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

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

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

**IOVANCE BIOTHERAPEUTICS, INC.**

(Name of Registrant as Specified in Its Charter)

Payment of Filing Fee (check the appropriate box);

No fee required.

Fee computed on table below per Exchange Act Rules 14a(i)(1) and 0-11.

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

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

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

(4) Proposed maximum aggregate value of transaction:

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Fee paid previously with preliminary materials.

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

(1) Amount Previously Paid:

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

(3) Filing Party:

(4) Date Filed:

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ADVANCING IMMUNO-ONCOLOGY

999 Skyway Road, Suite 150  
San Carlos, California 94070

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS  
To Be Held at 9:00 a.m. Eastern Daylight Savings Time on Monday, June 10, 2019

Dear Stockholders of Iovance Biotherapeutics, Inc.:

The 2019 Annual Meeting of Stockholders (the "Annual Meeting") of Iovance Biotherapeutics, Inc., a Delaware corporation, will be held on Monday, June 10, 2019 at 9:00 a.m. Eastern Time at the offices of DLA Piper LLP (US), 1251 6th Avenue, New York, New York 10020, for the following purposes, as more fully described in the accompanying proxy statement:

1. To elect six directors named in the proxy statement accompanying this notice to serve until the 2020 Annual Meeting of Stockholders;
2. To approve, by non-binding advisory vote, the compensation of our named executive officers;
3. To approve an amendment to our Certificate of Incorporation, as amended, to increase the number of authorized shares of our common stock from 150,000,000 shares to 300,000,000 shares; and
4. To ratify the appointment of Marcum LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2019.

We will also consider and act upon other business as may properly come before the Annual Meeting or any adjournments or postponements thereof.

Our Board of Directors has fixed the close of business on April 18, 2019 as the record date for the Annual Meeting. Only stockholders of record on April 18, 2019 are entitled to notice of and to vote at the Annual Meeting. Further information regarding voting rights and the matters to be voted upon is presented in the accompanying proxy statement.

**This proxy statement and our 2018 Annual Report can be accessed directly at the following internet address:  
<http://www.cstproxy.com/iovance/2019>.**

YOUR VOTE IS IMPORTANT. Whether or not you plan to attend the Annual Meeting, we urge you to submit your vote via the internet, telephone or mail.

We appreciate your continued support of Iovance Biotherapeutics, Inc. and look forward to either greeting you personally at the Annual Meeting or receiving your proxy.

By order of the Board of Directors

**Maria Fardis, Ph.D.**  
President and Chief Executive Officer  
April 30, 2019

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PROXY STATEMENT  
FOR 2019 ANNUAL MEETING OF STOCKHOLDERS  
To Be Held at 9:00 a.m. Eastern Daylight Savings Time on Monday, June 10, 2019

This proxy statement and the enclosed form of proxy are furnished by Iovance Biotherapeutics, Inc., a Delaware corporation (“we,” “our,” “us,” or the “Company”), in connection with the solicitation of proxies by our Board of Directors for use at our 2019 Annual Meeting of Stockholders, and any postponements, adjournments or continuations thereof (the “Annual Meeting”). The Annual Meeting will be held on Monday, June 10, 2019 at 9:00 a.m. Eastern Daylight Savings Time, at the offices of DLA Piper LLP (US), 1251 6th Avenue, New York, New York 10020. The Notice of Internet Availability of Proxy Materials (the “Notice”) containing instructions on how to access this proxy statement and our 2018 Annual Report is first being mailed on or about May 1, 2019 to all stockholders entitled to vote at the Annual Meeting.

**IMPORTANT NOTICE REGARDING THE INTERNET AVAILABILITY OF PROXY MATERIALS FOR THE ANNUAL MEETING:**  
*This proxy statement, the accompanying proxy card or voting instruction card and our 2018 Annual Report are also available at <http://www.cstproxy.com/iovance/2019>.*

The information provided in the “question and answer” format below is for your convenience only and is merely a summary of the information contained in this proxy statement. You should read this entire proxy statement carefully. Information contained on, or that can be accessed through, our website is not intended to be incorporated by reference into this proxy statement and references to our website address in this proxy statement are inactive textual references only.

**QUESTIONS AND ANSWERS ABOUT THE PROXY MATERIALS AND OUR ANNUAL MEETING**

**What matters am I voting on at the Annual Meeting?**

You will be voting:

- To elect six directors to serve until the 2020 Annual Meeting of Stockholders;
  - To approve, by non-binding advisory vote, the compensation of our named executive officers;
  - To approve an amendment to our Certificate of Incorporation, as amended (the “Charter”), to increase the number of authorized shares of our common stock from 150,000,000 shares to 300,000,000 shares;
  - To ratify the appointment of Marcum LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2019; and
  - Upon any other business as may properly come before the Annual Meeting.
-

## How does the Board of Directors recommend I vote on these proposals?

Our Board of Directors recommends a vote:

- Proposal No. 1 - “FOR” election of the nominees for directors named in this proxy statement;
- Proposal No. 2 - “FOR” the approval of the compensation of our named executive officers as disclosed in this proxy statement;
- Proposal No. 3 - “FOR” the approval of an amendment to our Charter to increase the number of authorized shares of our common stock from 150,000,000 shares to 300,000,000 shares; and
- Proposal No. 4 - “FOR” the ratification of the appointment of Marcum LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2019.

## Who is entitled to vote?

Holders of our common stock as of the close of business on April 18, 2019 (the “Record Date”) may vote at the Annual Meeting. As of the Record Date, there were 123,514,231 shares of our common stock outstanding. At the Annual Meeting, the stockholders will be entitled to one vote for each share of our common stock held by them on the Record Date. We do not have cumulative voting rights for the election of directors. On the Record Date, 194 shares of our Series A Convertible Preferred Stock (the “Series A Preferred”) were outstanding, which shares of Series A Preferred were convertible into 97,000 shares of common stock, and 5,854,845 shares of our Series B Convertible Preferred Stock (the “Series B Preferred”) were outstanding, which shares of Series B Preferred were convertible into 5,854,845 shares of common stock. However, except as otherwise required by law, the holders of shares of Series A Preferred and Series B Preferred do not have the right to vote on matters that come before the stockholders. Accordingly, the holders of the Series A Preferred and Series B Preferred do not have the right to vote at the Annual Meeting in their capacities as holders of preferred stock.

*Registered Stockholders.* If shares of our common stock are registered directly in your name with our transfer agent, you are considered the stockholder of record with respect to those shares, and the Notice was provided to you directly by us. As the stockholder of record, you have the right to grant your voting proxy directly to the individuals listed on the proxy card or to vote in person at the Annual Meeting.

*Street Name Stockholders.* If shares of our common stock are held on your behalf in a stock brokerage account or by a bank or other nominee, you are considered the beneficial owner of those shares held in “street name,” and the Notice was forwarded to you by your broker or nominee, who is considered the stockholder of record with respect to those shares. As the beneficial owner, you have the right to direct your broker or nominee how to vote your shares. Beneficial owners are also invited to attend the Annual Meeting. However, since a beneficial owner is not the stockholder of record, you may not vote your shares of our common stock in person at the Annual Meeting unless you follow your broker’s procedures for obtaining a legal proxy. If you request a printed copy of our proxy materials by mail, your broker or nominee will provide a voting instruction card for you to use. Throughout this proxy, we refer to stockholders who hold their shares through a broker, bank or other nominee as “street name stockholders.”

## How many votes are needed for approval of each proposal?

The representation, in person or by proxy, of at least a majority of the outstanding shares of common stock entitled to vote at the Annual Meeting is necessary to constitute a quorum for the transaction of business. Shares represented by proxies pursuant to which votes have been withheld from any nominee for director, or which contain one or more abstentions or broker “non-votes,” are counted as present or represented for purposes of determining the presence or absence of a quorum for the Annual Meeting. A “non-vote” occurs when a broker or other nominee holding shares for a beneficial owner votes on one proposal but does not vote on another proposal because the broker does not have discretionary voting power and has not received instructions from the beneficial owner.

*Election of Directors (Proposal No. 1).* Directors are elected by a plurality of the votes cast, in person or by proxy, at the Annual Meeting. The six nominees who receive the highest number of affirmative votes of the shares present or represented and voting on the election of directors at the Annual Meeting will be elected to our Board of Directors. Shares present or represented and not so marked as to withhold authority to vote for a particular nominee will be voted in favor of a particular nominee and will be counted toward such nominee's achievement of a plurality. Shares present at the meeting or represented by proxy where the stockholder properly withholds authority to vote for such nominee in accordance with the proxy instructions and broker "non-votes" will not be counted toward such nominee's achievement of plurality.

*Advisory Vote on the Compensation of our Named Executive Officers (Proposal No. 2).* For the advisory vote on the compensation of our named executive officers, the affirmative vote of the majority of shares present, in person or represented by proxy, and voting on that matter is required for approval. Shares voted to abstain are included in the number of shares present or represented and voting on each matter. Shares subject to broker "non-votes" are considered to be not entitled to vote for the particular matter and have the practical effect of reducing the number of affirmative votes required to achieve a majority for such matter by reducing the total number of shares from which the majority is calculated.

*Approval of an Amendment to our Certificate of Incorporation, as Amended, to Increase the Number of Authorized Shares of our Common Stock (Proposal No. 3).* For the approval of an amendment to our Charter to increase the number of authorized shares of our common stock from 150,000,000 shares to 300,000,000 shares, the affirmative vote of the majority of shares outstanding is required for approval. Brokers are authorized to vote without instructions on this proposal. Abstentions are included in the shares present at the Meeting for purposes of determining whether a quorum is present and are counted as a vote against for purposes of determining whether the foregoing proposal is approved.

*Ratification of Independent Accountants (Proposal No. 4).* For the ratification of the appointment of Marcum LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018, an affirmative vote of a majority of the shares present, in person or represented by proxy, and voting on such matter is required for approval. Shares voted to abstain are included in the number of shares present or represented and voting. Shares subject to broker "non-votes" are considered to be not entitled to vote for the particular matter and have the practical effect of reducing the number of affirmative votes required to achieve a majority by reducing the total number of shares from which the majority is calculated.

*Other Matters.* The Board of Directors knows of no other matters to be presented at the Annual Meeting. If any other matter should be presented at the Annual Meeting upon which a vote properly may be taken, the persons named on the enclosed proxy will have discretionary authority to vote the shares represented by such proxies in accordance with their best judgment.

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

If you are a stockholder of record, there are four ways to vote:

- *By Internet* — You may submit your proxy from any location in the world by following the internet voting instructions on the proxy card or voting instruction card sent to you.
- *By Telephone* — You may submit your proxy by following the telephone voting instructions on the proxy card or voting instruction card sent to you.
- *By Mail* — You may do this by marking, dating and signing your proxy card or, for shares held in street name, the voting instruction card provided to you by your broker or nominee, and mailing it in the enclosed, self-addressed, postage prepaid envelope. No postage is required if mailed in the United States. *Please note that you will be mailed a printed proxy card or printed voting instruction card only if you request that such printed materials be sent to you by following the instructions in the Notice of Internet Availability for requesting paper copies of the proxy materials.*

· *In Person* — You may vote by written ballot at the Annual Meeting, if you are a stockholder of record.

If you are a street name stockholder, you will receive voting instructions from your broker, bank or other nominee. You must follow the voting instructions provided by your broker, bank or other nominee in order to instruct your broker, bank or other nominee on how to vote your shares. Street name stockholders should generally be able to vote by returning an instruction card, or by telephone or on the internet. However, the availability of telephone and internet voting will depend on the voting process of your broker, bank or other nominee. As discussed above, if you are a street name stockholder, you may not vote your shares in person at the Annual Meeting unless you obtain a legal proxy from your broker, bank or other nominee.

### **Can I change my vote?**

Yes. If you are a stockholder of record, you can change your vote or revoke your proxy any time before the Annual Meeting by:

- entering a new vote by internet;
- returning a later-dated proxy card;
- notifying the Corporate Secretary, in writing, at Iovance Biotherapeutics, Inc., 999 Skyway Road, Suite 150, San Carlos, California 94070;  
or
- completing a written ballot at the Annual Meeting.

If you are a street name stockholder, your broker, bank or other nominee can provide you with instructions on how to change your vote.

### **What is the effect of giving a proxy?**

Proxies are solicited by and on behalf of our Board of Directors. Maria Fardis, Ph.D., and Timothy E. Morris have been designated as proxies by our Board of Directors. When proxies are properly dated, executed and returned, the shares represented by such proxies will be voted at the Annual Meeting in accordance with the instructions of the stockholder. If no specific instructions are given, however, the shares will be voted in accordance with the recommendations of our Board of Directors as described above. If any matters not described in this proxy statement are properly presented at the Annual Meeting, the proxy holders will use their own judgment to determine how to vote the shares. If the Annual Meeting is adjourned, the proxy holders can vote the shares on the new Annual Meeting date as well, unless you have properly revoked your proxy instructions, as described above.

### **Why did I receive a Notice of Internet Availability of Proxy Materials instead of a full set of proxy materials?**

In accordance with the rules of the Securities and Exchange Commission (“SEC”), we have elected to furnish our proxy materials, including this proxy statement and our annual report, primarily via the internet. The Notice containing instructions on how to access our proxy materials is first being mailed on or about May 1, 2019 to all stockholders entitled to vote at the Annual Meeting. Stockholders may request to receive all future proxy materials in printed form by mail or electronically by e-mail by following the instructions contained in the Notice. We encourage stockholders to take advantage of the availability of our proxy materials on the internet to help reduce the environmental impact of our annual meetings of stockholders.

**How are proxies solicited for the Annual Meeting?**

Our Board of Directors is soliciting proxies for use at the Annual Meeting. All expenses associated with this solicitation will be borne by us. We will reimburse brokers or other nominees for reasonable expenses that they incur in sending our proxy materials to you if a broker or other nominee holds shares of our common stock on your behalf.

**How may my brokerage firm or other intermediary vote my shares if I fail to provide timely directions?**

Brokerage firms and other intermediaries holding shares of our common stock in street name for customers are generally required to vote such shares in the manner directed by their customers. In the absence of timely directions, your broker will have discretion to vote your shares on our two “routine” matters: the proposal to approve an amendment to our to increase the number of authorized shares of our common stock from 150,000,000 shares to 300,000,000 shares, and the proposal to ratify the appointment of Marcum LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2019. Your broker will not have discretion to vote on the election of directors or any of the other proposals, which are “non-routine” matters, absent direction from you.

**Who will bear the cost of soliciting votes for the Annual Meeting?**

We will bear all expenses of this solicitation, including the cost of preparing and mailing these proxy materials. We may reimburse brokerage firms, custodians, nominees, fiduciaries and other persons representing beneficial owners of common stock for their reasonable expenses in forwarding solicitation material to such beneficial owners. Directors, officers and employees of our Company may also solicit proxies in person or by other means of communication. Such directors, officers and employees will not be additionally compensated but may be reimbursed for reasonable out-of-pocket expenses in connection with such solicitation. We may engage the services of a professional proxy solicitation firm to aid in the solicitation of proxies from certain brokers, bank nominees and other institutional owners. Our costs for such services, if retained, will not be significant. You are responsible for any internet access charges you may incur in connection with viewing our proxy materials or voting over the internet.

**Is my vote confidential?**

Proxy instructions, ballots, and voting tabulations that identify individual stockholders are handled in a manner that protects your voting privacy. Your vote will not be disclosed either within our Company or to third parties, except as necessary to meet applicable legal requirements, to allow for the tabulation of votes and certification of the vote, or to facilitate a successful proxy solicitation.

**Where can I find the voting results of the Annual Meeting?**

We will announce preliminary voting results at the Annual Meeting. We will also disclose voting results on a Current Report on Form 8-K that we will file with the SEC within four business days after the Annual Meeting. If final voting results are not available to us in time to file a Current Report on Form 8-K within four business days after the Annual Meeting, we will file a Current Report on Form 8-K to publish preliminary results and will provide the final results in an amendment to this Current Report on Form 8-K as soon as they become available.



**I share an address with another stockholder, and we received only one paper copy of the proxy materials. How may I obtain an additional copy of the proxy materials?**

We have adopted a procedure called “householding,” which the SEC has approved. Under this procedure, we deliver a single copy of the Notice and, if applicable, our proxy materials to multiple stockholders who share the same address unless we have received contrary instructions from one or more of the stockholders. This procedure reduces our printing costs, mailing costs, and fees, and is also environmentally friendly. Stockholders who participate in householding will continue to be able to access and receive separate proxy cards. Upon written or oral request, we will deliver promptly a separate copy of the Notice and, if applicable, our proxy materials to any stockholder at a shared address to which we delivered a single copy of any of these materials. To receive a separate copy, or, if a stockholder is receiving multiple copies, to request that we only send a single copy of the Notice and, if applicable, our proxy materials, such stockholder may contact us at the following address:

Iovance Biotherapeutics, Inc.  
Attention: Corporate Secretary  
999 Skyway Road, Suite 150  
San Carlos, California 94070

Stockholders who beneficially own shares of our common stock held in street name may contact their brokerage firm, bank, broker-dealer or other similar organization to request information about householding.

**What is the deadline to propose actions for consideration at next year’s Annual Meeting of Stockholders or to nominate individuals to serve as directors?**

Stockholders may present proper proposals for inclusion in our proxy statement and for consideration at the next Annual Meeting of Stockholders by submitting their proposals in writing to our Secretary in a timely manner. For a stockholder proposal to be considered for inclusion in our proxy statement for our 2020 Annual Meeting of Stockholders, our Corporate Secretary must receive the written proposal at our principal executive offices not later than December 26, 2019, which is 120 days prior to the first anniversary of the mailing date of this proxy. In addition, stockholder proposals must comply with the requirements of Rule 14a-8 regarding the inclusion of stockholder proposals in company-sponsored proxy materials. Stockholder proposals should be addressed to:

Iovance Biotherapeutics, Inc.  
Attention: Corporate Secretary  
999 Skyway Road, Suite 150  
San Carlos, California 94070

In addition, our bylaws establish an advance notice procedure for stockholders who wish to present certain matters before an Annual Meeting of Stockholders. In general, nominations for the election of directors may be made by our board of directors or any committee thereof or any stockholder, who is a stockholder of record on the date of the giving of such notice and on the record date for the determination of stockholders entitled to vote at such meeting, who is entitled to vote at such meeting and who has delivered Timely Notice (as defined below) to our Corporate Secretary, which notice must contain specified information concerning the nominees and concerning the stockholder proposing such nominations, as specified in our bylaws.

Our bylaws also provide that the only business that may be conducted at an annual meeting is business that is (1) specified in the notice of meeting (or any supplement thereto) given by or at the direction of our Board of Directors, (2) otherwise properly brought before the meeting by or at the direction of our Board of Directors (or any committee thereto) or (3) properly brought before the meeting by a stockholder who has delivered Timely Notice (as defined below) to our Corporate Secretary.

“Timely Notice” is defined in our amended and restated bylaws as that date which is not less than 90 days nor more than 120 days prior to the one-year anniversary of the previous year’s Annual Meeting of Stockholders. As a result, in order for a stockholder to bring an item of business before the 2020 Annual Meeting of Stockholders, that item must be provided to our Corporate Secretary between February 11, 2020 and March 12, 2020 in accordance with the applicable provisions of our bylaws.

You may recommend candidates to our Board of Directors for consideration by our nominating and governance committee by following the procedures set forth below in “Board of Directors and Corporate Governance — Director Nominations Process — *Nomination of Directors by Stockholders*.”

If a stockholder who has notified us of his, her or its intention to present a proposal at an annual meeting does not appear to present his, her or its proposal at such annual meeting, we are not required to present the proposal for a vote at such annual meeting.

**How may I obtain a copy of the bylaw provisions regarding stockholder proposals and director nominations?**

A copy of the full text of the bylaw provisions discussed above may be obtained by writing to our Corporate Secretary. In addition, this and other information about our Company may be obtained at the web site maintained by the SEC that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the SEC’s website is [www.sec.gov](http://www.sec.gov). All notices of proposals by stockholders, whether or not included in our proxy materials, should be sent to our principal executive offices, Attention: Corporate Secretary.

**PROPOSAL NO. 1 - ELECTION OF DIRECTORS**

The following is information concerning the nominees for election as directors. We believe that each nominee will be able to serve as a director. In the event that a nominee is unable to serve, the proxy holder will vote the proxies for such other nominee as he or she may determine. Each nominee, currently serves as a director of the Company. The term of office of each director will expire at next year’s Annual Meeting of Stockholders.

