system for the exercise of Stock Options, such as a system using an internet website or interactive voice response, then the paperless exercise of Stock Options may be permitted through the use of such an automated system.

(f) Annual Limit on Incentive Stock Options. To the extent required for “incentive stock option” treatment under Section 422 of the Code, the aggregate Fair Market Value (determined as of the time of grant) of the shares of Stock with respect to which Incentive Stock Options granted under this Plan and any other plan of the Company or its parent and subsidiary corporations become exercisable for the first time by an optionee during any calendar year shall not exceed \$100,000. To the extent that any Stock Option exceeds this limit, it shall constitute a Non-Qualified Stock Option.

SECTION 6. STOCK APPRECIATION RIGHTS

(a) Award of Stock Appreciation Rights. The Administrator may grant Stock Appreciation Rights under the Plan. A Stock Appreciation Right is an Award entitling the recipient to receive shares of Stock (or cash, to the extent explicitly provided for in the applicable Award Certificate) having a value equal to the excess of the Fair Market Value of a share of Stock on the date of exercise over the exercise price of the Stock Appreciation Right multiplied by the number of shares of Stock with respect to which the Stock Appreciation Right shall have been exercised.

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(b) Exercise Price of Stock Appreciation Rights. The exercise price of a Stock Appreciation Right shall not be less than 100 percent of the Fair Market Value of the Stock on the date of grant.

(c) Grant and Exercise of Stock Appreciation Rights. Stock Appreciation Rights may be granted by the Administrator independently of any Stock Option granted pursuant to Section 5 of the Plan.

(d) Terms and Conditions of Stock Appreciation Rights. Stock Appreciation Rights shall be subject to such terms and conditions as shall be determined on the date of grant by the Administrator. The term of a Stock Appreciation Right may not exceed ten years. The terms and conditions of each such Award shall be determined by the Administrator, and such terms and conditions may differ among individual Awards and grantees.

SECTION 7. RESTRICTED STOCK AWARDS

(a) Nature of Restricted Stock Awards. The Administrator may grant Restricted Stock Awards under the Plan. A Restricted Stock Award is any Award of Restricted Shares subject to such restrictions and conditions as the Administrator may determine at the time of grant. Conditions may be based on continuing employment (or other Service Relationship) and/or achievement of pre-established performance goals and objectives.

(b) Rights as a Stockholder. Upon the grant of the Restricted Stock Award and payment of any applicable purchase price, a grantee shall have the rights of a stockholder with respect to the voting of the Restricted Shares and receipt of dividends; provided that if the lapse of restrictions with respect to the Restricted Stock Award is tied to the attainment of performance goals, any dividends paid by the Company during the performance period shall accrue and shall not be paid to the grantee until and to the extent the performance goals are met with respect to the Restricted Stock Award. Unless the Administrator shall otherwise determine, (i) uncertificated Restricted Shares shall be accompanied by a notation on the records of the Company or the transfer agent to the effect that they are subject to forfeiture until such Restricted Shares are vested as provided in Section 7(d) below, and (ii) certificated Restricted Shares shall remain in the possession of the Company until such Restricted Shares are vested as provided in Section 7(d) below, and the grantee shall be required, as a condition of the grant, to deliver to the Company such instruments of transfer as the Administrator may prescribe.

(c) Restrictions. Restricted Shares may not be sold, assigned, transferred, pledged or otherwise encumbered or disposed of except as specifically provided herein or in the Restricted Stock Award Certificate. Except as may otherwise be provided by the Administrator either in the Award Certificate or, subject to Section 16 below, in writing after the Award is issued, if a grantee's employment (or other Service Relationship) with the Company and its Subsidiaries terminates for any reason, any Restricted Shares that have not vested at the time of termination shall automatically and without any requirement of notice to such grantee from or other action by or on behalf of, the Company be deemed to have been reacquired by the Company at its original purchase price (if any) from such grantee or such grantee's legal representative simultaneously with such termination of employment (or other Service Relationship), and thereafter shall cease to represent any ownership of the Company by the grantee or rights of the grantee as a stockholder. Following such deemed reacquisition of Restricted Shares that are represented by physical certificates, a grantee shall surrender such certificates to the Company upon request without consideration.

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(d) Vesting of Restricted Shares. The Administrator at the time of grant shall specify the date or dates and/or the attainment of pre-established performance goals, objectives and other conditions on which the non-transferability of the Restricted Shares and the Company's right of repurchase or forfeiture shall lapse. Subsequent to such date or dates and/or the attainment of such pre-established performance goals, objectives and other conditions, the shares on which all restrictions have lapsed shall no longer be Restricted Shares and shall be deemed "vested."