**Nominees**

Our Nominating and Corporate Governance Committee has recommended, and our Board of Directors has approved, as nominees the following individuals for election as directors at the Annual Meeting.

Iain Dukes, D. Phil.  
Maria Fardis, Ph.D.  
Ryan Maynard  
Merrill A. McPeak  
Wayne P. Rothbaum  
Michael Weiser, M.D., Ph.D.

For information concerning the nominees, please see the section titled “Board of Directors and Corporate Governance” below.

If you are a stockholder of record and you sign your proxy card or vote by telephone or over the internet but do not give instructions with respect to the voting of directors, your shares will be voted “FOR” the re-election of the above-mentioned nominees.

We expect that all of the foregoing nominees will accept such nomination; however, in the event that a director nominee is unable or declines to serve as a director at the time of the Annual Meeting, the proxies will be voted for any nominee who shall be designated by our Board of Directors to fill such vacancy. If you are a street name stockholder and you do not give voting instructions to your broker or nominee, your broker will leave your shares unvoted on this matter.

## BOARD OF DIRECTORS AND CORPORATE GOVERNANCE

Our business affairs are managed under the direction of our Board of Directors, which is currently composed of six members. The following table sets forth the names, ages as of the Record Date, and certain other information for the six directors whose terms are expiring at the annual meeting and who are also nominees for election as a director at the Annual Meeting.

<b>Directors with Terms expiring at the Annual Meeting/Nominees</b>	<b>Age</b>	<b>Position</b>	<b>Director Since</b>
Iain Dukes, D.Phil.	60	Chairman of the Board	2016
Maria Fardis, Ph.D.	51	President, Chief Executive Officer and Director	2016
Ryan Maynard	49	Director	2015
Merrill A. McPeak	83	Director	2011
Wayne Rothbaum	51	Director	2016
Michael Weiser, M.D., Ph.D.	56	Director	2018

### Nominees for Director

Iain Dukes, D. Phil. Dr. Dukes joined our Board of Directors on August 4, 2016 and was appointed Chairman of the Board on August 16, 2016. Dr. Dukes currently is a Venture Partner at OrbiMed Advisors LLC. He previously served as Senior Vice President and Head of Business Development and Licensing for Merck Research Laboratories through May 2016. He joined Merck in August 2013. Prior to joining Merck, Dr. Dukes was Vice President of External Research & Development at Amgen, from August 2010 to August 2013. From 2007 to 2010, Dr. Dukes was the President and Chief Executive Officer, and a member of the board of directors, of Essentialis Therapeutics, a clinical stage biotechnology company focused on the development of breakthrough medicines for the treatment of rare metabolic diseases. From 2000 to 2007, Dr. Dukes was Vice President of Scientific and Technology Licensing at GlaxoSmithKline, and prior to that, from 1990 to 1999, he held various positions at Glaxo Wellcome, including Head of Exploratory Development for Metabolic and Urogenital Diseases and Head of Ion Channel Drug Discovery Group. Dr. Dukes holds Master of Jurisprudence and Doctorate of Philosophy degrees from the University of Oxford, a Master of Science degree in Cardiovascular Studies from the University of Leeds and a Bachelor of Science degree in Pharmacology from the University of Bath.

Our Board of Directors believes that Dr. Dukes is highly qualified to serve as a member of the Board of Directors because of his extensive experience in the pharmaceutical industry, including in senior management roles.

Maria Fardis, Ph.D. Dr. Fardis joined the Company as President and Chief Executive Officer on June 1, 2016 and was appointed to our Board of Directors on June 7, 2016. Dr. Fardis served as the Chief Operating Officer of Acerta Pharma, LLC, a clinical-stage biopharmaceutical company, from January 2015 to March 2016. From 2011 to 2014, she worked at Pharmacyclics, Inc., which she joined as Senior Director of Global Project Management, and was promoted to Vice President, Alliance and Global Project Management in December 2011, was appointed Executive Vice President, Alliances and Operations in September 2012 and was appointed Chief of Oncology Operations and Alliances in March 2013. Prior to joining Pharmacyclics, from August 2001 to April 2011, Dr. Fardis held increasingly senior positions in Medicinal Chemistry and the project and portfolio management department at Gilead Sciences, Inc., most recently serving as Associate Director, Project and Portfolio Management. Dr. Fardis received her Ph.D. in Organic Chemistry from the University of California, Berkeley and her B.S. summa cum laude, in chemistry from the University of Illinois, Urbana-Champaign. Dr. Fardis holds an M.B.A., with highest honors, from Golden Gate University.

Our Board of Directors believes that Dr. Fardis is highly qualified to serve as a member of the Board of Directors because of her experience both as an executive of biopharmaceutical companies and as a scientist.

Ryan Maynard. Mr. Maynard joined our Board of Directors in February 2015. Mr. Maynard was appointed as the Chief Financial Officer of Blade Therapeutics, Inc., a privately held biotechnology company in February of 2018. Until December 2017, he was the Executive Vice President and Chief Financial Officer of Rigel Pharmaceuticals, Inc., a public commercial-stage drug development company. He joined Rigel in September 2001 as Corporate Controller and was appointed as an Assistant Secretary in October 2001. In June 2006 he became Rigel's Vice President of Finance and Acting Chief Financial Officer and became its Vice President and Chief Financial Officer in January 2007. Prior to joining Rigel, Mr. Maynard was Corporate Controller and Director of Finance and Accounting for Personify, Inc., an e-commerce software company, from November 1999 to April 2001. From July 1998 to October 1999 he served as Controller of General Magic, Inc. and from July 1994 to June 1998 he held various positions at Siliconix, Inc., most recently as Senior Finance Manager. He previously worked at Ernst & Young LLP. Mr. Maynard holds a B.S. in Commerce - Accounting from Santa Clara University.

Our Board of Directors believes that Mr. Maynard is highly qualified to serve as a member of the Board of Directors because of his extensive experience as the Chief Financial Officer of a publicly traded pharmaceutical company, as well as his expertise in auditing and financial and other related matters pertaining to the operation of publicly traded pharmaceutical companies.

Merrill A. McPeak. General (Ret.) McPeak joined our Board of Directors in July 2011. From February 2015 until the appointment of Dr. Dukes as our new Chairman, General McPeak was the lead director on our Board of Directors. General McPeak also served as our unpaid, interim Chief Executive Officer from January 14, 2013 until July 24, 2013. General McPeak currently is the President of McPeak and Associates, a consulting firm that he founded in 1995. He has previously served as a director of several public companies, including Tektronix, Inc., Trans World Airlines, Inc., and ECC International Corp., where he was for many years the chairman of the board. General McPeak has served as a director of Research Solutions, Inc., a company engaged in developing systems to reuse published content, since November 2010, and of Aerojet Rocketdyne, an aerospace and defense contractor, since March 2013. He also served on the board of directors of Lilis Energy, an independent oil and gas producer, from January 2015 to April 2018. He was Chairman of the Board of Coast Plating, Inc., a privately held turnkey provider of metal processing and metal finishing services, from January 2009 until the company was acquired by Trive Capital and renamed Valence Surface Technologies, now the country's largest independently owned aerospace and defense metal processing company. He continues to be a director of that company. He helped found, and from December 2003 to February 2012 was Chairman of the Board of EthicsPoint, Inc., a provider of risk management and compliance software-as-a-service that was acquired in 2012 and restyled Navex Global. General McPeak remained a member of the board of directors of Navex Global until that company was sold in 2014.

From 1990 until his retirement from active military service in late 1994, General McPeak was Chief of Staff of the United States Air Force. As a member of the Joint Chiefs of Staff, General McPeak was a military advisor to the Secretary of Defense and the President of the United States. General McPeak received a Bachelor of Arts degree in economics from San Diego State College and a Master of Science degree in international relations from the George Washington University, and is a member of the Council on Foreign Relations. From July 2010 to December 2017, General McPeak was Chairman of the American Battlefield Monuments Commission.

Our Board of Directors believes that General McPeak is highly qualified to serve as a member of the Board of Directors because of his extensive leadership experience, including his experience in the military and as a director on numerous public and private company boards of directors.

Wayne P. Rothbaum, Mr. Rothbaum joined our Board of Directors on June 7, 2016. Mr. Rothbaum is currently the President of Quogue Capital LLC, a life sciences investment fund he founded in 2001. Beginning in 2012, Mr. Rothbaum served as the co-founder and largest investor of Acerta Pharma, B.V., a Dutch biotech focused on developing selective, covalent small molecules to treat cancer and inflammation. Acerta Pharma was sold to AstraZeneca in February 2016. From February 2013 until its sale in February 2016, Mr. Rothbaum served as the executive chairman of Acerta Pharma. From 1993 until 2001, Mr. Rothbaum led the biotechnology practice at the strategic consulting firm The Carson Group. Mr. Rothbaum graduated Phi Beta Kappa from Binghamton University in 1990 with a dual major in political science and psychology and received his master's degree in international economics from the George Washington University.

Our Board of Directors believes that Mr. Rothbaum is highly qualified to serve as a member of the Board of Directors on the basis of his business background and education, his investment experience as the manager of an investment fund focused on the life sciences industry, and his experience serving in a leadership capacity with other biotechnology companies.

Michael Weiser, M.D., Ph.D. Dr. Weiser joined our Board of Directors in March 2018. He is the founder and has been a principal of Actin Biomed LLC since 2006. Actin Biomed is a healthcare investment firm focused on the discovery and development of novel treatments for unmet medical needs. Prior to joining Actin Biomed, Dr. Weiser was the Director of Research at Paramount BioCapital, Inc., a pharmaceutical development and healthcare investment firm. Dr. Weiser currently serves on the board of directors of Emisphere Technologies, Inc., a pharmaceutical and drug delivery company. Dr. Weiser previously served as the chairman of the board of directors of Chelsea Therapeutics International, Ltd., a development stage pharmaceutical company that was acquired by H. Lundbeck A/S in 2014, and served on the board of directors of Ziopharm Oncology, Inc., a publicly traded biopharmaceutical company focused on immunotherapies in oncology. Dr. Weiser holds a B.A. in Psychology from the University of Vermont, received his M.D. from New York University School of Medicine and completed his Ph.D. in Molecular Neurobiology at Cornell University Medical College.

Our Board of Directors believes that Dr. Weiser is highly qualified to serve as a member of the Board of Directors because of his medical and business background and education, and his investment experience as the manager of an investment fund focused on biotechnology companies.

### **Corporate Governance Highlights at a Glance**

#### **What we do**

- Annually Elected Directors
- Robust Independent Director Role
- Majority of Independent Directors
- Non-Executive Chairperson
- Regular Non-Executive Director Executive Sessions
- Proactive Stockholder Engagement
- Annual Say on Pay Vote

#### **What we do not do**

- No Poison Pill
- No Supermajority Voting Provisions
- No Classified Board

### **Director Nominations Process**

The Nominating and Corporate Governance Committee administers our director nominations process and establishes criteria for Board of Directors member candidates and the process by which candidates for inclusion in our recommended slate of director nominees are selected. The Committee's charter is available under the "Investors" section of our website at [www.iovance.com](http://www.iovance.com), under "Corporate Governance – Governance Highlights."

Minimum Criteria for Board of Directors Members. Under the director nominations process, each Board of Directors candidate must possess at least the following specific minimum qualifications:

- He or she shall be prepared to represent the best interests of all of our stockholders and not just one particular constituency.
- He or she shall be an individual who has demonstrated integrity and ethics in his or her personal and professional life and established a record of professional accomplishment in his or her chosen field.
- Neither the candidate nor any family member (as defined in the Nasdaq Stock Market Rules) or affiliate or associate (each as defined in SEC rules) shall have any material personal, financial or professional interest in any of our current or potential competitors.
- He or she shall be prepared to participate fully in Board of Directors activities, including, if eligible, active membership on at least one committee and attendance at, and active participation in, meetings of the Board of Directors and any committee of which he or she is a member, and not have other personal or professional commitments that would, in the Nominating and Corporate Governance Committee's sole judgment, interfere with or limit his or her ability to do so.

Desirable Qualities and Skills. The Nominating and Corporate Governance Committee also considers it desirable that each candidate should:

- Contribute to the Board of Directors' overall diversity — diversity being broadly construed to mean a variety of opinions, perspectives, personal and professional experiences and backgrounds, as well as other differentiating characteristics.
- Contribute positively to the collaborative culture among Board of Directors members.
- Possess professional and personal experiences and expertise relevant to our goal of being a leading biopharmaceutical company. At this stage of our development, relevant experiences might include, among other things, large biotechnology or pharmaceutical company chief executive officer or senior management experience, senior-level management experience in medical research or clinical development activities in the fields of oncology, immunology or molecular biology within a public company or large university setting, and relevant senior-level expertise in one or more of finance, accounting, sales and marketing, organizational development and public relations.

Internal Process for Identifying Candidates. The Nominating and Corporate Governance Committee has two primary methods for identifying Board of Directors candidates. On a periodic basis, the Nominating and Corporate Governance Committee may solicit suggestions for possible candidates from a number of sources, which may include members of the Board of Directors, our senior executives, individuals personally known to members of the Board of Directors, and independent research by either members of the Board of Directors or our senior executives. The Nominating and Corporate Governance Committee may also use its authority under its Charter to retain at the Company's expense one or more search firms to identify candidates. If a search firm is used, it may be asked to identify possible candidates who meet minimum and desired qualifications; interview and screen candidates, and conduct appropriate background and reference checks; act as a liaison among the Board of Directors, the Nominating and Corporate Governance Committee, and the candidate during the screening and evaluation process; and be available for consultation as needed by the Nominating and Corporate Governance Committee. The Nominating and Corporate Governance Committee has the authority under its Charter to approve such firms' fees and other retention terms.

Nomination of Directors by Stockholders. The Nominating and Corporate Governance Committee will also consider properly submitted stockholder nominations for candidates for membership on the Board of Directors. Any of our stockholders may recommend one or more eligible persons for election as a director at an Annual Meeting of Stockholders if the stockholder provides the recommendation to our Corporate Secretary at our principal executive offices not less than 120 days prior to the anniversary of the date of the proxy statement released to stockholders in connection with the previous year's annual meeting. In the event that we set an annual meeting date that is not within 30 days before or after the date of the immediately preceding annual stockholders meeting, the stockholder's recommendation must be received no later than the close of business on the tenth day following the day on which notice of the date of the annual meeting was mailed or public disclosure of that date was made, whichever occurs first. To be eligible for consideration, a candidate proposed by a stockholder must be independent of the stockholder providing the nomination in all respects, as determined by the Nominating and Corporate Governance Committee or by applicable law, qualify as an "independent director" under the Nasdaq Stock Market Rules and meet the *Minimum Criteria for Board of Directors Members* set forth above.

Evaluation of Candidates. The Nominating and Corporate Governance Committee will consider all candidates identified through the processes described above, and will evaluate each of them, including incumbents, based on the same criteria. If, based on the Nominating and Corporate Governance Committee's or other director's initial evaluation, a candidate continues to be of interest, the Nominating and Corporate Governance Committee Chair or one or more other directors will interview the candidate and communicate the interviewer(s)' evaluation to the other Nominating and Corporate Governance Committee member(s), the Chairman of the Board of Directors, the Chief Executive Officer, and the independent members of the Board of Directors. Later reviews will be conducted by other members of the Nominating and Corporate Governance Committee, the Board of Directors and senior management. Ultimately, background and reference checks will be conducted, and the Nominating and Corporate Governance Committee will meet to finalize its list of recommended candidates for the Board of Directors' consideration.

Timing of the Identification and Evaluation Process. Our fiscal year is the calendar year. The Nominating and Corporate Governance Committee expects generally to meet one or more times to consider, among other things, candidates to be recommended to the Board of Directors for inclusion in our recommended slate of director nominees for the next annual meeting and our Proxy Statement. The Board of Directors usually meets each March or early April and at that meeting approves, among other things, the slate of director nominees to be submitted to and recommended for election by stockholders at the annual meeting, which is typically held in May or June. All candidates, whether identified internally or by a nomination received from a stockholder, who after evaluation are recommended by the Nominating and Corporate Governance Committee and the independent members of the Board of Directors, and approved by the Board of Directors, will be included in our recommended slate of director nominees in our Proxy Statement.

#### **Meetings of the Board of Directors**

The property, affairs and business of our Company are conducted under the supervision and management of our Board of Directors, as called for under the laws of Delaware and our bylaws. Pursuant to our bylaws, our Board of Directors may establish committees of one or more directors from time-to-time, as it deems appropriate.

Our common stock currently is listed on the Nasdaq Global Market. A majority of our directors currently are "independent directors" as defined under the Nasdaq Stock Market Rules, which define an "independent director" as "a person other than an executive officer or employee of the Company or any other individual having a relationship which, in the opinion of the Company's board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director." The definition further provides that, among others, employment of a director by us (or any parent or subsidiary of ours) at any time during the past three years is considered a bar to independence regardless of the determination of our Board of Directors.

Our Board of Directors has determined that, with the exception of Dr. Fardis and Dr. Dukes, for the purposes of serving on our Board of Directors, all of our other directors are “independent” under the Nasdaq Stock Market Rules.

Our Board of Directors held five meetings during the fiscal year ending December 31, 2018. Each director attended at least 75% of the aggregate of the total meetings of the Board of Directors that were held during the portion of the 2018 fiscal year in which he/she served as a director.

### **Executive Sessions**

During the fiscal year ended December 31, 2018, the non-executive directors met in executive session of the Board of Directors on three occasions, the members of the Audit Committee met in executive session on four occasions, the members of the Nominating and Corporate Governance Committee met in executive session on one occasion, and the members of the Compensation Committee met in executive session on two occasions.

### **Committees of The Board of Directors**

Our Board of Directors has a standing Audit Committee, Nominating and Corporate Governance Committee, and Compensation Committee.

Current committee memberships are as follows:

#### Audit Committee

The Audit Committee currently consists of:

Ryan Maynard (Chair)  
Merrill A. McPeak  
Michael Weiser, M.D., Ph.D.

The Audit Committee operates pursuant to a written charter. Among other things, the Audit Committee is responsible for:

- appointing, approving the compensation of, and assessing the independence of our independent registered public accounting firm;
- overseeing the work of our independent registered public accounting firm;
- reviewing and discussing with management and the independent registered public accounting firm our annual and quarterly financial statements and related disclosures;
- monitoring our internal control over financial reporting, disclosure controls and procedures and Code of Business Conduct and Ethics;
- overseeing our internal audit function;



- meeting independently with our internal auditing staff or consultants, independent registered public accounting firm and management;
- reviewing and approving or ratifying any related person transactions;
- periodically reviewing and assessing the adequacy of our insurance programs, including directors' and officers' insurance programs, and recommending any changes to such programs to our Board of Directors; and
- preparing the Audit Committee Report required by SEC rules (which is included on page 16 of this proxy statement).

As of the date of this proxy statement, Mr. Maynard, Dr. Weiser, and General McPeak constitute all of the members of the Audit Committee. All of the members of the Audit Committee are non-employee directors and independent as defined under the Nasdaq Stock Market Rules. Mr. Maynard is a former chief financial officer of a public company, Rigel Pharmaceuticals, Inc., where he served in that role for more than 10 years. Because of his knowledge of financial, audit and accounting matters, our Board of Directors has designated him as the "audit committee financial expert" of the Audit Committee.

The Audit Committee operates pursuant to a written charter, which is available on our website, [www.iovance.com](http://www.iovance.com), under "Corporate Governance – Governance Highlights".

#### Compensation Committee

The Compensation Committee currently consists of:

Michael Weiser, M.D., Ph.D. (Chair)  
 Merrill A. McPeak  
 Wayne P. Rothbaum

The Compensation Committee is responsible for the compensation of our executives and directors. As part of its responsibilities, the Compensation Committee has the following duties and responsibilities:

- Establish annual base salary and annual incentive compensation amounts for executive officers and, based upon discussions with the Chief Executive Officer, annual incentive levels and the operational and any other goals to be met to earn annual and long-term incentive awards.
- Review and evaluate the performance and leadership of the Chief Executive Officer and determine the amounts of annual and any long-term incentive awards and any adjustment to the annual salary and annual incentive compensation amounts based upon such performance and other factors as the Compensation Committee deems appropriate.
- Review with the Chief Executive Officer his/her evaluation of the performance of the other executive officers and determine with the Chief Executive Officer, and either approve or recommend Board of Directors approval of, the amounts of annual and any long-term incentive awards and any adjustments to the annual salary and annual incentive compensation amounts based upon such performance and other factors as the Compensation Committee deems appropriate.
- Review the compensation of non-employee directors and recommend to the Board of Directors, for its approval, the components and amounts of compensation for non-employee directors.