SECTION 8. RESTRICTED STOCK UNITS

(a) Nature of Restricted Stock Units. The Administrator may grant Restricted Stock Units under the Plan. A Restricted Stock Unit is an Award of stock units that may be settled in shares of Stock (or cash, to the extent explicitly provided for in the Award Certificate) upon the satisfaction of such restrictions and conditions at the time of grant. Conditions may be based on continuing employment (or other Service Relationship) and/or achievement of pre-established performance goals and objectives. The terms and conditions of each such Award shall be determined by the Administrator, and such terms and conditions may differ among individual Awards and grantees. Except in the case of Restricted Stock Units with a deferred settlement date that complies with Section 409A, at the end of the vesting period, the Restricted Stock Units, to the extent vested, shall be settled in the form of shares of Stock. Restricted Stock Units with deferred settlement dates are subject to Section 409A and shall contain such additional terms and conditions as the Administrator shall determine in its sole discretion in order to comply with the requirements of Section 409A.

(b) Election to Receive Restricted Stock Units in Lieu of Compensation. The Administrator may, in its sole discretion, permit a grantee to elect to receive a portion of future cash compensation otherwise due to such grantee in the form of an award of Restricted Stock Units. Any such election shall be made in writing and shall be delivered to the Company no later than the date specified by the Administrator and in accordance with Section 409A and such other rules and procedures established by the Administrator. Any such future cash compensation that the grantee elects to defer shall be converted to a fixed number of Restricted Stock Units based on the Fair Market Value of Stock on the date the compensation would otherwise have been paid to the grantee if such payment had not been deferred as provided herein. The Administrator shall have the sole right to determine whether and under what circumstances to permit such elections and to impose such limitations and other terms and conditions thereon as the Administrator deems appropriate. Any Restricted Stock Units that are elected to be received in lieu of cash compensation shall be fully vested, unless otherwise provided in the Award Certificate.

(c) Rights as a Stockholder. A grantee shall have the rights as a stockholder only as to shares of Stock acquired by the grantee upon settlement of Restricted Stock Units; provided, however, that the grantee may be credited with Dividend Equivalent Rights with respect to the stock units underlying his Restricted Stock Units, subject to the provisions of Section 11 and such terms and conditions as the Administrator may determine.

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(d) Termination. Except as may otherwise be provided by the Administrator either in the Award Certificate or, subject to Section 16 below, in writing after the Award is issued, a grantee's right in all Restricted Stock Units that have not vested shall automatically terminate upon the grantee's termination of employment (or cessation of Service Relationship) with the Company and its Subsidiaries for any reason.

SECTION 9. UNRESTRICTED STOCK AWARDS

Grant or Sale of Unrestricted Stock. The Administrator may grant (or sell at par value or such higher purchase price determined by the Administrator) an Unrestricted Stock Award under the Plan. An Unrestricted Stock Award is an Award pursuant to which the grantee may receive shares of Stock free of any restrictions under the Plan. Unrestricted Stock Awards may be granted in respect of past services or other valid consideration, or in lieu of cash compensation due to such grantee.

SECTION 10. CASH-BASED AWARDS

Grant of Cash-Based Awards. The Administrator may grant Cash-Based Awards under the Plan. A Cash-Based Award is an Award that entitles the grantee to a payment in cash upon the attainment of specified performance goals. The Administrator shall determine the maximum duration of the Cash-Based Award, the amount of cash to which the Cash-Based Award pertains, the conditions upon which the Cash-Based Award shall become vested or payable, and such other provisions as the Administrator shall determine. Each Cash-Based Award shall specify a cash-denominated payment amount, formula or payment ranges as determined by the Administrator. Payment, if any, with respect to a Cash-Based Award shall be made in accordance with the terms of the Award and may be made in cash.