As part of its other responsibilities, the Compensation Committee reviews and approves any reports required by the SEC for inclusion in the annual report and proxy statement, provides general oversight of our compensation structure, and, if deemed necessary, retains and approves the terms of the retention of compensation consultants and other compensation experts. Other specific duties and responsibilities of the Compensation Committee include reviewing the performance of executive officers and overseeing succession planning; reviewing and approving objectives relevant to executive officer compensation; administering our equity-based and incentive compensation plans; and establishing compensation policies and practices for service on our Board of Directors and its committees and for the Chairman of our Board of Directors.

In the Compensation Committee's sole discretion, the Committee has the authority to retain or obtain the advice of a compensation consultant, legal counsel or other advisor after taking into consideration the independence of such compensation consultant, legal counsel or other advisor. Our Compensation Committee requires any compensation consultant, legal counsel or other advisor retained by the Compensation Committee, or who otherwise provides advice to the Compensation Committee, to be independent.

The Compensation Committee is directly responsible for the appointment, compensation, oversight and termination of the work of any compensation consultant, legal counsel or other advisor retained by the Committee. Our Company is responsible for the payment of all reasonable compensation, as determined and approved by the Compensation Committee, that is owed to any compensation consultant, legal counsel or other advisor retained by the Compensation Committee.

Unless prohibited by applicable law, Nasdaq's rules and regulations or our bylaws, the Compensation Committee may delegate to one or more of its members or to our executive officers its authority with respect to compensation determinations for our non-executive officers and employees consistent with applicable law.

Our Board of Directors has granted our Chief Executive Officer the authority to grant options to (i) newly hired non-executive employees, and (ii) non-executive employees as part of our annual performance review. The Compensation Committee has established certain parameters within which non-executive options could be granted by our Chief Executive Officer.

The executive officers of our Company are responsible for maintaining the employee compensation policies for our Company, including ensuring that the policies are sufficiently attractive to retain our Company's existing employees and to incentivize prospective employees. For a description of the processes and procedures used by the Compensation Committee for the consideration and determination of executive and director compensation, see "Executive Compensation-Compensation Discussion and Analysis."

Our Board of Directors has determined that each of the current members of the Compensation Committee is "independent" under the current independence standards of the Nasdaq Stock Market Rules.

#### Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee currently consists of:

Merrill A. McPeak (Chair)  
Michael Weiser, M.D., Ph.D.

The Nominating and Corporate Governance Committee recommends candidates to be nominated for election as directors at our annual meeting, consistent with criteria approved by our Board of Directors; develops and regularly reviews corporate governance principles and related policies for approval by our Board of Directors; oversees the organization of our Board of Directors to discharge its duties and responsibilities properly and efficiently; and sees that proper attention is given and effective responses are made to stockholder concerns regarding corporate governance. The Nominating and Corporate Governance Committee also oversees an annual assessment by the Board of Directors of its performance.

Usually, nominees for election to our Board of Directors are proposed by our existing directors. In identifying and evaluating individuals qualified to become Board of Directors members, our current directors will consider such factors as they deem appropriate to assist in developing a Board of Directors and committees thereof that are diverse in nature and comprised of experienced and seasoned advisors. Our Board of Directors has not adopted a formal policy with regard to the consideration of diversity, other than as may be prescribed by law, when evaluating candidates for election to our Board of Directors. However, our Board of Directors believes that membership should reflect diversity in its broadest sense, but should not be chosen nor excluded based on race, color, gender, national origin or sexual orientation. In this context, our Board of Directors does consider a candidate's experience, education, industry knowledge, history with the Company, independence, and differences of viewpoint when evaluating his or her qualifications for election to our Board of Directors. In evaluating such candidates, our Board of Directors seeks to achieve a balance of knowledge, experience and capability in its composition. In connection with this evaluation, our Board of Directors determines whether to interview the prospective nominee, and if warranted, one or more directors interview prospective nominees in person or by telephone.

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

The Audit Committee provides assistance to our Board of Directors in fulfilling its oversight responsibility to the Company's stockholders, potential stockholders, the investment community, and others relating to our financial statements and the financial reporting process, the systems of internal accounting and financial controls, the internal audit function, the annual independent audit of our financial statements and the ethics programs when established by our management and our Board of Directors. The Audit Committee has the sole authority (subject, if applicable, to stockholder ratification) to appoint or replace the outside auditors and is directly responsible for determining the compensation of the independent auditors. In discharging its oversight role, the Audit Committee is empowered to investigate any matter brought to its attention, with full access to all of our books, records, facilities and personnel, and to retain its own legal counsel and other advisers as it deems necessary or appropriate.

As part of its oversight of our financial statements, the Audit Committee reviewed and discussed with both management and our outside auditors our interim financial statements and annual audited financial statements that are included in our Quarterly Reports on Form 10-Q and Annual Report on Form 10-K, respectively. The Audit Committee held four meetings during the fiscal year ended December 31, 2018, including regular meetings in conjunction with the close of each fiscal quarter, during which the Audit Committee reviewed and discussed the Company's financial statements with management and Marcum LLP. These Audit Committee meetings routinely include executive sessions of the committee, as well as private sessions with Marcum LLP. Our management advised the Audit Committee in each case that all such financial statements were prepared in accordance with accounting principles generally accepted in the United States of America and reviewed significant accounting issues with the Audit Committee. These reviews included discussion with the outside auditors of matters required to be discussed by Auditing Standard 1301, "Communications with Audit Committees," issued by the Public Company Accounting Oversight Board.

During the fiscal year ended December 31, 2018, Marcum LLP served as our independent registered public accounting firm and audited our financial statements for the year ended December 31, 2018. Marcum LLP did not have any financial interest, direct or indirect, in our Company, and did not have any connection with our Company except in its professional capacity as our independent auditors. As discussed in Proposal No. 4 below, the Audit Committee has engaged Marcum LLP as our independent registered public accountants for the fiscal year ending December 31, 2019.

The Audit Committee discussed with Marcum LLP, the auditors of our 2018 annual financial statements, matters relating to its independence, including a review of audit and non-audit fees and the letter and written disclosures made by Marcum LLP to the Audit Committee pursuant to Public Company Accounting Oversight Board (United States) Rule 3526.

Audit and non-audit services to be provided by Marcum LLP are subject to the prior approval of the Audit Committee. In general, the Audit Committee's policy is to grant such approval where it determines that the non-audit services are not incompatible with maintaining the independent registered public accounting firm's independence and there are cost or other efficiencies in obtaining such services from the independent registered public accounting firm as compared to other possible providers.

Taking all of these reviews and discussions into account, the Audit Committee recommended to our Board of Directors that our Board of Directors approve the inclusion of our audited financial statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, which was deemed filed with the SEC on February 28, 2019.

AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

Ryan Maynard (Chair)

Merrill McPeak

Michael Weiser, M.D., Ph.D.

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

Our Board of Directors believes it is important to select the Company's Chairman and Chief Executive Officer in the manner it considers in the best interests of the Company at any given time. Our Board of Directors believes that the Chairman and Chief Executive Officer positions may be filled by one individual or by two different individuals, as determined by our Board of Directors based on circumstances then in existence.

Our Board of Directors is currently comprised of a majority of individuals who are independent from the management of the Company and, assuming that the nominees are elected at the Annual Meeting, four of the six members of our Board of Directors will continue to be independent directors. Our Board of Directors and its committees meet regularly throughout the year to assure that the independent directors are well briefed and informed with regard to the Company's affairs. Each of the independent directors has access to the executive officers of the Company. In this fashion, we seek to maintain well informed, independent directors who are prepared to make informed decisions regarding our business affairs.

Management is responsible for the day-to-day management of risks the Company faces, while our Board of Directors as a whole plays an important role in overseeing the identification, assessment and mitigation of such risks. Our Board of Directors reviews information regarding the Company's finances and operations, as well as the risks associated with each. For example, the oversight of financial risk management lies primarily with the Audit Committee, which is empowered to appoint and oversee our independent auditors, monitor the integrity of our financial reporting processes and systems of internal controls and provide an avenue of communication among our independent auditors, management and our Board of Directors. The Compensation Committee is responsible for overseeing the management of risks relating to the Company's compensation plans and arrangements. In fulfilling its risk oversight responsibility, our Board of Directors, as a whole and acting through any established committees, consults with management to evaluate and, when appropriate, modify our risk management strategies.

**Stockholder Communication with Members of the Board of Directors**

Stockholders who wish to communicate with members of our Board of Directors may contact us at our principal executive office at 999 Skyway Road, Suite 150, San Carlos, California 94070. Written communications specifically marked as a communication for our Board of Directors, or a particular director, except those that are clearly marketing or soliciting materials, will be forwarded unopened to Dr. Dukes, currently the Chairman of our Board of Directors, or to the particular director to whom they are addressed, or presented to the full Board of Directors or the particular director at the next regularly scheduled Board of Directors meeting.

## Board of Directors Members' Attendance at Annual Meetings

It is the Company's policy to have each director and director nominee attend the Annual Meeting of Stockholders. Three of our current directors attended our 2018 Annual Meeting of Stockholders and all of our then-current directors attended our 2017 Annual Meeting of Stockholders.

## Code of Ethics

Our Board of Directors has adopted a code of business conduct and ethics that applies to our officers, directors and employees ("Code of Ethics"). A copy of our Code of Ethics will be furnished without charge to any person upon written request. Requests should be sent to: Secretary, Iovance Biotherapeutics, Inc., 999 Skyway Road, Suite 150, San Carlos, California 94070. Our Code of Ethics is also available under the "Investors" section of our website at [www.iovance.com](http://www.iovance.com), under "Corporate Governance – Governance Highlights".

## Director Compensation

We believe that a combination of cash and equity compensation is appropriate to attract and retain the individuals we desire to serve on our board of directors and that this approach is comparable to the policies of our peer companies. Our cash compensation policies are designed to encourage frequent and active interaction between directors and our executives both during and between formal meetings as well as compensate our directors for their time and effort. Further, we believe it is important to align the long-term interests of our non-employee directors with those of the Company and its stockholders, and that awarding equity compensation to, and thereby increasing ownership of our common stock by, our non-employee directors is an appropriate means to achieve this alignment.

In 2018, our non-employee directors received an annual cash retainer for Board of Directors and committee service in addition to equity compensation, as set forth in further detail in the table below. We expect non-employee director compensation to remain the same in 2019, except that the Chair of the Compensation Committee is expected to receive an additional 15,000 options for his additional service to the Board of Directors.

		<b>Annual Cash Retainer <sup>(1)</sup></b>	<b>Annual Equity Compensation <sup>(2)</sup></b>
Board of Directors membership		\$ 35,000	35,000
Chairman of the Board of Directors (Extra Retainer)		\$ 25,000	35,000
Audit Committee	Chair	\$ 15,000	
	Member	\$ 7,500	
Compensation Committee	Chair	\$ 15,000	
	Member	\$ 7,500	
Nominating and Corporate Governance Committee	Chair	\$ 15,000	
	Member	\$ 7,500	

(1) The annual cash retainers are payable in quarterly installments.

(2) Represents number of shares underlying options granted annually to the directors. These options are exercisable in four equal quarterly installments following the date of grant. If the individual's service with the Board of Directors is terminated before the option expiration date, the options will be exercisable for two years following termination of service (or until the expiration of the option) unless the director is terminated for cause, in which case the options are terminated.

The table below shows the compensation received by each of our non-employee directors during 2018 for serving on the Board of Directors and on its committees. Our non-employee directors do not receive fringe or other benefits.

**Director Compensation Table**

Name	Fees Earned or Paid in Cash		Options Awards (\$) <sup>(1)</sup>		Total (\$)
Iain Dukes, D.Phil.	\$	60,000	\$	992,866	\$ 1,052,866
Wayne Rothbaum <sup>(2)</sup>	\$	-	\$	-	-
Ryan Maynard	\$	50,000	\$	496,433	\$ 546,433
Merrill A. McPeak	\$	65,000	\$	496,433	\$ 561,433
Michael Weiser, M.D., Ph.D.	\$	51,819	\$	1,273,483	\$ 1,325,302

(1) Represents the grant date value computed in accordance with FASB ASC Topic 718. These amounts do not reflect the actual economic value that will be realized by the directors upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.

(2) To date, Mr. Rothbaum has declined to receive any compensation, whether cash or options.

**OUR BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” EACH OF THE NOMINEES NAMED ABOVE.**

**PROPOSAL NO. 2 - ADVISORY VOTE ON THE COMPENSATION OF  
THE COMPANY’S NAMED EXECUTIVE OFFICERS**

Section 951 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the “Dodd-Frank Act”), as set forth in Section 14A(a) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), provides the Company’s stockholders with the opportunity to vote to approve, on an advisory, non-binding basis, the compensation of our named executive officers as disclosed in this proxy statement in accordance with SEC rules. At the 2014 Annual Meeting of Stockholders, our stockholders approved an advisory measure that the stockholders’ advisory votes on executive compensation be held on an annual basis. Our Board of Directors determined to follow our stockholders’ recommendations and to include an annual stockholders advisory vote on the compensation of the Company’s named executive officers. Please refer to the discussion under “Executive Compensation-Compensation Discussion and Analysis” for a description of the compensation of our named executive officers.

We are asking for stockholder approval of the compensation of our named executive officers as disclosed in this proxy statement in accordance with SEC rules, which include the disclosures under “Executive Compensation - Compensation Discussion and Analysis,” the compensation tables and the narrative discussion following the compensation tables. This vote is not intended to address any specific item of compensation, but rather the overall compensation of our named executive officers and the compensation policies and practices described in this proxy statement. Accordingly, we are asking you to approve the following resolution:

RESOLVED, that the compensation paid to the named executive officers of Iovance Biotherapeutics, Inc., as disclosed in the 2019 Proxy Statement of Iovance Biotherapeutics, Inc. pursuant to Item 402 of SEC Regulation S-K, including the compensation tables and narrative discussion, hereby is approved.

This proposal, commonly known as a “Say-on-Pay” proposal, gives our stockholders the opportunity to express their views on our named executive officers’ compensation as a whole. This vote is advisory in nature and therefore is not binding on us, our Compensation Committee or our Board of Directors. Our Board of Directors and our Compensation Committee, however, value the opinions of our stockholders. To the extent there is any significant vote against the named executive officer compensation as disclosed in this proxy statement, we will consider the stockholders’ concerns, and our Compensation Committee will evaluate whether any actions are necessary to address those concerns.

#### Vote Required

The affirmative vote of a majority of the shares of our common stock present in person or represented by proxy and entitled to vote on this proposal at the Annual Meeting is required for advisory approval of the proposal.

### THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THE APPROVAL, ON AN ADVISORY BASIS, OF THE COMPENSATION OF OUR NAMED EXECUTIVE OFFICERS.

#### MANAGEMENT NAMED EXECUTIVE OFFICERS

#### Named Executive Officers

The following table sets forth information regarding our named executive officers as of the Record Date.

Name	Age	Position
Maria Fardis, Ph.D.	51	President and Chief Executive Officer
Timothy E. Morris	57	Chief Financial Officer and Corporate Secretary
Frederick G. Vogt, Ph.D., Esq.	45	General Counsel

Maria Fardis, Ph.D. Dr. Fardis has served as our President and Chief Executive Officer since her appointment effective June 1, 2016. See, “Proposal No. 1: Election of Directors — Nominees for Director,” above.

Timothy E. Morris. Mr. Morris joined the Company as our Chief Financial Officer on August 14, 2017. Mr. Morris thereafter became our principal accounting officer on November 8, 2017. Prior to joining us, Mr. Morris was the Chief Financial Officer and Head of Business Development for AcetRx Pharmaceuticals, Inc., a publicly traded biopharmaceutical company focusing on the development and commercialization of sublingual therapies for the treatment of acute pain, from March 2014 until June 2017. From November 2004 to December 2013, Mr. Morris served as the Chief Financial Officer and Global Head of Corporate Development for VIVUS, Inc., a publicly traded biopharmaceutical company focused on the development and commercialization of therapies to treat obesity and restore sexual health. Prior to joining VIVUS, he served as Chief Financial Officer and Senior Vice President of Finance, Manufacturing and Administration at Questcor Pharmaceuticals, Inc. from September 2001 to November 2004. Prior thereto, Mr. Morris also served as Chief Financial Officer of Interpro Business Solutions, Inc., Utility.com, and RiboGene, Inc. Mr. Morris currently serves as a non-executive director of Humanigen, Inc. Mr. Morris is a Certified Public Accountant (inactive) and received a bachelor’s degree in business with emphasis in accounting from California State University, Chico.

Frederick G. Vogt, Ph.D., Esq. Dr. Vogt joined the Company on September 30, 2016 as our Vice President, Intellectual Property. Dr. Vogt was promoted to General Counsel on July 1, 2017. From May 2013 until he joined the Company, Dr. Vogt practiced law at the international law firm of Morgan, Lewis & Bockius LLP, focusing on intellectual property and business law in the life sciences and representing clients in patent strategy, transactional, and litigation matters. Prior to joining Morgan, Lewis & Bockius LLP, he served in numerous scientific, management, and legal roles of increasing responsibility over a period of 13 years at GlaxoSmithKline plc., where he focused primarily on oncology and cardiovascular drug development. Dr. Vogt holds a B.S. in Chemistry from Ursinus College, a Ph.D. in Chemistry from the Pennsylvania State University, and a J.D. from Temple University. He is admitted to practice in Pennsylvania and before the U.S. Patent and Trademark Office and the U.S. District Court for the Eastern District of Pennsylvania.

## EXECUTIVE COMPENSATION — COMPENSATION DISCUSSION AND ANALYSIS

### Overview of Executive Compensation Program

The Compensation Committee recommends to the Board of Directors for its determination and approval the compensation of our Chief Executive Officer and, based on discussions with our Chief Executive Officer, establishes the compensation of our other named executive officers.

At our 2018 Annual Meeting of Stockholders, on an advisory basis, a majority of the stockholders who voted on this matter approved the compensation of our named executive officers as disclosed in our 2018 proxy statement. Based on our continued engagement with our shareholders as well as the results of the 2018 stockholder advisory vote, the Compensation Committee has determined to follow the stockholders' recommendation and to continue to follow our historical compensation policies and procedures, subject to recommendations received from our independent compensation consulting firm.

This section explains the objectives of our name executive officer compensation program, the compensation decisions we made with respect to compensation for our fiscal year ended December 31, 2018, and the factors we considered in making those decisions, and focuses on the compensation of officers who are listed as our "named executive officers" in this proxy statement. The named executive officers include the following three officers who are currently employed with us:

Maria Fardis, Ph.D., our President and Chief Executive Officer,  
Timothy E. Morris, our Chief Financial Officer, and  
Frederick G. Vogt, Ph.D., Esq., our General Counsel.

### Compensation Policies and Practices at a Glance

#### What we do

- Practice pay-for-performance, under which a significant percentage of our named executive officer compensation is at-risk and may not be realized if corporate and individual performance goals are not achieved
- Set challenging short- and long-term incentive award goals
- Maintain an industry-specific peer group for benchmarking compensation
- Target named executive officer compensation based on market norms
- Offer market-competitive benefits for named executive officers that are consistent with the rest of our employees
- Do not guarantee annual bonus or guarantee salary increases



- Have a pre-established grant date practice for approving executive officers' equity awards
- Maintain an independent Compensation Committee
- Consult with an independent compensation advisor on compensation levels and practices

#### **What we do not do**

- Executives are prohibited from hedging or pledging our stock
- Compensation Committee's independent consultant performs no other work for the Company
- No single trigger severance benefits upon change in control except for our President and Chief Executive Officer
- No excise tax gross-ups for any change-of-control payments
- Re-price stock options
- Provide excessive personal perquisites, such as automobile leases, country club memberships or personal use of aircraft
- Provide supplemental executive retirement plans

#### **Policies and Procedures for the Review and Approval of Transactions with Related Persons**

The Audit Committee's charter requires the Audit Committee to review and approve any related-person transactions. In considering related-person transactions, the Audit Committee considers the relevant available facts and circumstances, including, but not limited to, (i) the risks, costs and benefits to us, (ii) the impact on a director's independence in the event the related party is a director, immediate family member of a director or an entity with which a director is affiliated, (iii) the terms of the transaction, (iv) the availability of other sources for comparable services or products, and (v) the terms available to or from, as the case may be, unrelated third parties or to or from employees generally. In the event a director has an interest in the proposed transaction, the director must recuse himself or herself from the deliberations and approval. In determining whether to approve, ratify or reject a related-person transaction, the Audit Committee evaluates whether, in light of known circumstances, the transaction is in, or is not inconsistent with, our best interests and those of our stockholders.

#### **Insider Trading Policy**

Our insider trading policy expressly prohibits short sales and derivative transactions of our stock by our named executive officers, directors and specified other employees, including short sales of our securities, including short sales "against the box"; purchases or sales of puts, calls or other derivative securities of the Company or any derivative securities that provide the economic equivalent of ownership of any of our securities or an opportunity, direct or indirect, to profit from any change in the value of our securities; or other hedging or monetization transactions accomplished through the use of prepaid variable forwards, equity swaps, collars and exchange funds. In addition, our insider trading policy expressly prohibits our named executive officers, directors and specified other employees from purchasing our securities on margin, borrowing against Company securities held in a margin account, or pledging our securities as collateral for a loan.

#### **Compensation Objectives and Philosophy**

Our named executive officer compensation program is designed principally to:

- attract, motivate and retain talented and dedicated named executive officers;
- correlate discretionary annual cash bonuses to the achievement of operational and financial objectives; and

- provide our named executive officers with appropriate long-term incentives that directly correlate to the enhancement of stockholder value, as well as facilitate executive retention.

To achieve these objectives, we establish (i) annual base salaries at levels that we believe are competitive with base salaries of executive officers in other comparable publicly-held biopharmaceutical companies, and (ii) discretionary year-end annual cash bonuses based in part on the achievement of key operational and financial goals. We also grant stock options as a retention tool and as a means to align the named executive officer's long-term interests with those of our stockholders, with the ultimate objective of affording our named executive officers an appropriate incentive to help us to improve stockholder value. Our Compensation Committee does not have any formal policies for allocating compensation among the foregoing three components. Rather, our Compensation Committee uses its judgment to determine the appropriate level and mix of compensation on an annual basis with the goal to balance current cash compensation with equity awards to reward both short-term and long-term performance. Our Compensation Committee evaluates both employee performance and compensation to maintain our ability to attract and retain highly-qualified executives in key positions and to assure that compensation provided to our named executive officers remains competitive when compared to the compensation paid to similarly situated executives of companies that we consider comparable to our Company.

#### **Compensation Determination Process and the Role of Named Executive Officers in Compensation Decisions**

We conduct an annual review of named executive officer compensation, generally in December, January, or February, with a presentation by our Chief Executive Officer to our Board of Directors and Compensation Committee regarding each element of our executive compensation arrangements. Our Compensation Committee met on February 26, 2019 to establish year-end compensation for the fiscal year ended December 31, 2018. At the Compensation Committee's direction, our Chief Executive Officer typically prepares an executive compensation review for each named executive officer which includes recommendations for:

- a proposed year-end cash bonus, if any, (i) payable under the terms of each named executive officer's employment agreement or (ii) under our discretionary cash bonus program, in each case based on the achievement of individual and/or corporate objectives and the applicable terms of the employment agreements;
- a proposed increase, if any, in base salary and cash bonus potential for the upcoming year; and
- an award, if any, of stock options or stock awards for the year under review.

As part of the compensation review, our Compensation Committee also considers changes to an executive officer's compensation.

In accordance with Nasdaq requirements, the Compensation Committee also meets in an executive session without the Chief Executive Officer to consider and make recommendations to our Board of Directors regarding the Chief Executive Officer's compensation, including base salary and cash bonus. The Compensation Committee recommends to our Board of Directors year-end annual stock option grants to our Chief Executive Officer. The Compensation Committee also grants year-end stock options to other named executive officers based on, among other factors, recommendations by our Chief Executive Officer. With the exception of these executive sessions of the Compensation Committee, our Chief Executive Officer generally participates in all deliberations of the Compensation Committee and of our Board of Directors relating to executive compensation.

In conjunction with the year-end annual compensation review, or as soon as practicable after the fiscal year-end (but no later than March 15 of each year), our Chief Executive Officer recommends (by the end of the prior fiscal year) to the Compensation Committee the corporate objectives and other criteria to be utilized for purposes of determining cash bonuses (i) for each named executive officer for the upcoming year (typically in accordance with that named executive officer's employment agreement), and (ii) for all other employees as a group. The Compensation Committee in its discretion may revise our Chief Executive Officer's recommendations or make its own recommendations to our Board of Directors, which may in turn suggest further revisions. At the end of the year, the Compensation Committee, in consultation with our Chief Executive Officer, reviews each performance goal and determines the extent to which we achieved such goals. For a description of some of the goals established for 2018, see "2018 Named Executive Officer Compensation - Annual and Special Cash Bonuses," below.

#### **Setting Compensation for Named Executive Officers - Compensation Committee, Board of Directors and Chief Executive Officer**

The Compensation Committee of our Board of Directors has the primary responsibility for determining compensation of our executive officers. Our Board of Directors has determined that each member of our Compensation Committee is "independent" as that term is defined by applicable Nasdaq rules, is an "outside director" as defined in Section 162(m) of the Internal Revenue Code (the "Code"), and is a "non-employee" director as defined under Section 16 of the Exchange Act. Pursuant to the Tax Cuts and Jobs Act, Section 162(m) is no longer applicable for compensation received after December 31, 2017. However, we have retained references to Section 162(m) in this proxy statement as it applies to compensation prior to 2018. Our Compensation Committee recommends the compensation of our Chief Executive Officer and determines all compensation matters for our named executive officers, including base salary, bonuses, and equity compensation. Our Board of Directors, after considering the recommendations of the Compensation Committee, makes the final determination with respect to the compensation of our Chief Executive Officer. Utilizing input from our Chief Executive Officer, the Compensation Committee makes an independent decision on compensation for each other named executive officers, although our Compensation Committee has, on occasion, submitted its compensation determinations for named executive officers to our full Board of Directors for its approval. The Compensation Committee engaged Radford, a business unit of Aon plc ("Radford"), as a compensation consultant for part of the 2018 review and assessed Radford's independence pursuant to SEC rules and concluded that no conflict of interest exists that would have prevented Radford from independently advising the Compensation Committee. The Compensation Committee has engaged Haigh & Company ("Haigh") as a compensation consultant for part of the 2018 review and for the 2019 review and has assessed Haigh's independence pursuant to SEC rules and concluded that no conflict of interest exists that would prevent Haigh from independently advising the Compensation Committee.

#### **Peer and Industry Data**

For purposes of compensation for 2019, our Compensation Committee, with the advice of Haigh, examined our 2018 peer group in light of our continued growth throughout 2018, which is anticipated to continue in 2019, the stage of development of our clinical programs, and changes in our market capitalization. With reference to these and other key business metrics, companies whose market capitalization and/or whose number of employees that were at the low end, below, or significantly above our targeted range were removed and new companies were added to the peer group for 2019. Based on its discussions with Haigh, the Compensation Committee identified the following 20 peer companies for 2019 that were selected from among publicly-held U.S. pharmaceutical and biotechnology companies with comparable operations in the U.S. based on the following criteria: number, stage and indication of development programs, number of employees, and market capitalization:

Accelaron Pharma, Inc.  
Aduro Biotech, Inc.  
Aimmune Therapeutics, Inc.  
AnaptysBio, Inc.  
Atara Biotherapeutics, Inc.  
Blueprint Medicines Corp.  
Calithera Biosciences, Inc.  
ChemoCentryx, Inc.  
Cytokinetics, Inc.  
CytomX Therapeutics, Inc.

Editas Medicine, Inc.  
Epizyme, Inc.  
Fate Therapeutics, Inc.  
Five Prime Therapeutics, Inc.  
ImmunoGen, Inc.  
Kura Oncology, Inc.  
Mirati Therapeutics, Inc.  
Portola Pharmaceuticals, Inc.  
Sangamo Therapeutics, Inc.  
Zogenix, Inc.

### **Benchmarking in the Context of Our Other Executive Compensation Principles**

Our Compensation Committee and our Board of Directors use market data as one means of evaluating and establishing executive pay. In instances where an executive officer is believed to be especially suited to our Company or important to our success, the Compensation Committee may establish or recommend compensation that deviates from industry averages or other specific benchmarks. Upward or downward variations in total cash compensation and long-term incentives may also occur as a result of the individual's experience level, the nature and level of the individual's specific job responsibilities, the balance of the individual's different elements of compensation, market factors and other strategic considerations.

Our Compensation Committee believes that, given the competitiveness of our industry and our corporate culture, our base compensation, annual cash bonuses and equity programs are flexible enough to reward the achievement of clearly defined corporate goals and are sufficient to retain our existing executive officers and to hire new executive officers with the appropriate qualifications and experience.

### **Elements of Named Executive Compensation**

The objectives of our compensation program are to pay competitive compensation to our employees in light of the tight labor market for biotech employees in Silicon Valley. For 2018, the cash compensation for each of our named executive officers ranged from the third quartile to the fourth quartile, while the equity compensation ranged from the first quartile to the fourth quartile, based on data from a combination of our peer group companies and using a Black-Scholes valuation method. Based on a comparison of the actual amount of equity grants awarded to our named executive officers, which we believe may be a more accurate comparison, due to fluctuations in our stock price that impacted the Black-Scholes analysis, equity compensation ranged from the first quartile to the third quartile, with Dr. Fardis at the 55th percentile.

We have designed and implemented compensation policies that have historically allowed us to recruit both in the geographic areas where we operate and where our named executive officers serve, as the case may be. For 2018, the principal components of compensation for our named executive officers consisted of:

- a base salary;
- an annual cash incentive bonus; and
- an annual stock option award.

### **Base Salary**

We provide our named executive officers with base salary to compensate them for services rendered during the year. Generally, the base salaries reflect the experience, skills, knowledge and responsibilities required of each executive officer, and reflect our executive officers' overall performance and contributions to our business.

During its review of base salaries for executives, the Compensation Committee primarily considers:

- the negotiated terms of each named executive officer's employment agreement, if any;
- an internal review of the named executive officer's compensation, both individually and relative to other named executive officers; and
- base salaries paid by comparable companies in the biopharmaceutical industry that have a similar business and financial profile.

Salary levels are considered annually as part of our Company's performance review process. Merit-based increases to salaries are based on management's assessment of the individual's performance, the recommendations made by the Chief Executive Officer to the Compensation Committee, and the comparative compensation at peer companies.

Other than Mr. Morris, each of our named executive officers received an increase in his or her base salary in 2018 over his or her 2017 base salary. Mr. Morris and Dr. Vogt each received an increase in their base salary in 2019, as described below. Dr. Fardis did not receive an increase in her base salary in 2019.

#### **Annual Cash Incentive Bonuses**

We provide an opportunity for each of our named executive officers to receive an annual cash incentive bonus based on the satisfaction of individual and corporate objectives established by our Board of Directors. For any given year, these objectives may include individualized goals or corporate goals that relate to operational, strategic or financial factors such as progress in developing our product candidates, achieving certain manufacturing, intellectual property, clinical and regulatory objectives, and raising certain levels of capital.

Historically, at its annual year-end meeting to consider named executive officer compensation, the Compensation Committee, in consultation with management, has established corporate goals for the upcoming fiscal year for purposes of, among other things, making its recommendations regarding its discretionary annual bonus awards (and stock option grants) for the upcoming year to our named executive officers and all employees.

The employment agreements of our named executive officers and certain of our other executives entitle the named executive officers and those other individuals to an annual target end-of-year cash bonus, at the discretion of the Chief Executive Officer and/or the Compensation Committee, upon the achievement of certain goals or milestones.

While the Board of Directors or the Compensation Committee adopts corporate objectives, it is typically the Compensation Committee that evaluates and approves the achievement level of corporate objectives, and subsequently reviews and approves the annual cash bonuses for named executive officers as part of its final compensation deliberations. The Compensation Committee also considers the bonuses paid by comparable companies. The Compensation Committee, or where appropriate, our Board of Directors may approve bonuses based on the foregoing determinations or, after considering market conditions, our financial position or other factors, may, in its sole discretion, determine not to award any bonuses or to award larger or smaller bonuses.

On February 7, 2018, the Compensation Committee adopted corporate goals for the determination of cash bonuses to be paid for the 2018 fiscal year. Under the plan adopted by our Board of Directors, cash bonuses, if any, will be paid to qualified participating officers and employees upon (i) the achievement of corporate goals and (ii) a review of personal performance. The corporate goals, and the weight assigned to each of the goals, will apply to all officers and employees, including our named executive officers. The target bonus payable to participating employees and officers currently ranges from 10% to 40% of such recipient's 2018 base salary, and in the case of Dr. Fardis, ranges up to 100%. The target cash bonus percentage for most senior executive officers is currently based on the percentage set forth in each executive officer's employment agreement. The Company's goal is to pay any earned bonus by March 15 of the year following the year in which the bonus is earned. The cash bonuses that officers and employees can receive will be based upon the following corporate goals and on an evaluation of an individual's performance. The corporate goals and objectives for the 2018 calendar year were based on meeting certain goals with respect to the Company's operational performance as follows: (i) completing enrollment of certain number of patients in Phase 3 registrational quality manufacturing suites appropriate for registration of lifileucel, or LN-144, in the Company's C-144-01 metastatic melanoma trial; (ii) assuring that cervical (C-145-04) and head and neck cancer studies (C-145-03) are each half enrolled; (iii) starting enrollment of a new combination study for melanoma and head and neck cancers, and enrolling a specified number of patients by the end of the year; (iv) enrolling a specified number of patients in the non-small cell lung cancer trial by the end of the year; (v) completing process optimization and securing supplies for the Company's new Generation 2 process; (vi) achieving certain FDA goals regarding the regulatory path to registration for LN-144 in the U.S.; and (vii) achieving specified goals in the M.D. Anderson Cancer Center collaboration. Other lesser weighted goals included completing specified actions to protect the Company's intellectual property related to its Generation 2 manufacturing process and obtaining funding.

At its February 26, 2019 meeting, the Compensation Committee determined that the Company met 85% of its operational goals.

At its December 7, 2018 meeting, our Board of Directors set corporate goals and objectives for the Company in 2019, and such goals will be disclosed in next year's proxy statement.

See the discussion below in "2018 Named Executive Officer Compensation - Annual and Special Bonuses" for information regarding the annual incentive bonuses paid to our named executive officers for 2018.

### **Equity Incentive Compensation**

We believe that successful long-term corporate performance is more likely to be achieved with a corporate culture that encourages a long-term focus by our named executive officers and other employees through the use of equity awards, the value of which depends on our stock performance. We established our 2014 Equity Incentive Plan and 2018 Equity Incentive Plan to provide all of our employees, including our named executive officers, with incentives to help align our employees' interests with the interests of our stockholders and to enable them to participate in the long-term appreciation of our stockholder value. Additionally, equity awards provide an important retention tool for all employees, as the awards generally are subject to vesting over an extended period of time based on continued service with us.

Typically, we grant equity awards upon an employee's hire. In addition, equity awards may also be granted for performance annually at, or soon after, the end of each year, depending on position, performance and tenure at the Company.

The determination of whether to grant stock options, as well as the size of such grants, to our named executive officers involves subjective assessments by the Compensation Committee and our Board of Directors and, with respect to named executive officers other than herself, our Chief Executive Officer. Generally, annual equity awards are driven by our desire to retain and motivate our named executive officers, and we consider individual performance and contributions during the preceding year to the extent the Compensation Committee and our Board of Directors believe such factors are relevant. As with base salary and cash bonuses, in evaluating and determining stock option grants to our named executive officers, the Compensation Committee and our Board of Directors also considers publicly available data prepared by Haigh at the request of the Compensation Committee from other similar clinical stage companies identified by the Compensation Committee.

We normally grant stock options or stock awards to new employees when they join our Company based upon their position with us and their relevant prior experience. The range of options that can be granted to employees is prescribed in a schedule based on employee's title and position. The awards granted by the Compensation Committee generally vest over the first three years of the ten-year option term (although some previously granted awards vest over four years), or upon the achievement of certain milestones. Unless otherwise agreed to by us with respect to a termination without "cause" or for "good reason," vesting and exercise rights generally cease upon termination of employment, except in the case of death (subject to a one-year limitation), disability or retirement. Prior to the exercise of an option, the holder has no rights as a stockholder with respect to the shares subject to such option, including voting rights or the right to receive dividends or dividend equivalents. In addition to the initial option grants, our Compensation Committee may grant additional options to retain our employees and reward, or provide incentive for, the achievement of corporate goals and strong individual performance.

Our Board of Directors has granted our Chief Executive Officer the discretion to grant options to non-executive employees upon joining our Company, and to make grants during each annual non-executive employee review cycle. Our Board of Directors has fixed both the total number of shares that our Chief Executive Officer can grant under such options, and the range of shares subject to such grants based on each employee's position with the Company. Options are granted based on a combination of individual contributions to our Company and on general corporate achievements, which may include the attainment of product development milestones (such as commencement and completion of clinical trials) and attaining other annual corporate goals and objectives.

On an annual basis, the Compensation Committee assesses the appropriate corporate goals for our named executive officers and may provide additional option grants based upon the achievement by the named executive officers of corporate goals or other significant accomplishments for the Company. We expect that we will continue to provide new employees with initial option grants in the future to provide long-term compensation incentives and will continue to rely on performance-based and retention grants to provide additional incentives for current employees. Additionally, in the future, the Compensation Committee may consider awarding additional or alternative forms of equity incentives, such as grants of bonus stock, restricted stock and restricted stock units, although the Compensation Committee does not currently plan to do so in the near future.

It is our policy to award stock options at an exercise price equal to the closing price on the Nasdaq Global Market of our common stock on the date of the grant. For purposes of determining the exercise price of stock options for newly hired employees, other than executive officers, the grant date is deemed to be the first day of employment and the authority to make such a grant is delegated to our Chief Executive Officer. For other employee stock option grants, the grant date is such date as is determined by the Compensation Committee when it approves the stock option grant.

We have no program, practice or plan to grant stock options, in coordination with the release of material nonpublic information. We also have not timed the release of material nonpublic information for the purpose of affecting the value of stock options or other compensation, and we have no plan to do so. We have no policy regarding the adjustment or recovery of stock option awards in connection with the restatement of our financial statements, as our stock option awards have not been tied to the achievement of specific financial statement goals.

We do not take into consideration any amounts realized by our named executive officers from prior stock option or stock awards in determining whether to grant new stock options, restricted stock units or restricted stock awards.

## **Other Aspects of Our Compensation Philosophy**

### Retirement Plans, Perquisites and Other Personal Benefits

Our named executive officers are eligible to participate in the employee benefit plans on the same terms and conditions as they are available to our other regular employees. These benefits include medical, dental, vision, disability and life insurance, flexible spending accounts, and a 401(k) plan.

Under the tax-qualified employee savings and retirement plan, our 401(k) plan, all eligible U.S. employees, including our named executive officers, may elect to defer a percentage of their eligible compensation in our 401(k) plan, subject to the annual IRS limit. In 2018, we matched 100% of the employee contributions up to 4% of annual eligible compensation. The 2018 matching contributions made under the Safe Harbor Matching Contribution are fully vested.

We do not provide perquisites or other personal benefits to our named executive officers other than those that we provide to our employees. We do not provide any tax reimbursement payments (including “gross-ups”) on any personal benefits, except in the case of certain relocation benefits.

### Cash Bonuses

From time to time, we may pay cash bonuses to employees upon the successful completion of certain projects and we may also pay sign-on bonuses to aid in recruiting certain key employees.

### Severance Agreements

We have entered into employment agreements with our named executive officers which provide for payment of between six months’ and one year’s base salary as severance upon the involuntary termination of employment, provided such termination is not for cause, as defined in the agreements.

### Stock Ownership Guidelines

Although stock option grants encourage equity ownership, we currently do not require our directors or executive officers to own a particular number of shares of our common stock. We believe that stock and option holdings among our directors and named executive officers are adequate at this time to appropriately align their interests with those of our stockholders.