SECTION 11. DIVIDEND EQUIVALENT RIGHTS

(a) Dividend Equivalent Rights. The Administrator may grant Dividend Equivalent Rights under the Plan. A Dividend Equivalent Right is an Award entitling the grantee to receive credits based on cash dividends that would have been paid on the shares of Stock specified in the Dividend Equivalent Right (or other Award to which it relates) if such shares had been issued to the grantee. A Dividend Equivalent Right may be granted hereunder to any grantee as a component of an award of Restricted Stock Units or as a freestanding award. The terms and conditions of Dividend Equivalent Rights shall be specified in the Award Certificate. Dividend equivalents credited to the holder of a Dividend Equivalent Right may be paid currently or may be deemed to be reinvested in additional shares of Stock, which may thereafter accrue additional equivalents. Any such reinvestment shall be at Fair Market Value on the date of reinvestment or such other price as may then apply under a dividend reinvestment plan sponsored by the Company, if any. Dividend Equivalent Rights may be settled in cash or shares of Stock or a combination thereof, in a single installment or installments. A Dividend Equivalent Right granted as a component of an Award of Restricted Stock Units shall provide that such Dividend Equivalent Right shall be settled only upon settlement or payment of, or lapse of restrictions on, such other Award, and that such Dividend Equivalent Right shall expire or be forfeited or annulled under the same conditions as such other Award.

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(b) Termination. Except as may otherwise be provided by the Administrator either in the Award Certificate or, subject to Section 16 below, in writing after the Award is issued, a grantee's rights in all Dividend Equivalent Rights shall automatically terminate upon the grantee's termination of employment (or cessation of Service Relationship) with the Company and its Subsidiaries for any reason.

SECTION 12. TRANSFERABILITY OF AWARDS

(a) Transferability. Except as provided in Section 12(b) below, during a grantee's lifetime, his or her Awards shall be exercisable only by the grantee, or by the grantee's legal representative or guardian in the event of the grantee's incapacity. No Awards shall be sold, assigned, transferred or otherwise encumbered or disposed of by a grantee other than by will or by the laws of descent and distribution or pursuant to a domestic relations order. No Awards shall be subject, in whole or in part, to attachment, execution, or levy of any kind, and any purported transfer in violation hereof shall be null and void.

(b) Administrator Action. Notwithstanding Section 12(a), the Administrator, in its discretion, may provide either in the Award Certificate regarding a given Award or by subsequent written approval that the grantee (who is an employee or director) may transfer his or her Non-Qualified Stock Options to his or her immediate family members, to trusts for the benefit of such family members, or to partnerships in which such family members are the only partners, provided that the transferee agrees in writing with the Company to be bound by all of the terms and conditions of this Plan and the applicable Award. In no event may an Award be transferred by a grantee for value.

(c) Family Member. For purposes of Section 12(b), "family member" shall mean a grantee's child, stepchild, grandchild, parent, stepparent, grandparent, spouse, former spouse, sibling, niece, nephew, mother-in-law, father-in-law, son-in-law, daughter-in-law, brother-in-law, or sister-in-law, including adoptive relationships, any person sharing the grantee's household (other than a tenant of the grantee), a trust in which these persons (or the grantee) have more than 50 percent of the beneficial interest, a foundation in which these persons (or the grantee) control the management of assets, and any other entity in which these persons (or the grantee) own more than 50 percent of the voting interests.

(d) Designation of Beneficiary. To the extent permitted by the Company, each grantee to whom an Award has been made under the Plan may designate a beneficiary or beneficiaries to exercise any Award or receive any payment under any Award payable on or after the grantee's death. Any such designation shall be on a form provided for that purpose by the Administrator and shall not be effective until received by the Administrator. If no beneficiary has been designated by a deceased grantee, or if the designated beneficiaries have predeceased the grantee, the beneficiary shall be the grantee's estate.

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SECTION 13. TAX WITHHOLDING

(a) Payment by Grantee. Each grantee shall, no later than the date as of which the value of an Award or of any Stock or other amounts received thereunder first becomes includable in the gross income of the grantee for Federal income tax purposes, pay to the Company, or make arrangements satisfactory to the Administrator regarding payment of, any Federal, state, or local taxes of any kind required by law to be withheld by the Company with respect to such income. The Company and its Subsidiaries shall, to the extent permitted by law, have the right to deduct any such taxes from any payment of any kind otherwise due to the grantee. The Company's obligation to deliver evidence of book entry (or stock certificates) to any grantee is subject to and conditioned on tax withholding obligations being satisfied by the grantee.

(b) Payment in Stock. The Administrator may require the Company's tax withholding obligation to be satisfied, in whole or in part, by the Company withholding from shares of Stock to be issued pursuant to any Award a number of shares with an aggregate Fair Market Value (as of the date the withholding is effected) that would satisfy the withholding amount due; provided, however, that the amount withheld does not exceed the maximum statutory tax rate or such lesser amount as is necessary to avoid liability accounting treatment. For purposes of share withholding, the Fair Market Value of withheld shares shall be determined in the same manner as the value of Stock includible in income of the grantees. The Administrator may also require the Company's tax withholding obligation to be satisfied, in whole or in part, by an arrangement whereby a certain number of shares of Stock issued pursuant to any Award are immediately sold and proceeds from such sale are remitted to the Company in an amount that would satisfy the withholding amount due.