## **2018 Named Executive Officer Compensation**

### Base Salaries

The Compensation Committee considers salary increases for our named executive officers generally on an annual basis, setting salaries based on corporate objectives and the recommendations of our Chief Executive Officer after assessing each executive’s performance. A similar process is used by the Board of Directors in setting our Chief Executive Officer’s salary. However, the Chief Executive Officer does not provide recommendations on her own salary.

The base salary of all three of our named executive officers currently exceeds the Compensation Committee’s goal of positioning the compensation of our named executive officers at approximately the 50% percentile of our peer group. At its February 26, 2019 meeting, our Compensation Committee did not increase the salary of Dr. Fardis. Previously, in February 2018, in recognition of her performance, our Compensation Committee recommended, and the Board of Directors approved, an increase in Dr. Fardis’ annual base salary in 2018 from \$500,000 to \$600,000. At its February 26, 2019 meeting, our Compensation Committee, in recognition of their performance, increased the salaries of Mr. Morris from \$450,000 to \$460,000 and Dr. Vogt from \$375,000 to \$400,000. At the Compensation Committee’s meetings in December 2017, the Compensation Committee increased Dr. Vogt’s 2018 annual base salary from \$350,000 to \$375,000 in recognition of his promotion to General Counsel and his performance in 2017. The 2018 base salary of Mr. Morris was not increased because Mr. Morris was hired in August 2017.



As a result, the 2019 and 2018 salaries of our three currently employed named executive officers are as follows:

Name and Position <sup>(1)</sup>	2018 Salary	2019 Salary	% Increase from Final 2018 Base Salary
Maria Fardis, Ph.D., President and Chief Executive Officer	\$ 600,000	\$ 600,000	0%
Timothy E. Morris, Chief Financial Officer and Corporate Secretary	\$ 450,000	\$ 460,000	2.22%
Frederick G. Vogt, Ph.D., Esq., General Counsel	\$ 375,000	\$ 400,000	6.67%

#### Annual Incentive Bonuses

We provide an opportunity for each of our named executive officers as well as other key employees, to receive a discretionary annual incentive bonus based on both (i) performance related to corporate objectives established by our Compensation Committee and Board of Directors and (ii) a subjective evaluation of the employee's individual performance. For 2018, these objectives include individualized goals or corporate goals that relate to operational, strategic or financial factors such as progress in developing our product candidates, achieving certain manufacturing, intellectual property, clinical and regulatory objectives, and raising certain levels of capital.

Historically, at its annual year-end meeting to consider named executive officer compensation, our Compensation Committee, in consultation with the Chief Executive Officer and our compensation consultants, has considered corporate goals for the upcoming fiscal year for purposes of, among other things, making its recommendations regarding its discretionary annual bonus awards (and stock option grants) for the upcoming year to our named executive officers. The attainment of substantially all of our corporate goals for 2018, as described above, as well as the significant events and developments affecting the condition of the Company and need to retain certain key employees to manage and operate the Company was considered by our Compensation Committee at its meetings held in 2018 and 2019.

At its February 26, 2019 meeting, in recognition of their performance in 2018, our Compensation Committee granted Dr. Fardis, Mr. Morris, and Dr. Vogt year-end bonuses of \$510,000, \$153,000, and \$127,500, respectively. Previously, at its December 29, 2017 meeting, the Compensation Committee granted Mr. Morris a year-end bonus of \$65,130, which amount was based on his pro-rated time of service during 2017 and on the achievement level of his performance milestones. In February 2018 the Compensation Committee recommended, and the Board of Directors approved, a \$350,000 year-end cash bonus to Dr. Fardis. This bonus exceeded her 50% target bonus opportunity set forth in her employment agreement because the Compensation Committee determined that Dr. Fardis' performance in 2017 significantly exceeded the Compensation Committee's expectations. On February 9, 2018, in recognition of her substantial achievements in 2017, the Board of Directors increased Dr. Fardis' bonus opportunity to 100%. The cash year-end bonuses paid to the three currently serving named executive officers for 2018 is as follows:

<b>Name and Position</b>	<b>Hire Date</b>	<b>Annual Incentive Target % (1)</b>	<b>2018 Target Bonus Opportunity</b>	<b>2018 Actual Bonus Payment (2)</b>	<b>2018 Actual Bonus Payment (% of Target Award Opportunity)</b>
Maria Fardis, Ph.D., President and Chief Executive Officer	6/1/2016	100%	\$ 600,000	\$ 510,000	85%
Timothy E. Morris, Chief Financial Officer and Corporate Secretary	8/14/2017	40%	\$ 180,000	\$ 153,000	85%
Frederick G. Vogt, Ph.D., Esq., General Counsel	9/30/2016	40%	\$ 150,000	\$ 127,500	85%

- (1) The annual cash bonus target is a percentage of base salary.  
(2) Bonus amounts were paid on March 15, 2019.  
(3) The annual cash bonus target will remain the same for 2019.

The Compensation Committee retains the right to make discretionary cash bonus payments in excess of the target cash bonus levels to the named executive officers if in its opinion a named executive officer's performance justifies such excess payment. No excess payments were made for 2018.

#### Annual Stock Option Awards for Named Executive Officers

Our Board of Directors and Compensation Committee generally make year-end options grants to our named executive officers in recognition of their performance. None of our named executive officers is currently party to an employment agreement that provides for an automatic grant of stock options.

At its February 26, 2019 meeting, our Compensation Committee granted Dr. Fardis a non-qualified stock option award of 400,000 shares of our common stock at an exercise price of \$11.26, which price is equal to the closing price of our common stock on March 4, 2019, in recognition of her achievements in 2018. Dr. Fardis' option award has a term of ten years and, provided that she is employed with us on the following dates, will vest in installments as follows: (i) options for the purchase of one-third of the 400,000 shares shall vest on the one-year anniversary of March 4, 2019; and (ii) the remaining options shall vest in eight equal quarterly installments over the next two years, commencing with the first quarter following the first anniversary of March 4, 2019. The grant exceeded the Compensation Committee's goal of keeping equity awards at approximately the 50th percentile to the executive officers holding comparable positions at the companies in our compensation peer group. However, in determining the amount of Dr. Fardis' option award, our Compensation Committee considered her existing equity holdings, her level of responsibility and criticality, the amount of her existing equity holdings, and its subjective assessment of her individual performance and our overall Company performance. Previously, at the recommendation of the Compensation Committee, in recognition of her substantial achievements in 2017, on February 9, 2018, the Board of Directors granted Dr. Fardis a year-end option award of 500,000 shares of our common stock at an exercise price of \$16.80 (which price is equal to the closing price of our common stock on February 9, 2018).

At its February 26, 2019 meeting, our Compensation Committee granted Mr. Morris a non-qualified stock option award of 100,000 shares of our common stock at an exercise price of \$11.26, which price is equal to the closing price of our common stock on March 4, 2019, in recognition of his achievements in 2018. Mr. Morris' option award has a term of ten years and, provided that he is employed with us on the following dates, will vest in installments as follows: (i) options for the purchase of one-third of the 100,000 shares shall vest on the one-year anniversary of March 4, 2019; and (ii) the remaining options shall vest in eight equal quarterly installments over the next two years, commencing with the first quarter following the first anniversary of March 4, 2019. As part of its year-end equity awards review, our Compensation Committee considered granting Mr. Morris an additional stock option award in 2018. However, because Mr. Morris joined the Company less than five months before and was granted options at that time, the Compensation Committee did not grant Mr. Morris a year-end stock option award.

At its February 26, 2019 meeting, our Compensation Committee granted Dr. Vogt a non-qualified stock option award of 200,000 shares of our common stock at an exercise price of \$11.26, which price is equal to the closing price of our common stock on March 4, 2019, in recognition of his achievements in 2018. Dr. Vogt's option award has a term of ten years and, provided that he is employed with us on the following dates, will vest in installments as follows: (i) options for the purchase of one-third of the 100,000 shares shall vest on the one-year anniversary of March 4, 2019; and (ii) the remaining options shall vest in eight equal quarterly installments over the next two years, commencing with the first quarter following the first anniversary of March 4, 2019. In December 2017, as part of its year-end review, the Compensation Committee granted Dr. Vogt incentive stock options to purchase 37,400 shares, which options will have a term of ten years and will vest in installments over three years as follows: (i) one-third of the shares underlying the option shall vest on December 29, 2018; and (ii) the remaining shares underlying the option shall vest in eight equal quarterly installments over the two years following December 29, 2018. Based on an equity compensation report provided by Radford, the 2017 stock option grant to Dr. Vogt was positioned at the 25th percentile of the survey of grants by similar companies.

## **Other Policies and Considerations**

### Relationship Between Compensation Elements

Each element of named executive officer compensation in 2017 considered the same element paid to named executive officers holding similar positions at comparable companies within our peer group. Our Compensation Committee retained Haigh & Company ("Haigh") to assess our current compensation programs and provide recommendations for continued improved alignment of the programs with our compensation philosophy and goals. Haigh conducted and reported to the Compensation Committee an assessment of our named executive officer's base salaries, target total cash, short- and long-term incentives, target total direct compensation and retention value of prior equity awards against the competitive market. To determine the competitive market compensation, survey data was blended with proxy data of the peer companies identified below in this Compensation Discussion and Analysis. The foregoing information was considered when determining the relative proportion of salary, cash incentive or equity awards relative to each other and to total compensation.

### Employment Agreements and Termination Benefits.

We have entered into written employment agreements with each of our current and former named executive officers. The main purpose of these agreements is to protect our Company from business risks such as competition for each named executive officer's service, loss of confidential information or trade secrets, solicitation of our other employees, and to define our respective rights to terminate the employment relationship. Each of these employment agreements can be terminated by either party at any time. Each employment agreement was individually negotiated, so there are some variations in the terms among named executive officers. Generally speaking, however, the employment agreements provide for termination and severance benefits that the Compensation Committee believes are consistent with industry practices for similarly situated executives. The Compensation Committee believes that the termination and severance benefits help the Company retain the named executive officers by providing them with a competitive employment arrangement and compensation for termination of their employment by us without "cause."

In the event of termination of a named executive officer's employment by us without "cause," the named executive officers will be, entitled to a lump-sum payment, which payment is equal to twelve months of base salary in the case of Dr. Fardis, and six months of base salary in the case of Mr. Morris and Dr. Vogt. If a named executive officer's employment is terminated by us without "cause" in connection with a change of control of our Company, the named executive officers will be entitled to a lump-sum payment equal to twelve months of base salary in the case of Dr. Fardis and Mr. Morris, and six months of base salary in the case of Dr. Vogt, plus in each instance the pro-rated amount of their respective minimum bonuses for those periods. In addition, if the employment agreements of Dr. Fardis or Dr. Vogt are terminated by us without "cause" or by them for "good reason," their unvested stock options vest immediately.

The specific terms of the termination and change of control arrangements, as well as an estimate of the compensation that would have been payable had such provisions been triggered as of the end of 2018, are described in detail in the section below entitled "Executive Compensation – Potential Payments Upon Termination/Change of Control."

### **2019 Stockholder Advisory Vote**

Each year, we hold a non-binding advisory stockholder vote on the compensation program for our named executive officers. At our annual stockholder meetings held in 2017 and 2018, our stockholders approved, on an advisory basis, the compensation of our named executive officers. In evaluating our compensation arrangements in early 2018 (and most recently for 2018 year-end bonuses), we considered the support of our stockholders of our compensation arrangements and objectives. As a result, our Compensation Committee retains our general approach to executive compensation and continues to apply the same general principles and philosophy as in the prior fiscal years in determining executive compensation. Our Compensation Committee values the opinions of our stockholders and will take our stockholders' opinions into account when making compensation decisions for the members of our executive team, including the named executive officers.

### **Tax and Accounting Implications**

#### Deductibility of Executive Compensation

The Compensation Committee takes into consideration the tax consequences of compensation to the named executive officers, but tax considerations are not a significant part of our Company's compensation policy.

#### Accounting for Share-Based Compensation

We account for share-based compensation in accordance with the requirements of FASB ASC Topic 718. This accounting treatment has not significantly affected our executive compensation decisions.

#### Clawbacks

We have not established any policy regarding recoupment, or "clawback," of any performance-based compensation in the event our Company's historical financial results are subsequently revised or restated in a way that would have produced a lower compensation amount.

The foregoing policies remained in place through 2018, and, unless otherwise noted above, we expect to continue to follow them for the foreseeable future.

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

During 2018, no member of the Compensation Committee served as one of our officers, former officers, or employees. During 2018, none of our named executive officers served as a member of the compensation committee of any other entity, one of whose executive officers served as a member of our Board of Directors or Compensation Committee, and none of our named executive officers served as a member of the Board of Directors of any other entity, one of whose executive officers served as a member of our Compensation Committee.

## Report of the Compensation Committee on Executive Compensation

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

### COMPENSATION COMMITTEE OF THE BOARD OF DIRECTORS

Michael Weiser, M.D., Ph.D. (Chair)  
Merrill A. McPeak  
Wayne Rothbaum

## Summary Compensation of Named Executive Officers

The following table sets forth all compensation awards to, paid or earned by the following type of named executive officers for each of the Company’s last three years ended December 31, 2018, 2017, and 2016: (i) individuals who served as, or acted in the capacity of, the Company’s principal executive officer or principal financial officer for the year ended December 31, 2018; (ii) the Company’s most highly compensated executive officers, other than the principal executive officer or principal financial officer, who were serving as executive officers at the end of the year ended December 31, 2018; and (iii) up to two additional individuals for whom the disclosure would have been provided but for the fact that the individual was not serving as an executive officer of the Company at the end of the year ended December 31, 2018. We refer to these individuals collectively as our named executive officers.

Name and Principal Position	Year	Salary <sup>(1)</sup> (\$)	Bonus (\$)	Stock Awards <sup>(2)</sup> (\$)	Stock Options <sup>(3)</sup> (\$)	Non-Equity Incentive Plan Compensation <sup>(4)</sup> (\$)	All Other Compensation (\$)	Total
<b>Current Officers:</b>								
Maria Fardis, Ph.D. <sup>(6)</sup> President and Chief Executive Officer	2018	\$ 600,000	\$ -	\$ -	\$ 8,284,600 <sup>(5)</sup>	\$ 510,000	\$ -	\$ 9,394,600
	2017	\$ 500,000	\$ -	\$ -	\$ -	\$ 350,000	\$ -	\$ 850,000
	2016	\$ 291,667	\$ -	\$ 3,228,500	\$ 2,935,000	\$ 116,720 <sup>(7)</sup>	\$ 150,000 <sup>(8)</sup>	\$ 6,721,887
Timothy E. Morris <sup>(9)</sup> Chief Financial Officer and Corporate Secretary	2018	\$ 450,000	\$ -	\$ -	\$ -	\$ 153,000	\$ -	\$ 603,000
	2017	\$ 172,212	\$ -	\$ -	\$ 1,262,500	\$ 65,130 <sup>(10)</sup>	\$ -	\$ 1,499,842
Frederick G. Vogt, Ph.D., Esq. <sup>(11)</sup> General Counsel	2018	\$ 375,000	\$ -	\$ -	\$ -	\$ 127,500	\$ -	\$ 502,500
	2017	\$ 326,355	\$ -	\$ -	\$ 393,070	\$ 131,390	\$ -	\$ 850,815
	2016	\$ 75,616	\$ -	\$ -	\$ 1,510,000	\$ 13,620 <sup>(7)</sup>	\$ 50,000 <sup>(8)</sup>	\$ 1,649,236

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- (1) Includes amounts earned but deferred at the election of the named executive officer, such as salary deferrals under the Company's 401(k) plan.
  - (2) The amounts in this column represent the aggregate grant date fair value of the restricted stock awards and restricted stock units, determined in accordance with Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) Topic 718. The Company determines the grant date fair value of the awards by multiplying the number of units granted by the closing market price of one share of loavance common stock on the award grant date. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting or the sale of the common stock awards.
  - (3) The Company's share-based compensation program includes incentive and non-statutory stock options. The amounts set forth under this column represent the aggregate grant date fair value of stock options granted in each fiscal year for financial reporting purposes under Statement of Financial Accounting Standards ASC Topic 718, "Stock Compensation," disregarding the estimate of forfeitures. The Company's methodology, including its underlying estimates and assumptions used in calculating these values, is set forth in Note 6 to its audited financial statements included in its Form 10-K filed with the SEC for the year ended December 31, 2018. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.
  - (4) Amounts reported represent the annual cash performance-based bonuses earned pursuant to the achievement of certain corporate and individual performance objectives during 2018. Please see the descriptions of the annual performance bonuses in the prior sections entitled "Annual Cash Incentive Bonuses."
  - (5) The grant date fair value of stock options calculated using Black-Scholes calculations in accordance with Statement of Financial Accounting Standards ASC Topic 718, "Stock Compensation," included the following inputs: volatility, 192%; expected term, 6 years; risk free interest rate, 2.58%; and dividend rate, 0%. The volatility was calculated using historical Company share prices which included the impact of a 100-to-1 reverse split which occurred subject to a restructuring effective May 22, 2013. Starting on January 1, 2019, the volatility calculation will no longer include the impact of the unusual volatility observed in 2013 due in part to the 100-to-1 reverse split. As of the end of the first quarter in 2019, the volatility used in the Black-Scholes calculations was 71%. All of these stock options are out of the money as of the Record Date.
  - (6) Dr. Fardis became our Chief Executive Officer on June 1, 2016.
  - (7) Amount represents a discretionary pro-rata annual bonus paid for the 2016 fiscal year.
  - (8) Amount represents a sign-on bonus.
  - (9) Mr. Morris became our Chief Financial Officer on August 14, 2017.
  - (10) Amount represents a discretionary pro-rata annual bonus paid for the 2017 fiscal year.
  - (11) Dr. Vogt was promoted to General Counsel on July 1, 2017 and became a named executive officer on October 20, 2017. Amounts paid to Dr. Vogt prior thereto represent compensation he received after joining the Company on September 30, 2016 as Vice President, Intellectual Property.

#### **Chief Executive Officer Pay Ratio**

As a result of the recently adopted rules under the Dodd-Frank Act, SEC rules now require companies to disclose the ratio of the total annual compensation of the principal executive officer to the median employee's total annual compensation. We identified the median employee by examining the 2018 total annual compensation for all individuals, excluding our Chief Executive Officer, who were employed by us on December 31, 2018. We included all employees. For all employees, we examined total compensation, which included base salary, incentive compensation plan payments, equity awards consisting of stock options, and other compensation such as 401(k) matching contributions. We annualized the compensation of all permanent employees who were not employed by us for all of 2018.

After identifying the median employee based on total cash compensation, we calculated annual total compensation for that employee using the same methodology we use for our named executive officers as set forth in the 2017 Summary Compensation Table above. We then updated the median employee's compensation as it stood in 2018, and similarly updated our Chief Executive Officer's compensation. The total annual compensation of the median employee for 2018 was \$312,125. The total annual compensation including bonuses for our Chief Executive Officer for 2018 was \$9,394,600 (which includes \$8,284,600 for stock options based on a Black-Scholes calculation using historical volatility that results in a significant increase in total annual compensation, as described in footnote (5) of the foregoing table, although all of such options are out of the money). The total cash compensation for our Chief Executive Officer including salary and bonus was \$1,080,000. The ratio of Chief Executive Officer total annual compensation to the median employee total annual compensation for 2018 was approximately 30 to 1. The ratio of Chief Executive Officer salary compensation to the median employee salary compensation for 2018 was approximately 7 to 1.

## 2018 Grants of Plan-Based Awards

In 2018, we granted the following stock options to our named executive officers under our 2014 Equity Incentive Plan, as amended (as so amended, the "2014 Plan"):

Name	Grant Date	Number of Securities Underlying Options <sup>(1)</sup>	Exercise Price of Option Awards (\$/Share)	Grant Date Fair Value of Stock and Option Awards (\$) <sup>(2)</sup>
Maria Fardis, Ph.D.	2/9/2018	500,000 <sup>(3)</sup>	\$ 16.80	\$ 8,284,600 <sup>(4)</sup>

- (1) Represents shares of our common stock underlying options awarded, each of which vest over time.
- (2) Represents the fair value of each equity award on the date of grant, as computed in accordance with FASB ASC 718.
- (3) The option awards vest as to 33% of the shares underlying the options on the first anniversary, with remaining option awards vesting in equal quarterly installments over the two-year period following such first anniversary.
- (4) The grant date fair value of stock options calculated using Black-Scholes calculations in accordance with Statement of Financial Accounting Standards ASC Topic 718, "Stock Compensation," included the following inputs: volatility, 192%; expected term, 6 years; risk free interest rate, 2.58%; and dividend rate, 0%. The volatility was calculated using historical Company share prices which included the impact of a 100-to-1 reverse split which occurred subject to a restructuring effective May 22, 2013. Starting on January 1, 2019, the volatility calculation will no longer include the impact of the unusual volatility observed in 2013 due in part to the 100-to-1 reverse split. As of the end of the first quarter in 2019, the volatility used in the Black-Scholes calculations was 71%. All of these stock options are out of the money as of the Record Date.

## Outstanding Equity Awards

The following table sets forth outstanding stock options held by our named executive officers as of December 31, 2018. All options were granted under the 2014 Plan. In addition, the following table sets forth the restricted stock units held by Dr. Fardis under a restricted stock unit agreement as of December 31, 2018.

## Outstanding Equity Awards at Year Ended December 31, 2018

	Option Awards					Stock Awards	
	Grant Date	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	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 (\$)
Maria Fardis, Ph.D.	2/9/2018	-	500,000	\$ 16.80	2/9/2028	-	-
	6/1/2016	312,494	187,506	\$ 5.87	6/1/2026	-	-
	6/1/2016	-	-	-	-	68,749	\$ 608,429
Timothy E. Morris	8/14/2017	104,166	145,834	\$ 5.05	8/14/2027	-	-
Frederick G. Vogt, Ph.D., Esq.	12/29/2017	12,466	24,934	\$ 8.00	12/29/2027	-	-
	3/16/2017	7,350	5,250	\$ 7.45	3/16/2027	-	-
	11/14/2016	150,000	50,000	\$ 7.55	11/14/2026	-	-

### Option Exercises and Restricted Stock Units Vested

The following table contains information for our named executive officers concerning the option awards that were exercised and restricted stock units that vested 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 (\$) <sup>(1)</sup>
Maria Fardis, Ph.D.	-	\$ -	45,833	\$ 405,622

(1) Represents the closing price of our common stock on the vesting date multiplied by the number of RSUs that vested on that date.

### Potential Payments Upon Termination/Change of Control

Our named executive officer employment agreements have no specified term, and the employment relationship may be terminated by the named executive officers or by us at any time. The following table sets forth information regarding payments that would have been made to our named executive officers if they suffered an involuntary termination without cause, including a termination in connection with a change of control, and such termination payments were triggered on December 31, 2018. The closing price per share of our common stock on the Nasdaq Global Market on December 31, 2018 was \$8.85.



Name	Change in Control/Acceleration and Termination		Termination Without Cause	
	Salary and Bonus (\$)	Equity Acceleration (\$)	Salary and Bonus (\$)	Equity Acceleration (\$)
Maria Fardis, Ph.D.	\$ 1,200,000(1)	\$ 558,768(2)	\$ 1,200,000(1)	\$ 389,063(3)
Timothy E. Morris	\$ 630,000(4)	\$ 554,169(5)	\$ 225,000(6)	\$ -
Frederick G. Vogt, Ph.D., Esq.	\$ 187,500(6)	\$ 93,544(5)	\$ 337,500(7)	\$ 93,544(5)

- (1) Dr. Fardis would have received one year of her annual base salary, and the target bonus for that year. In addition, Dr. Fardis may be entitled to additional severance payments under certain circumstances pursuant to her Executive Employment Agreement.
- (2) Upon a change of control, all of Dr. Fardis' unvested time-based stock options and all unvested restricted stock units would vest immediately, and Dr. Fardis would have twelve months from the date of termination within which to exercise her vested options.
- (3) Upon termination, the vesting of Dr. Fardis' stock options would accelerate by one year, Dr. Fardis would have twelve months from the date of termination within which to exercise her vested options, and the vesting of her time-based restricted stock units would have been accelerated by one year.
- (4) Mr. Morris would have received one year of his annual base salary, and his pro-rated target bonus for that year.
- (5) Upon termination, all equity awards would have vested and the named executive officer would have been given three months in which to exercise the equity awards.
- (6) The named executive officer would have received six months of his current annual base salary.
- (7) The named executive officer would have received six months of his annual base salary, and his pro-rated target bonus for that year assuming the bonus was earned in 2018.

### Employment Agreements

The following is a summary of the employment agreements we entered into with our three named executive officers, Dr. Fardis, Mr. Morris and Dr. Vogt, who continue to serve as executive officers as of the Record Date.

Maria Fardis, Ph.D. On June 1, 2016, we entered into an Executive Employment Agreement with Maria Fardis, Ph.D., under which Dr. Fardis agreed to serve as our President and Chief Executive Officer. In her employment agreement, we have agreed to pay Dr. Fardis an annual base salary of \$500,000 and a signing bonus of \$150,000. In addition, on June 1, 2016, we granted to Dr. Fardis under our 2014 Plan stock options to purchase an aggregate of 500,000 shares of our common stock and entered into a restricted stock unit agreement pursuant to which we granted her 550,000 non-transferrable restricted stock units, outside the 2014 Plan, as an inducement of employment pursuant to the exception to the Nasdaq Stock Market rules that generally require stockholder approval of equity incentive plans. Dr. Fardis' stock options have an exercise price per share of \$5.87, vested 25% (125,000 shares) on June 1, 2017, with remaining options vesting in equal monthly installments over the 36-month period following June 1, 2017. The restricted stock units vest in installments as follows: (i) 137,500 restricted stock units vested upon the first anniversary of the effective date of her employment agreement; (ii) 275,000 restricted stock units vested upon the satisfaction of certain clinical trial milestones; and (iii) 137,500 restricted stock units vest in equal monthly installments over the 36-month period following the first anniversary of the effective date of her employment, in each case, provided that Dr. Fardis has been continuously employed with us as of such vesting dates. Dr. Fardis will also be eligible to participate in our annual incentive compensation program as approved by our Board of Directors, with target potential annual incentive compensation of 50% of her base annual salary. On February 9, 2018, the Board of Directors increased Dr. Fardis' annual base salary from \$500,000 to \$600,000 and increased her annual cash bonus target as a percentage of her annual base salary from 50% to 100% of her base salary.

If we terminate Dr. Fardis' employment agreement without "cause" (as defined in her employment agreement), or she terminates her employment for "good reason," Dr. Fardis will be entitled to receive her base salary through the date of termination, any incentive compensation that was earned to the date of termination, and a severance payment equal to twelve months' base annual salary and a full year's Incentive Compensation. In addition, Dr. Fardis may be entitled to additional severance payments under certain circumstances. Further, there will be a twelve-month acceleration of her unvested stock options and unvested time-based restricted stock units, and she will have twelve months from the date of termination within which to exercise her vested options.

In the event of a "change of control" (as defined in her employment agreement) of the Company, all of Dr. Fardis' unvested time-based stock options and all unvested restricted stock units will vest immediately, whether or not her employment is terminated. If, either before or after a change in control, Dr. Fardis' employment is terminated by us for any reason other than "cause" or she were to terminate her employment for "good reason," Dr. Fardis will be entitled to receive all of the cash payments she would be entitled to receive in the event we were to terminate her employment without "cause."

Timothy E. Morris. On August 4, 2017, entered into an Executive Employment Agreement with Mr. Morris pursuant to which agreed to serve as our Chief Financial Officer, effective August 14, 2017. Under his employment agreement, we agreed to pay Mr. Morris an annual base salary of \$450,000. In connection with his employment, we granted Mr. Morris a ten-year incentive stock option to purchase up to an aggregate of 250,000 shares of common stock at an exercise price of \$5.05, which was equal to the closing trading price of our common stock on the date of his employment. Provided that Mr. Morris is still employed with us on the following dates, the Option will vest in installments as follows: (i) options for the purchase of one-third of the 250,000 shares shall vest on August 14, 2018; and (ii) the remaining options shall vest as to one-twelfth of 250,000 shares at the end of each quarter over the next two years after August 14, 2018. Mr. Morris will be eligible to participate in our annual cash bonus program applicable to executive employees, as approved annually by the Board of Directors. The maximum potential amount payable to Mr. Morris under the bonus plan, if earned, is 40% of his base salary earned during the applicable calendar year. Compensation under the bonus plan will be conditioned on the satisfaction of individual and corporate objectives, as established in writing by our Compensation Committee, and on the condition that Mr. Morris is still employed by us on the payment date of the bonus compensation. Mr. Morris's annual salary was increased to \$460,000, effective February 15, 2019.

Mr. Morris's employment is "at-will" and not be for any pre-determined period of time. If the Company terminates Mr. Morris without cause, Mr. Morris will receive (i) his base salary through the date of termination; (ii) a severance payment equal to six months of his then base salary, provided he satisfies the severance conditions set forth in his employment agreement; and (iii) any benefits required to be paid in accordance with applicable benefit plans through the date of termination. If Mr. Morris' employment is terminated without cause in connection with a "change of control" (as defined in the employment agreement) of the Company, in addition to the foregoing termination payments, Mr. Morris will receive a change of control severance payment equal to six months of his then base salary, his prorated Incentive Compensation, and any of his time-based unvested stock options will become fully vested.

Frederick G. Vogt, Ph.D., Esq. On August 7, 2016, we entered into an Executive Employment Agreement with Frederick G. Vogt, Ph.D., Esq., under which Dr. Vogt agreed to serve as our Vice President of Intellectual Property, effective September 30, 2016. In his employment agreement, we agreed to pay Dr. Vogt an annual base salary of \$300,000 and a signing bonus of \$50,000. In addition, effective as of September 30, 2016, we granted him stock options to purchase an aggregate of 200,000 shares of our common stock. The stock options have an exercise price of \$8.23, equal to the fair market value of the common stock at the close of trading on the Nasdaq Global Market as of the date of grant. The employment agreement provided that the foregoing stock options would vest in three installments as follows: (i) options for the purchase of 66,672 shares vested on the one-year anniversary of the effective date of his employment; and (ii) the remaining stock options vest as to 16,672 shares at the end of each quarter over the next two years. Dr. Vogt is eligible to participate in our annual incentive compensation program as approved by our Board of Directors, with target potential annual incentive compensation of 30% of his base annual salary earned during the applicable calendar year, which was increased to 40% when he was promoted to General Counsel on July 1, 2017. Dr. Vogt's annual salary was increased to \$375,000, effective February 1, 2018, and to \$400,000, effective February 15, 2019.

Dr. Vogt's employment is "at-will", and either party can terminate the employment agreement and Dr. Vogt's employment without cause at any time. If we terminate Dr. Vogt's employment without cause (as defined in his agreement), whether or not in connection with a "change of control" (as defined in the agreement), Dr. Vogt will receive a severance payment equivalent to six months of his then-current base salary and all of Dr. Vogt's unvested stock options will become fully vested, and he shall have six months from the date of termination within which to exercise his vested options.

#### **2010 Equity Compensation Plan**

On March 29, 2010, our Board of Directors adopted the 2010 Equity Compensation Plan (the "2010 Plan") pursuant to which the Board of Directors reserved an aggregate of 35,000 shares of common stock for future issuance. The 2010 Plan provided for awards of incentive stock options, non-qualified stock options, rights to acquire restricted stock, rights to acquire unrestricted stock, and stock appreciation rights, or SARs, but since we did not obtain stockholder approval of the 2010 Plan within twelve months after the date our Board of Directors adopted the 2010 Plan, incentive stock options could not be granted thereunder. As of October 2011, options for the issuance of all 35,000 shares had been granted. As of December 31, 2017, as a result of certain forfeitures by former employees, 13,250 shares were available for future grant under the 2010 Plan. However, we have decided not to grant any awards under the 2010 Plan in the future.

#### **2011 Equity Incentive Plan**

As of October 14, 2011, we adopted our 2011 Equity Incentive Plan (the "2011 Plan"). Employees, directors, consultants and advisors of the Company are eligible to participate in the 2011 Plan. The 2011 Plan initially had 180,000 shares of common stock reserved for issuance in the form of incentive stock options, non-qualified options, common stock, and grant appreciation rights. The 2011 Plan was not approved by our stockholders within the required one-year period following its adoption and, accordingly, no incentive stock options can be granted under the 2011 Plan. In August 2013 our Board of Directors and a majority of our stockholders approved an amendment to increase the number of shares available under the 2011 Plan from 180,000 shares to 1,900,000 shares, and an amendment to increase the number options or other awards that can be granted to any one person during a twelve-month period from 50,000 shares to 300,000 shares. The foregoing amendment to the 2011 Plan became effective in September 2013. As of December 31, 2017, as a result of certain forfeitures by former employees, 592,490 shares were available for future grant under the 2011 Plan.

#### **2014 Equity Incentive Plan**

On September 19, 2014, our Board of Directors adopted the Iovance Biotherapeutics, Inc. 2014 Equity Incentive Plan (the "2014 Plan"). The 2014 Plan was approved by our stockholders at the Annual Meeting of Stockholders held in November 2014. On June 10, 2016, our Board of Directors amended the 2014 Plan to increase the total number of shares that can be issued under the 2014 Plan to 9,000,000 shares. The foregoing increase in the number of shares available under the 2014 Plan was approved by our stockholders at the Annual Meeting of Stockholders held on August 16, 2016.

The 2014 Plan contains provisions that are designed to protect our stockholders' interests and to reflect strong corporate governance practices, including:

- *Continued broad-based eligibility for equity awards.* We have granted stock options to our full-time employees. By doing so, we link employee interests with stockholder interests throughout the organization and motivate our employees to act as owners of the business.
- *Stockholder approval is required for additional shares.* The 2014 Plan does not contain an annual "evergreen" provision. The 2014 Plan authorizes a fixed number of shares available under the plan, so that stockholder approval is required to issue any additional shares beyond those already approved under the 2014 Plan.
- *No discount stock options or stock appreciation rights.* All stock options and stock appreciation rights are intended to have an exercise price equal to or greater than the fair market value of our common stock on the date the stock option or stock appreciation right is granted.
- *The Board is prohibited from taking action related to the 2014 Plan that would be treated as a repricing under generally accepted accounting principles without the approval of our stockholders.* The 2014 Plan requires that the Board of Directors obtain the approval of our stockholders before taking actions that would be deemed to be a repricing under generally accepted accounting principles, including reducing the exercise price of any outstanding stock option and/or cancelling and re-granting any outstanding stock option to reduce the exercise price of the option.

General. The 2014 Plan provides for awards of incentive stock options, non-statutory stock options, rights to acquire restricted stock, and stock appreciation rights, or SARs. Incentive stock options ("ISOs") granted under the 2014 Plan are intended to qualify as "incentive stock options" within the meaning of Section 422 of the Code. Non-qualified stock options (NQSOs) granted under the 2014 Plan are not intended to qualify as incentive stock options under the Code. See "Certain Federal Income Tax Consequences" below for a discussion of the principal federal income tax consequences of awards under the 2014 Plan.

Purpose. Our Board of Directors adopted the 2014 Plan to provide a means by which our employees, directors and consultants may be given an opportunity to benefit from increases in the value of our common stock, to assist in attracting and retaining the services of such persons, to bind the interests of eligible recipients more closely to our Company's interests by offering them opportunities to acquire shares of our common stock and to afford such persons stock-based compensation opportunities that are competitive with those afforded by similar businesses.

Administration. Our Board of Directors has authorized our Compensation Committee to administer the 2014 Plan, although the Board of Directors also, from time to time, participates in the administration of the 2014 Plan and the grant of options. Subject to the provisions of the 2014 Plan, our Compensation Committee has the power to determine in its discretion: (a) to grant options and SARs and grant or sell restricted stock; (b) to determine the fair market value of the shares of common stock subject to options or other awards; (c) to determine the exercise price of options granted, which shall be no less than the fair market value of any common stock on the date of grant, the economic terms of SARs granted, which shall provide for a benefit of the appreciation on common stock over not less than the value of our common stock on the date of grant, or the offering price of restricted stock; (d) to determine the persons to whom, and the time or times at which, options or SARs shall be granted or restricted stock granted or sold, and the number of shares subject to each option or SAR or the number of shares of restricted stock granted or sold; (e) to construe and interpret the terms and provisions of the 2014 Plan, of any applicable agreement and all options and SARs granted under the 2014 Plan, and of any restricted stock award under the 2014 Plan; (f) to prescribe, amend, and rescind rules and regulations relating to the 2014 Plan; (g) to determine the terms and provisions of each option and SAR granted and award of restricted stock (which need not be identical), including but not limited to, the time or times at which options and SARs shall be exercisable or the time at which the restrictions on restricted stock shall lapse; (h) with the consent of the grantee, to rescind any award or exercise of an option or SAR; (i) to modify or amend the terms of any option, SAR or restricted stock (with the consent of the grantee or holder of the restricted stock if the modification or amendment is adverse to the grantee or holder); (j) to accelerate or defer (with the consent of the grantee) the exercise date of any option or SAR or the date on which the restrictions on restricted stock lapse; (k) to issue shares of restricted stock to an optionee in connection with the accelerated exercise of an option by such optionee; (l) to authorize any person to execute on behalf of our Company any instrument evidencing the grant of an option, SAR or award of restricted stock; (m) to determine the duration and purposes of leaves of absence which may be granted to participants without constituting a termination of their employment for the purpose of the 2014 Plan; and (n) to make all other determinations deemed necessary or advisable for the administration of the 2014 Plan, any applicable agreement, option, SAR or award of restricted stock.

The Compensation Committee granted our Chief Executive Officer the authority to grant options to (i) newly hired non-executive employees, and (ii) non-executive employees as part of year-end bonus compensation. The Compensation Committee established a limit on the number of shares that may be granted and certain other parameters within which non-executive options could be granted by our Chief Executive Officer.

Eligibility. Incentive stock options may be granted under the 2014 Plan only to employees of our Company and its affiliates. Employees, directors and consultants of our Company and its affiliates are eligible to receive all other types of awards under the 2014 Plan.

Terms of Options and SARs. The exercise price of incentive stock options may not be less than the fair market value of our common stock subject to the option on the date of the grant and, in some cases, may not be less than 110% of such fair market value. The exercise price of nonstatutory options also may not be less than the fair market value of our common stock on the date of grant.

Options granted under the 2014 Plan may be exercisable in increments, or “vest,” as determined by our Board of Directors. Our Board of Directors has the power to accelerate the time as of which an option may vest or be exercised, with the consent of the optionee. The maximum term of options and SARs under the 2014 Plan is ten years, except that in certain cases the maximum term is five years. Options and SARs awarded under the 2014 Plan generally will terminate 90 days after termination of the participant’s service, subject to certain exceptions.

A recipient may not transfer an incentive stock option otherwise than by will or by the laws of descent and distribution. During the lifetime of the recipient, only the recipient may exercise an option or SAR. Our Board of Directors may grant nonstatutory stock options and SARs that are transferable to the extent provided in the applicable written agreement.

Terms of Restricted Stock Awards. Our Board of Directors or the Compensation Committee may issue shares of restricted stock under the 2014 Plan as a grant or for such consideration, including services, and, subject to the Sarbanes-Oxley Act of 2002, promissory notes, as determined in its sole discretion.

Shares of restricted stock acquired under a restricted stock purchase or grant agreement may, but need not, be subject to forfeiture to us or other restrictions that will lapse in accordance with a vesting schedule to be determined by our Board of Directors or the Compensation Committee. In the event a recipient’s employment or service with our Company terminates, any or all of the shares of common stock held by such recipient that have not vested as of the date of termination under the terms of the restricted stock agreement may be forfeited to our Company in accordance with such restricted stock agreement.

Rights to acquire shares of our common stock under the restricted stock purchase or grant agreement shall be transferable by the recipient only upon such terms and conditions as are set forth in the restricted stock agreement, as our Board of Directors shall determine in its discretion, so long as shares of common stock awarded under the restricted stock agreement remain subject to the terms of such agreement

Adjustment Provisions. If our common stock is changed by reason of a stock split, reverse stock split, stock dividend, recapitalization, combination or reclassification, then the number and class of shares of stock subject to each option and SAR outstanding under the 2014 Plan, and the exercise price of each outstanding option and the base value of SAR, will be automatically and proportionately adjusted, except that our company will not be required to issue fractional shares as a result of any such adjustments. Such adjustment in any outstanding option or SAR will be made without change in the total price applicable to the unexercised portion of the option or SAR, but with a corresponding adjustment in the price for each share covered by the unexercised portion of the option or SAR.