SECTION 14. SECTION 409A AWARDS

Awards are intended to be exempt from Section 409A to the greatest extent possible and to otherwise comply with Section 409A. The Plan and all Awards shall be interpreted in accordance with such intent. To the extent that any Award is determined to constitute "nonqualified deferred compensation" within the meaning of Section 409A (a "409A Award"), the Award shall be subject to such additional rules and requirements as specified by the Administrator from time to time in order to comply with Section 409A. In this regard, if any amount under a 409A Award is payable upon a "separation from service" (within the meaning of Section 409A) to a grantee who is then considered a "specified employee" (within the meaning of Section 409A), then no such payment shall be made prior to the date that is the earlier of (i) six months and one day after the grantee's separation from service, or (ii) the grantee's death, but only to the extent such delay is necessary to prevent such payment from being subject to interest, penalties and/or additional tax imposed pursuant to Section 409A. Further, the settlement of any 409A Award may not be accelerated except to the extent permitted by Section 409A.

SECTION 15. TERMINATION OF SERVICE RELATIONSHIP, TRANSFER, LEAVE OF ABSENCE, ETC.

(a) Termination of Service Relationship. If the grantee's Service Relationship is with an Affiliate and such Affiliate ceases to be an Affiliate, the grantee shall be deemed to have terminated his or her Service Relationship for purposes of the Plan.

(b) For purposes of the Plan, the following events shall not be deemed a termination of a Service Relationship:

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- (i) a transfer to the employment of the Company from an Affiliate or from the Company to an Affiliate, or from one Affiliate to another; or
- (ii) an approved leave of absence for military service or sickness, or for any other purpose approved by the Company, if the employee's right to re-employment is guaranteed either by a statute or by contract or under the policy pursuant to which the leave of absence was granted or if the Administrator otherwise so provides in writing.

### SECTION 16. AMENDMENTS AND TERMINATION

The Board may, at any time, amend or discontinue the Plan and the Administrator may, at any time, amend or cancel any outstanding Award for the purpose of satisfying changes in law or for any other lawful purpose, but no such action shall materially and adversely affect rights under any outstanding Award without the holder's consent. Except as provided in Section 3(b) or 3(c), without prior stockholder approval, in no event may the Administrator exercise its discretion to reduce the exercise price of outstanding Stock Options or Stock Appreciation Rights or effect repricing through cancellation and re-grants or cancellation of Stock Options or Stock Appreciation Rights in exchange for cash or other Awards. To the extent required under the rules of any securities exchange or market system on which the Stock is listed, to the extent determined by the Administrator to be required by the Code to ensure that Incentive Stock Options granted under the Plan are qualified under Section 422 of the Code, Plan amendments shall be subject to approval by Company stockholders. Nothing in this Section 16 shall limit the Administrator's authority to take any action permitted pursuant to Section 3(b) or 3(c).

### SECTION 17. STATUS OF PLAN

With respect to the portion of any Award that has not been exercised and any payments in cash, Stock or other consideration not received by a grantee, a grantee shall have no rights greater than those of a general creditor of the Company unless the Administrator shall otherwise expressly determine in connection with any Award or Awards. In its sole discretion, the Administrator may authorize the creation of trusts or other arrangements to meet the Company's obligations to deliver Stock or make payments with respect to Awards hereunder, provided that the existence of such trusts or other arrangements is consistent with the foregoing sentence.

### SECTION 18. GENERAL PROVISIONS

(a) No Distribution. The Administrator may require each person acquiring Stock pursuant to an Award to represent to and agree with the Company in writing that such person is acquiring the shares without a view to distribution thereof.