Effect of Certain Corporate Events. Except as otherwise provided in an applicable employment agreement, in the event of (i) a liquidation or dissolution of our Company, (ii) a merger or consolidation of our Company with or into another corporation or entity (other than a merger with a wholly-owned subsidiary), or (iii) a sale of all or substantially all of the assets of our Company in a single transaction or a series of related transactions, all options and SARs will terminate upon consummation of the transaction unless our Board of Directors determines that they will survive. If our Board of Directors determines that outstanding options and SARs will survive, and if our Company will not be the surviving entity in the transaction, our Board of Directors may provide that the outstanding options and SARs will be assumed or an equivalent option or SAR substituted by an applicable successor entity or any affiliate of the successor entity. If outstanding options and SARs are to terminate upon consummation of the corporate transaction, any options or SARs outstanding immediately prior to the consummation of the corporate transaction will be deemed fully vested and exercisable immediately prior to the consummation of the corporate transaction (provided that the option or SAR has not expired by its terms and that the grantee takes all steps necessary to exercise the option or SAR prior to the corporate transaction as required by the agreement evidencing the option or SAR).

Duration, Amendment and Termination. Our Board of Directors may suspend or terminate the 2014 Plan without stockholder approval or ratification, subject to certain restrictions, at any time or from time to time. Unless sooner terminated, the 2014 Plan will terminate ten years from the date of its adoption by our Board of Directors, or on September 19, 2024.

Our Board of Directors may also amend the 2014 Plan at any time, and from time to time. However, except as relates to adjustments upon changes in common stock, no amendment will be effective unless approved by our stockholders to the extent stockholder approval is necessary to preserve incentive stock option treatment for federal income tax purposes. Our Board of Directors may submit any other amendment to the 2014 Plan for stockholder approval in its discretion.

#### Certain Federal Income Tax Consequences of the 2014 Plan

Section 162(m). For the purposes of complying with the requirements under Section 162(m) of the Code relating to the deductibility for federal income tax purposes of employee expense associated with awards under the 2014 Plan of more than \$1 million to “covered employees” within the meaning of Section 162(m), the 2014 Plan as originally approved by our Board of Directors and our stockholders provided that no eligible person shall be granted options or other awards during any twelve-month period covering more than 500,000 shares. This so-called Section 162(m) limitation was increased to 550,000 by the amendment to the 2014 Plan adopted by our board of directors on June 1, 2016. The amended limitation will not satisfy the requirements to Section 162(m) unless and until the limitation is approved by our stockholders. We are not seeking stockholder approval of this recent amendment at the Annual Meeting, but our Board of Directors may determine to present the amended Section 162(m) limitation for stockholder approval in the future.

Non-qualified Stock Options. There will be no federal income tax consequences to either the Company or the participant upon the grant of a non-discounted NQSO. However, the participant will realize ordinary income on the exercise of the NQSO in an amount equal to the excess of the fair market value of the common stock acquired upon the exercise of such option over the exercise price, and the Company will receive a corresponding deduction. The gain, if any, realized upon the subsequent disposition by the participant of the common stock will constitute short-term or long-term capital gain, depending on the participant’s holding period.

**Incentive Stock Options.** There will be no regular federal income tax consequences to either the Company or the participant upon the grant or exercise of an ISO. If the participant does not dispose of the shares of common stock for two years after the date the option was granted and one year after the acquisition of such shares of common stock, the difference between the aggregate option price and the amount realized upon disposition of the shares of common stock will constitute long-term capital gain or loss, and the Company will not be entitled to a federal income tax deduction. If the shares of common stock are disposed of in a sale, exchange or other “disqualifying disposition” during those periods, the participant will realize taxable ordinary income in an amount equal to the excess of the fair market value of the common stock purchased at the time of exercise over the aggregate option price (adjusted for any loss of value at the time of disposition), and the Company will be entitled to a federal income tax deduction equal to such amount, subject to the limitations under Section 162(m) of the Code.

While the exercise of an incentive stock option does not result in current taxable income, the excess of (1) the fair market value of the option shares at the time of exercise over (2) the exercise price, will be an item of adjustment for purposes of determining the participant’s alternative minimum tax income.

**SARs.** A participant receiving an SAR will not recognize income, and the Company will not be allowed a tax deduction, at the time the award is granted. When a participant exercises the SAR, the amount of cash and the fair market value of any shares of common stock received will be ordinary income to the participant and will be allowed as a deduction for federal income tax purposes to the Company, subject to limitations under Section 162(m) of the Code. In addition, the Board of Directors or the Compensation Committee, may at any time, in its discretion, declare any or all awards to be fully or partially exercisable and may discriminate among participants or among awards in exercising such discretion.

**Restricted Stock.** Unless a participant makes an election to accelerate recognition of the income to the date of grant, a participant receiving a restricted stock award will not recognize income, and the Company will not be allowed a tax deduction, at the time the award is granted. When the restrictions lapse, the participant will recognize ordinary income equal to the fair market value of the common stock, and the Company will be entitled to a corresponding tax deduction at that time, subject to the limitations under Section 162(m) of the Code.

### **2018 Equity Incentive Plan**

On March 9, 2018, our Board of Directors adopted the Iovance Biotherapeutics, Inc. 2018 Equity Incentive Plan (the “2018 Plan”). The 2018 Plan was approved by our stockholders at the Annual Meeting of Stockholders held on June 6, 2018. Except with respect to awards then outstanding, unless sooner terminated, the 2018 Plan will expire on the tenth anniversary of the date it was approved by stockholders and no further awards may be granted after such date.

The 2018 Plan contains provisions that are designed to protect our stockholders’ interests and to reflect strong corporate governance practices, including:

- *Stockholder approval is required for additional shares.* The 2018 Plan does not contain an annual “evergreen” provision that provides for automatic increases of shares on an ongoing basis. The 2018 Plan authorizes a fixed number for our share reserve, so that stockholder approval is required to issue any additional shares from the 2018 Plan once we have used all shares available for issuance. The 2018 Plan is not an inducement plan, and therefore requires stockholder approval under the Nasdaq Stock Market Rules.

- *No discounted stock options or stock appreciation rights.* All stock options and stock appreciation rights will have an exercise price equal to or greater than the fair market value of our common stock on the date the stock option or stock appreciation right is granted.
- *Repricing is not allowed without stockholder approval.* The 2018 Plan prohibits the repricing or exchange of underwater stock options and stock appreciation rights without prior stockholder approval.
- *Reasonable share counting provisions.* In general, when awards granted under the 2018 Plan lapse or are canceled, the shares reserved for those awards will be returned to the share reserve and be available for future awards. However, the 2018 Plan prohibits shares tendered or withheld to pay the exercise price of an award or for payment of taxes to be returned to our share reserve.

Administration. Our Board of Directors has authorized our Compensation Committee to administer the 2018 Plan, although the Board of Directors also, from time to time, participates in the administration of the 2018 Plan and the grant of options. The Compensation Committee has the authority to determine the terms and conditions of any agreements evidencing any awards granted under the 2018 Plan and to adopt, alter and repeal rules, guidelines and practices relating to the 2018 Plan. The Compensation Committee has full discretion to administer and interpret the 2018 Plan and to adopt such rules, regulations and procedures as it deems necessary or advisable and to determine, among other things, the time or times at which the awards may be exercised and whether and under what circumstances an award may be exercised.

Eligibility. Any current or prospective employees, directors, officers, consultants or advisors of the Company or its affiliates who are selected by the Compensation Committee are eligible for awards under the 2018 Plan. The Compensation Committee will have the sole and complete authority to determine who will be granted an award under the 2018 Plan.

Number of Shares Authorized. Pursuant to the 2018 Plan, we have reserved an aggregate of 6,000,000 shares of our common stock for issuance of awards to be granted thereunder. All of the shares of our common stock reserved under the plan may be issued as incentive stock options under the 2018 Plan. The maximum number of equity awards that may be awarded to the non-employee members of the Board of Directors for serving on the Board of Directors, shall be an amount equal to the product of 50,000 times the number of non-employee members on the Board of Directors; provided, that the foregoing limitation shall not apply in respect of any awards issued to a non-employee director in respect of (i) any one-time equity grant upon a non-employee director's initial appointment or election to the Board of Directors, or (ii) equity grants for services provided to the Company other than services as a member of the Board of Directors. The total amount of awards granted annually to the non-employee members of the Board of Directors may be allocated amongst the non-employee members of the Board of Directors in a manner determined by the Board of Directors. If any award granted under the 2018 Plan expires, terminates, or is canceled or forfeited without being settled, vested or exercised, shares of our common stock subject to such award will again be made available for future grants. Any shares that are surrendered or tendered to pay the exercise price of an award or to satisfy withholding taxes owed, or any shares reserved for issuance, but not issued, with respect to settlement of a stock appreciation right, will not again be available for grants under the 2018 Plan.

Change in Capitalization. If there is a change in our capitalization in the event of a stock or extraordinary cash dividend, recapitalization, stock split, reverse stock split, reorganization, merger, consolidation, split-up, split-off, spin-off, combination, repurchase or exchange of shares of our common stock or other relevant change in capitalization or applicable law or circumstances, such that the Compensation Committee determines that an adjustment to the terms of the 2018 Plan (or awards thereunder) is necessary or appropriate, then the Compensation Committee shall make adjustments in a manner that it deems equitable. Such adjustments may be to the number of shares reserved for issuance under the 2018 Plan, the number of shares covered by awards then outstanding under the 2018 Plan, the limitations on awards under the 2018 Plan, or the exercise price of outstanding options, or such other equitable substitution or adjustments as the Compensation Committee may determine appropriate.



Awards Available for Grant. The Compensation Committee may grant awards of non-qualified stock options, incentive (qualified) stock options, stock appreciation rights (“SARs”), restricted stock awards, restricted stock units, other stock-based awards, other cash-based awards or any combination of the foregoing. Awards may be granted under the 2018 Plan in assumption of, or in substitution for, outstanding awards previously granted by an entity acquired by the Company or with which the Company combines, which are referred to herein as “Substitute Awards.”

Stock Options. The Compensation Committee will be authorized to grant options to purchase shares of our common stock that are either “qualified,” meaning they are intended to satisfy the requirements of Section 422 of the Code for incentive stock options, or “non-qualified,” meaning they are not intended to satisfy the requirements of Section 422 of the Code. All options granted under the 2018 Plan shall be non-qualified unless the applicable award agreement expressly states that the option is intended to be an incentive stock option. Options granted under the 2018 Plan will be subject to the terms and conditions established by the Compensation Committee. Under the terms of the 2018 Plan, the exercise price of the options will not be less than the fair market value (or 110% of the fair market value in the case of an incentive stock option granted to a 10% stockholder) of our common stock on the date of grant (except with respect to Substitute Awards). Options granted under the 2018 Plan will be subject to such terms, including the exercise price and the conditions and timing of exercise, as may be determined by the Compensation Committee and specified in the applicable award agreement. The maximum term of an option granted under the 2018 Plan will be ten years from the date of grant (or five years in the case of an incentive stock option granted to a 10% stockholder), provided that if the term of a non-qualified option would expire at a time when trading in the shares of our common stock is prohibited by the Company’s insider trading policy, the option’s term shall be extended automatically until the 30th day following the expiration of such prohibition (as long as such extension shall not violate Section 409A of the Code). Payment in respect of the exercise of an option may be made in cash, by check, by cash equivalent or by such other method as the Compensation Committee may permit in its sole discretion, including, to the extent permitted by the Compensation Committee, (i) by delivery of shares of our common stock valued at the fair market value on the date the option is exercised, provided that such shares are not subject to any pledge or other security interest, (ii) by delivery of other property having a fair market value equal to the exercise price and all applicable required withholding taxes, (iii) if there is a public market for the shares of our common stock at such time, by means of a broker-assisted cashless exercise mechanism or (iv) by means of a “net exercise” procedure effected by withholding the minimum number of shares otherwise deliverable in respect of an option that are needed to pay the exercise price and up to the maximum withholding taxes, or any combination of the foregoing. In all events of cashless or net exercise, any fractional shares of common stock will be settled in cash.

Stock Appreciation Rights. The Compensation Committee will be authorized to award SARs under the 2018 Plan. SARs will be subject to the terms and conditions established by the Compensation Committee. A SAR is a contractual right that allows a participant to receive, in the form of either cash, shares or any combination of cash and shares, the appreciation, if any, in the value of a share over a certain period of time. An option granted under the 2018 Plan may include SARs, and SARs may also be awarded to a participant independent of the grant of an option. SARs granted in connection with an option shall be subject to terms similar to the option corresponding to such SARs, including with respect to vesting and expiration. Except as otherwise provided by the Compensation Committee (in the case of Substitute Awards or SARs granted in tandem with previously granted options), the strike price per share of our common stock underlying each SAR shall not be less than 100% of the fair market value of such share, determined as of the date of grant and the maximum term of a SAR granted under the 2018 Plan will be ten years from the date of grant.

Restricted Stock. The Compensation Committee will be authorized to grant restricted stock under the 2018 Plan, which will be subject to the terms and conditions established by the Compensation Committee. Restricted stock is common stock that is generally non-transferable and is subject to other restrictions determined by the Compensation Committee for a specified period. Any accumulated dividends will be payable at the same time that the underlying restricted stock vests.

**Restricted Stock Unit Awards.** The Compensation Committee will be authorized to grant restricted stock unit awards, which will be subject to the terms and conditions established by the Compensation Committee. A restricted stock unit award, once vested, may be settled in a number of shares of our common stock equal to the number of units earned, in cash equal to the fair market value of the number of shares of our common stock earned in respect of such restricted stock unit award or in a combination of the foregoing, at the election of the Compensation Committee. Restricted stock units may be settled at the expiration of the period over which the units are to be earned or the Compensation Committee may establish a program for deferred delivery, in compliance with Section 409A of the Code. To the extent provided in an award agreement, the holder of outstanding restricted stock units shall be entitled to be credited with dividend equivalent payments upon the payment by us of dividends on shares of our common stock, either in cash or, at the sole discretion of the Compensation Committee, in shares of our common stock having a fair market value equal to the amount of such dividends (or a combination of cash and shares), and interest may, at the sole discretion of the Compensation Committee, be credited on the amount of cash dividend equivalents at a rate and subject to such terms as determined by the Compensation Committee, which accumulated dividend equivalents (and interest thereon, if applicable) shall be payable at the same time that the underlying restricted stock units are settled.

**Other Stock-Based Awards.** The Compensation Committee will be authorized to grant awards of unrestricted shares of our common stock, rights to receive grants of awards at a future date, other awards denominated in shares of our common stock, or awards that provide for cash payments based in whole or in part on the value of our common stock under such terms and conditions as the Compensation Committee may determine and as set forth in the applicable award agreement.

**Effect of a Change in Control.** Unless otherwise provided in an award agreement, or any applicable employment, consulting, change in control, severance or other agreement between us and a participant, in the event of a change in control (as defined in the 2018 Plan), if a participant's employment or service is terminated by us other than for cause (and other than due to death or disability) within the 12-month period following a change in control, then (i) all then-outstanding options and SARs held by such participant will become immediately exercisable as of such participant's date of termination with respect to all of the shares subject to such option or SAR; and/or (ii) the restricted period (and any other conditions) shall expire as of such participant's date of termination with respect to all of the then-outstanding shares of restricted stock or restricted stock units held by such participant (including without limitation a waiver of any applicable performance goals); provided that with respect to any award whose vesting or exercisability is otherwise subject to the achievement of performance conditions, the portion of such award that shall become fully vested and immediately exercisable shall be based on the assumed achievement of actual or target performance as determined by the Compensation Committee and, unless otherwise determined by the Compensation Committee, prorated for the number of days elapsed from the grant date of such award through the date of termination. In addition, the Compensation Committee may in its discretion and upon at least ten days' notice to the affected persons, cancel any outstanding award and pay the holders, in cash, securities or other property (including of the acquiring or successor company), or any combination thereof, the value of such awards based upon the price per share of the Company's common stock received or to be received by other shareholders of the Company in connection with the transaction (it being understood that any option or SAR having a per-share exercise price or strike price equal to, or in excess of, the fair market value (as of the date specified by the Compensation Committee) of a share of the Company's common stock subject thereto may be canceled and terminated without payment or consideration therefor). Notwithstanding the above, the Compensation Committee shall exercise such discretion over the timing of settlement of any award subject to Section 409A of the Code at the time such award is granted.

**Nontransferability.** Each award may be exercised during the participant's lifetime by the participant or, if permissible under applicable law, by the participant's guardian or legal representative. No award may be assigned, alienated, pledged, attached, sold or otherwise transferred or encumbered by a participant other than by will or by the laws of descent and distribution unless the Compensation Committee permits the award to be transferred to a permitted transferee (as defined in the 2018 Plan).

Amendment. Our Board of Directors may amend, suspend or terminate the 2018 Plan at any time, subject to stockholder approval if necessary to comply with any tax, stock exchange rules, or other applicable regulatory requirement. No amendment, suspension or termination will materially and adversely affect the rights of any participant or recipient of any award without the consent of the participant or recipient.

The Compensation Committee may, to the extent consistent with the terms of any applicable award agreement, waive any conditions or rights under, amend any terms of, or alter, suspend, discontinue, cancel or terminate, any award theretofore granted or the associated award agreement, prospectively or retroactively; provided, that any such waiver, amendment, alteration, suspension, discontinuance, cancellation or termination that would materially and adversely affect the rights of any participant with respect to any award theretofore granted will not to that extent be effective without the consent of the affected participant; and provided further that, without stockholder approval, (i) no amendment or modification may reduce the exercise price of any option or the strike price of any SAR, (ii) the Compensation Committee may not cancel any outstanding option and replace it with a new option (with a lower exercise price) or cancel any SAR and replace it with a new SAR (with a lower strike price) or, in each case, with another award or cash in a manner that would be treated as a repricing (for compensation disclosure or accounting purposes), (iii) the Compensation Committee may not take any other action considered a repricing for purposes of the stockholder approval rules of the applicable securities exchange on which our common shares are listed and (iv) the Compensation Committee may not cancel any outstanding option or SAR that has a per-share exercise price or strike price (as applicable) at or above the fair market value of a share of our common stock on the date of cancellation and pay any consideration to the holder thereof. However, stockholder approval is not required with respect to clauses (i), (ii), (iii) and (iv) above with respect to certain adjustments on changes in capitalization.

#### Certain Federal Income Tax Consequences of the 2018 Plan

Stock Options. Holders of incentive stock options will generally incur no federal income tax liability at the time of grant or upon vesting or exercise of those options. However, the spread at exercise will be an “item of tax preference,” which may give rise to “alternative minimum tax” liability for the taxable year in which the exercise occurs. If the holder does not dispose of the shares before the later of two years following the date of grant and one year following the date of exercise, the difference between the exercise price and the amount realized upon disposition of the shares will constitute long-term capital gain or loss, as the case may be. Assuming the holding period is satisfied, no deduction will be allowed to us for U.S. federal income tax purposes in connection with the grant or exercise of the incentive stock option. If, within two years following the date of grant or within one year following the date of exercise, the holder of shares acquired through the exercise of an incentive stock option disposes of those shares (a “disqualifying disposition”), the participant will generally realize taxable compensation at the time of such disposition equal to the difference between the exercise price and the lesser of the fair market value of the share on the date of exercise or the amount realized on the subsequent disposition of the shares, and that amount will generally be deductible by us for U.S. federal income tax purposes, subject to the possible limitations on deductibility under Sections 280G and 162(m) of the Code. Any additional gain and any loss would be a capital gain or loss. The applicable capital gain tax rate will depend on the length of the Participant’s share holding period measured from the exercise date. Finally, if an incentive stock option becomes first exercisable in any one year for shares having an aggregate value in excess of \$100,000 (based on the grant date value), the portion of the incentive stock option in respect of those excess shares will be treated as a non-qualified stock option for federal income tax purposes.