(b) Issuance of Stock. To the extent certificated, stock certificates to grantees under this Plan shall be deemed delivered for all purposes when the Company or a stock transfer agent of the Company shall have mailed such certificates in the United States mail, addressed to the grantee, at the grantee's last known address on file with the Company. Uncertificated Stock shall be deemed delivered for all purposes when the Company or a Stock transfer agent of the Company shall have given to the grantee by electronic mail (with proof of receipt) or by United States mail, addressed to the grantee, at the grantee's last known address on file with the Company, notice of issuance and recorded the issuance in its records (which may include electronic "book entry" records). Notwithstanding anything herein to the contrary, the Company shall not be required to issue or deliver any evidence of book entry or certificates evidencing shares of Stock pursuant to the exercise or settlement of any Award, unless and until the Administrator has determined, with advice of counsel (to the extent the Administrator deems such advice necessary or advisable), that the issuance and delivery is in compliance with all applicable laws, regulations of governmental authorities and, if applicable, the requirements of any exchange on which the shares of Stock are listed, quoted or traded. Any Stock issued pursuant to the Plan shall be subject to any stop-transfer orders and other restrictions as the Administrator deems necessary or advisable to comply with federal, state or foreign jurisdiction, securities or other laws, rules and quotation system on which the Stock is listed, quoted or traded. The Administrator may place legends on any Stock certificate or notations on any book entry to reference restrictions applicable to the Stock. In addition to the terms and conditions provided herein, the Administrator may require that an individual make such reasonable covenants, agreements, and representations as the Administrator, in its discretion, deems necessary or advisable in order to comply with any such laws, regulations, or requirements. The Administrator shall have the right to require any individual to comply with any timing or other restrictions with respect to the settlement or exercise of any Award, including a window-period limitation, as may be imposed in the discretion of the Administrator.

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(c) Stockholder Rights. Until Stock is deemed delivered in accordance with Section 18(b), no right to vote or receive dividends or any other rights of a stockholder will exist with respect to shares of Stock to be issued in connection with an Award, notwithstanding the exercise of a Stock Option or any other action by the grantee with respect to an Award.

(d) Other Compensation Arrangements; No Employment Rights. Nothing contained in this Plan shall prevent the Board from adopting other or additional compensation arrangements, including trusts, and such arrangements may be either generally applicable or applicable only in specific cases. The adoption of this Plan and the grant of Awards do not confer upon any employee any right to continued employment with the Company or any Subsidiary.

(e) Trading Policy Restrictions. Option exercises and other Awards under the Plan shall be subject to the Company's insider trading policies and procedures, as in effect from time to time.

(f) Clawback Policy. Awards under the Plan shall be subject to the Company's clawback policy, as in effect from time to time.

SECTION 19. EFFECTIVE DATE OF PLAN

This Plan shall become effective upon stockholder approval in accordance with applicable state law, the Company's bylaws and articles of incorporation, and applicable stock exchange rules. No grants of Stock Options and other Awards may be made hereunder after the tenth anniversary of the Effective Date and no grants of Incentive Stock Options may be made hereunder after the tenth anniversary of the date the Plan is approved by the Board.

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SECTION 20. GOVERNING LAW

This Plan and all Awards and actions taken thereunder shall be governed by, and construed in accordance with, the General Corporation Law of the State of Delaware as to matters within the scope thereof, and as to all other matters shall be governed by and construed in accordance with the internal laws of the State of North Carolina, applied without regard to conflict of law principles.

DATE APPROVED BY BOARD OF DIRECTORS:

June 7, 2019

DATE APPROVED BY STOCKHOLDERS:

**APPENDIX B**

CERTIFICATE OF AMENDMENT TO RESTATED CERTIFICATE OF INCORPORATION OF  
BIODELIVERY SCIENCES INTERNATIONAL, INC.

BioDelivery Sciences International, Inc. (the "Corporation"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "DGCL"), does hereby certify:

1. Pursuant to Section 242 of the DGCL, this Certificate of Amendment to Restated Certificate of Incorporation (this "Amendment") amends the provisions of the Restated Certificate of Incorporation of the Corporation (the "Certificate").

2. This Amendment has been approved and duly adopted by the Corporation's Board of Directors and stockholders in accordance with the provisions of Section 242 of the DGCL.

3. The Certificate is hereby amended as follows:

The first paragraph of Article FIFTH is hereby amended and restated in its entirety to read as set forth below:

"FIFTH: The total number of shares of capital stock which the Corporation shall have authority to issue is 180,000,000 shares, consisting of 175,000,000 (One-Hundred Seventy-Five Million) shares of common stock, each of par value one-thousandths of one cent (\$0.001) (the "Common Stock"), and 5,000,000 (Five Million) shares of preferred stock, each of par value one-thousandths of one cent (\$0.001) (the "Preferred Stock")."

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**IN WITNESS WHEREOF**, the undersigned authorized officer of the Corporation has executed this Certificate of Amendment to Restated Certificate of Incorporation as of July [●], 2019.

**BIODELIVERY SCIENCES INTERNATIONAL, INC.**

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Herm Cukier  
Chief Executive Officer