No income will be realized by a participant upon grant or vesting of an option that does not qualify as an incentive stock option (“a non-qualified stock option”). Upon the exercise of a non-qualified stock option, the participant will recognize ordinary compensation income in an amount equal to the excess, if any, of the fair market value of the purchased shares on the date of exercise over the option exercise price, and the participant’s tax basis will equal the sum of the compensation income recognized and the exercise price paid. We will be able to deduct this same excess amount for U.S. federal income tax purposes, subject to the possible limitations on deductibility under Sections 280G and 162(m) of the Code. In the event of a sale of shares received upon the exercise of a non-qualified stock option, any appreciation or depreciation after the exercise date generally will be taxed as capital gain or loss and will be long-term gain or loss if the holding period for such shares is more than one year.

SARs. No income will be realized by a participant upon grant or vesting of a SAR. Upon the exercise of a SAR, the participant will recognize ordinary compensation income in an amount equal to the fair market value of the payment received in respect of the SAR. We will be able to deduct this same amount for U.S. federal income tax purposes, subject to the possible limitations on deductibility under Sections 280G and 162(m) of the Code.

Restricted Stock. A participant will not be subject to tax upon the grant of an award of restricted stock unless the participant elects to be taxed on the date of grant pursuant to Section 83(b) of the Code. On the date an award of restricted stock is no longer subject to a substantial risk of forfeiture (i.e., the vesting date), the participant will have taxable compensation equal to the difference between the fair market value of the shares on that date over the amount the participant paid for such shares, if any, unless the participant made an election under Section 83(b) of the Code to be taxed on the date of grant. If the participant made an election under Section 83(b), the participant will have taxable compensation on the date of grant equal to the difference between the fair market value of the shares on the date of grant over the amount the participant paid for such shares, if any. If the election is made, the participant will not be allowed a deduction for, or recoupment of, taxes paid on account of shares that fail to vest or on account of any subsequent decrease in the value of the shares. (Special rules apply to the receipt and disposition of restricted shares received by officers and directors who are subject to Section 16(b) of the Exchange Act). We will be able to deduct, in the same year as it is recognized by the participant, the amount of taxable compensation to the participant for U.S. federal income tax purposes, subject to the possible limitations on deductibility under Sections 280G and 162(m) of the Code.

Restricted Stock Units. A participant will not be subject to tax upon the grant or vesting of a restricted stock unit award. Rather, upon the delivery of shares or cash pursuant to a restricted stock unit award, the participant will have taxable compensation equal to the fair market value of the number of shares (or the amount of cash) the participant actually receives with respect to the award. We will be able to deduct the amount of taxable compensation to the participant for U.S. federal income tax purposes, subject to the possible limitations on deductibility under Sections 280G and 162(m) of the Code.

#### Section 409A

Code Section 409A imposes complex rules on nonqualified deferred compensation arrangements, including requirements with respect to elections to defer compensation and the timing of payment of deferred amounts. Depending on how they are structured, certain equity-based awards may be subject to Code Section 409A, while others are exempt. If an award is subject to Code Section 409A and a violation occurs, the compensation is includible in income when no longer subject to a substantial risk of forfeiture and the participant may be subject to a 20% penalty tax and, in some cases, interest penalties. The 2018 Plan and awards granted under the 2018 Plan are intended to be exempt from or conform to the requirements of Code Section 409A.

#### Section 162(m) and the Company's Deduction.

Generally, whenever a participant recognizes ordinary income under the 2018 Plan, a corresponding deduction is available to the Company, provided that the Company complies with certain reporting requirements. However, under Code Section 162(m), the Company will be denied a deduction for compensation paid to certain senior executives that exceeds \$1,000,000, unless the compensation is "performance-based compensation" within the meaning of the Code.

Beginning January 1, 2018, with the passage and signing of the Tax Cuts and Jobs Act (“TCJA”), this limitation will apply to the Company’s Chief Executive Officer, Chief Financial Officer, the Company’s three next highest-paid executive officers, and anyone who was such a covered person starting with 2017. Prior to January 1, 2018, certain performance-based compensation was excluded from the \$1,000,000 deduction limit. Under the TCJA, beginning January 1, 2018 (with an exception for certain grandfathered arrangements), the Company will be denied a deduction for any compensation exceeding \$1,000,000.

### Equity Compensation Plan Information

The following table summarizes, as of December 31, 2018, (i) the number of shares of our common stock that are issuable under our equity compensation plans upon the exercise of outstanding options, and other rights, (ii) the weighted-average exercise price of such options and rights, and (iii) the number of securities remaining available for future issuance under our equity compensation plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
2018 Equity Incentive Plan	-	-	6,000,000
2014 Equity Incentive Plan	6,262,570	\$ 10.21	579,809
Equity compensation plans not approved by our stockholders: <sup>(1)</sup>			
2010 Equity Compensation Plan	2,000	\$ 117.00	33,000
2011 Equity Incentive Plan	624,717	\$ 10.32	376,240
Total	6,889,287	\$ 10.25	6,989,049

- (1) Our Board of Directors adopted our 2010 Equity Compensation Plan and our 2011 Equity Incentive Plan. However, we did not submit either of those plans to our stockholders for their approval. Accordingly, while we have adopted these equity compensation plans, these plans are not stockholder-approved plans.

### CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

#### Certain Relationships and Related Transactions

Other than employment agreements with our named executive officers and other payments made to our named executive officers, all as described above under the section entitled “Executive Compensation — Compensation of Executive Officers,” and compensation paid to directors as described above in the section titled “Executive Compensation - Director Compensation,” the following is a description of all transactions since January 1, 2017 to which we have been a party, and in which (i) the amounts involved exceeded or will exceed \$120,000, and (ii) our directors and named executive officers or holders of more than 5% of our common stock, or any member of the immediate family of the foregoing persons or entities affiliated with them, had or will have a direct or indirect material interest.

On September 8, 2017 we entered into a three-year consulting agreement (the “Consulting Agreement”) with Iain Dukes, D. Phil, the Chairman of our Board of Directors. Under the Consulting Agreement, Dr. Dukes agreed to consult with us regarding business development opportunities, licensing transactions and technology acquisitions, and any such strategic initiatives appropriate for the Company that Dr. Dukes may identify. In consideration for his services, we granted Dr. Dukes a ten-year, non-qualified stock option to purchase up to 150,000 shares of our common stock at an exercise price of \$7.30 per share (the closing trading price of the common stock on the Nasdaq Global Market on September 8, 2017). The stock option vests in 12 quarterly installments (with 1/12th of the option shares having vested on the date of grant). The vesting of the stock option will accelerate, and the entire stock option will become fully vested upon the closing of a significant licensing transaction, a material product acquisition, a material strategic transaction, or upon a Change of Control transaction. A “Change of Control” is defined to mean: (1) a merger or consolidation or the sale or exchange by our of capital stock, where our stockholders do not obtain or retain, directly or indirectly, at least a majority of the beneficial interest in the voting stock or other voting equity of the surviving or acquiring corporation or other surviving or acquiring entity, in substantially the same proportion as before such transaction; (2) any transaction or series of related transactions to which this Company is a party in which in excess of fifty percent (50%) of our voting power is transferred; or (3) the sale or exchange of all or substantially all of our assets, where our stockholders do not obtain or retain, directly or indirectly, at least a majority of the beneficial interest in the voting stock or other voting equity of the corporation or other entity acquiring our assets, in substantially the same proportion as before such transaction.

Jay Venkatesan, M.D., was a member of our Board of Directors from September 3, 2013 until March 1, 2018. In July 2017, we filed a post-effective amendment to a registration statement on Form S-3 to register the public sale of certain securities we sold in a private placement in 2013. Also included in that Form S-3 registration statement also were 2,823,333 shares of this Company’s common stock owned by Ayer Capital Partners Master Fund, L.P. and Ayer Capital Partners Kestrel Fund, LP (collectively, “Ayer”). Dr. Venkatesan is the manager of the Ayer funds.

In July 2017, we filed a post-effective amendment to a registration statement on Form S-3 to register the public sale of certain securities, including 446,433 shares owned by General McPeak, a member of our Board of Directors.

Sanford J. Hillsberg, a former member of our Board of Directors, was an attorney at TroyGould PC. TroyGould PC rendered legal services to our company in 2018 and has continued to render legal services in 2019. We paid TroyGould PC \$0.5 million in fees in 2018. Mr. Hillsberg did not provide any legal services to our Company during 2018.

#### **Director Independence**

Our Board of Directors has determined that General McPeak, Mr. Rothbaum, Mr. Maynard and Dr. Weiser qualify as “independent directors” as defined under the applicable Nasdaq Stock Market Rules and the rules of the SEC, satisfy the independence criteria set forth in Rule 10A-3 under the Exchange Act, and have no material relationships with us (either directly or as a partner, stockholder or officer of any entity) that are inconsistent with a finding of their independence as members of our Board of Directors. Our Board of Directors has determined that Mr. Maynard, General McPeak and Dr. Weiser, the current members of our Audit Committee, also are “independent” for purposes of service as the members of our Audit Committee.

#### **SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

The following table sets forth certain information regarding the beneficial ownership of our common stock as of the Record Date by (i) each person who is known by us to own more than 5% of the outstanding common stock; (ii) each of our directors and director nominees; (iii) each of our named executive officers listed in the “Compensation of Executive Officers” table; and (iv) all of our current named executive officers and directors as a group. This table is based upon information supplied by officers, directors and principal stockholders and Schedules 13D and 13G and amendments thereto filed with the SEC. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all shares that they beneficially owned, subject to community property laws where applicable. As of the Record Date, a total of 123,514,231 shares of common stock were outstanding, a total of 194 shares of Series A Preferred were outstanding, and a total of 5,854,845 shares of Series B Preferred were outstanding. Our shares of Series A Preferred and Series B Preferred do not have voting rights.

Name and Address of Beneficial Owner	Common Stock	
	Number of Shares	Percent of Class (1)
<b>5% and Greater Stockholders</b>		
Perceptive Advisors LLC Joseph Edelman Perceptive Life Sciences Master Fund Ltd 51 Astor Place, 10 <sup>th</sup> Floor New York, NY 10003 (2)	12,339,072(2)	9.9%
venBio Select Advisor LLC 120 West 45th Street, Suite 2802 New York, NY 10036 (3)	11,738,961(3)	9.5%
Quogue Capital LLC 1171 S. Ocean Blvd. Delray Beach, FL 33483 (4)	9,000,000(4)	7.3%
BlackRock Inc. 55 East 52nd Street New York, NY 10055 (5)	8,780,191(5)	7.1%
Franklin Resources, Inc. One Franklin Parkway San Mateo, CA 94403 (6)	8,283,464(6)	6.7%

#### Named Executive Officers and Directors

Merrill A. McPeak	682,833(7)	*
Michael Weiser, M.D., Ph.D.	178,882(8)	*
Ryan D. Maynard	181,250(9)	*
Maria Fardis, Ph.D.	858,350(10)	*
Timothy E. Morris	145,833(9)	*
Frederick G. Vogt, Ph.D., Esq.	191,699(9)	*
Wayne Rothbaum	9,000,000(11)	7.3%
Iain Dukes, D. Phil.	304,500(12)	*
All directors, director nominees and current executive officers as a group (8 persons)	11,543,347(13)	9.3%

\* Less than 1%.

- (1) Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Shares of common stock subject to options, warrants and convertible securities currently exercisable or convertible, or exercisable or convertible within 60 days, are deemed outstanding, including for purposes of computing the percentage ownership of the person holding such option, or convertible security, but not for purposes of computing the percentage of any other holder.
- (2) Based on information disclosed in a Schedule 13G filed with the SEC on February 14, 2019 by Perceptive Advisors LLC, according to which Perceptive Advisors LLC and Joseph Edelman beneficially own 12,241,305 shares, all of which are held by Perceptive Life Sciences Master Fund Ltd., a private investment fund to which Perceptive Advisors LLC serves as the investment manager. Mr. Edelman is the managing member of Perceptive Advisors LLC. Excludes 908,724 shares of our common stock issuable upon the conversion of Series B Preferred shares. Under the terms of the Series A Preferred and Series B Preferred shares, the holder does not have the right to convert the preferred stock to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of 4.99% (which limit was increased to 9.99% upon notice by Perceptive Advisors LLC). Additionally, the beneficial ownership limitation for the Series B Preferred shares will not apply to the extent that the holder's ownership was, immediately prior to such conversion, required to report, or exempt from reporting, his, her or its holdings and transactions relating to our securities pursuant to Section 16 of the Exchange Act.

- (3) Based on information disclosed in a Schedule 13G/A filed with the SEC on February 13, 2019 by (i) venBio Select Advisor LLC, a Delaware limited liability company, which provides investment advisory and management services and has acquired the foregoing securities solely for investment purposes on behalf of venBio Select Fund LLC, a Delaware limited liability company, and certain managed accounts and (ii) Behzad Aghazadeh, who serves as the portfolio manager and controlling person of venBio Select Advisor LLC. The number of shares beneficially owned consists of 11,000,000 shares of our common stock and 738,961 shares of our common stock issuable upon conversion of Series B Preferred shares. Under the terms of the Series B Preferred, the holder does not have the right to convert the preferred stock to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of 4.99% (which limit was increased to 9.99% upon notice by venBio Select Advisor LLC). Additionally, the beneficial ownership limitation for the Series B Preferred shares will not apply to the extent that the holder's ownership was, immediately prior to such conversion, required to report, or exempt from reporting, his, her or its holdings and transactions relating to our securities pursuant to Section 16 of the Exchange Act.
- (4) Based on information disclosed in a Schedule 13D/A filed with the SEC on December 7, 2018 by Quogue Capital LLC, the number of shares beneficially owned consists of 7,067,333 shares of our common stock and 1,932,667 shares of our common stock issuable upon conversion of Series B Preferred shares owned by Quogue Capital LLC. Mr. Rothbaum is the sole managing member of Quogue Capital LLC and may be deemed to beneficially own the shares owned by Quogue Capital LLC. Under the terms of the Series B Preferred shares, the holder does not have the right to convert the preferred stock or exercise the warrant to the extent that after giving effect to such exercise, the holder (together with its affiliates) would beneficially own in excess of 4.99% (which limit was increased to 9.99% upon notice by Mr. Rothbaum); provided, however, that the beneficial ownership limitation for the Series B Preferred shares will not apply to the extent that the holder's ownership was, immediately prior to such conversion, required to report, or exempt from reporting, his, her or its holdings and transactions relating to our securities pursuant to Section 16 of the Exchange Act. Therefore, the 9.99% limitation does not apply to Mr. Rothbaum or Quogue Capital LLC.
- (5) Based on information disclosed in a Schedule 13G filed with the SEC on February 13, 2019 by Blackrock, Inc., according to which Blackrock, Inc. beneficially owns 8,780,191 shares, with sole voting power over 8,559,912 shares and sole dispositive power over 8,780,191 shares. The registered holders of the referenced shares are funds and accounts under management by investment adviser subsidiaries of BlackRock, Inc. BlackRock, Inc. is the ultimate parent holding company of such investment adviser entities.
- (6) Based on information disclosed in a Schedule 13G/A filed on January 28, 2019 by Franklin Resources, Inc. ("FRI"), Charles B. Johnson, Rupert H. Johnson, Jr. and Franklin Advisers, Inc., regarding their beneficial ownership as of December 31, 2018. According to this Schedule 13G/A, these securities are beneficially owned by one or more open- or closed-end investment companies or other managed accounts that are investment management clients of investment managers that are direct and indirect subsidiaries of FRI. Charles B. Johnson and Rupert H. Johnson, Jr. each own in excess of 10% of the outstanding common stock of FRI and are the principal stockholders of FRI. Franklin Advisers, Inc., one of the subsidiaries of FRI, has sole voting power and sole dispositive power with respect to 8,224,464 shares and Fiduciary Trust Company International, one of the subsidiaries of FRI, has sole voting and dispositive power with respect to 59,000 shares.



- (7) Represents 456,583 shares of common stock and options to purchase 226,250 shares of common stock that are exercisable currently or within 60 days of the Record Date.
- (8) Represents 102,632 shares owned by Dr. Weiser and 76,250 options that are exercisable currently or within 60 days of the Record Date. Does not include 28,484 shares owned by Actin Capital Partners, LLC. Dr. Weiser holds a position in Actin Capital Partners, LLC but does not have voting or dispositive control over the 28,484 shares held by Actin Capital Partners, LLC, and thus disclaims beneficial ownership of these shares, except to the extent of his pecuniary interest therein.
- (9) Represents options to purchase shares of common stock that are exercisable currently or within 60 days of the Record Date.
- (10) Represents 267,382 shares owned and 7,639 shares of common stock that are issuable upon vesting of restricted stock units, and 583,329 options to purchase shares of common stock that are exercisable currently or within 60 days of the Record Date.
- (11) Represents the shares of common stock owned by Quogue Capital LLC described in footnote (4) above. Mr. Rothbaum is the sole managing member of Quogue Capital LLC and may be deemed to beneficially own the shares owned by Quogue Capital LLC.
- (12) Represents 12,000 shares of common stock and 292,500 options to purchase shares of common stock that are exercisable currently or within 60 days of the Record Date.
- (13) Includes 7,639 shares of common stock that are issuable upon vesting of restricted stock units and options to purchase 1,697,111 shares of common stock that are exercisable currently or within 60 days of the Record Date.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE COMPENSATION OF THE COMPANY’S NAMED EXECUTIVE OFFICERS.**

**PROPOSAL NO. 3 - APPROVAL OF AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION, AS AMENDED, TO INCREASE THE NUMBER OF AUTHORIZED SHARES OF OUR COMMON STOCK**

Our Charter currently authorizes us to issue a total of 150,000,000 shares of common stock, with a par value of \$0.000041666 per share, and 50,000,000 shares of preferred stock, with a par value of \$0.001 per share, for a total of 200,000,000 shares of all classes. In December 2018, our Board of Directors approved an amendment to our Charter (the “Authorized Shares Amendment”) to increase the number of shares of authorized common stock from 150,000,000 shares to 300,000,000 shares, subject to stockholder approval, and consequently the total number of shares of all classes increased to 350,000,000.

Approval of the Authorized Shares Amendment requires the affirmative vote of the holders of a majority of the shares outstanding. Brokers are authorized to vote without instructions on this proposal. Abstentions are included in the shares present at the Meeting for purposes of determining whether a quorum is present, and are counted as a vote against for purposes of determining whether the foregoing proposal is approved.

Our Board of Directors has unanimously determined that the Authorized Shares Amendment is advisable and in the best interests of the Company and our stockholders and recommends that our stockholders approve the Authorized Shares Amendment. In accordance with the General Corporation Law of the State of Delaware (the “DGCL”), we are hereby seeking approval of the Authorized Shares Amendment by our stockholders. No other changes to our Charter are being proposed, including with respect to the number of authorized shares of our preferred stock. The Authorized Shares Amendment is not intended to modify the rights of existing stockholders in any material respect. The additional shares of common stock to be authorized pursuant to the proposed Authorized Shares Amendment will be identical to the shares of common stock currently authorized and outstanding under our Charter, none of which have preemptive or similar rights to acquire the newly authorized shares. Under the DGCL, our stockholders are not entitled to appraisal rights with respect to the proposed Authorized Shares Amendment to increase the number of authorized shares of common stock, and we will not independently provide stockholders with any such rights.

### **Reasons for the Authorized Shares Amendment**

Our Board of Directors is proposing the Authorized Shares Amendment to increase the number of authorized shares of our common stock from 150,000,000 shares to 300,000,000 shares, and consequently increase the total number of shares of all classes from 200,000,000 to 350,000,000. Of the 150,000,000 shares of common stock that are currently authorized to be issued under the Charter, as of the Record Date, 123,514,231 shares are issued and outstanding, including shares reserved for issuance under our equity plans. Therefore, we currently have only a limited number of authorized shares of common stock available for future issuance.

In determining the magnitude of the Authorized Shares Amendment, the Board considered a number of factors, including our historical issuances of shares and potential future needs, our need to issue additional shares in connection with one or more future equity transactions, acquisitions or other strategic transactions and future issuances under equity compensation plans.

The additional authorized shares will be available for issuance from time to time to enable us to respond to future business opportunities requiring the issuance of shares, including the consummation of equity-based financings involving common stock or securities convertible into or exercisable for common stock (“equity-linked securities”), acquisition or strategic joint venture transactions involving the issuance of common stock or equity-linked securities, grants of common stock and equity-linked securities to our current and future employees and directors, or for other general corporate purposes that our Board of Directors may deem advisable from time to time.

Our Board of Directors believes that the proposed increase in the number of authorized shares of common stock will also benefit us by improving our ability to raise funding through the issuance of shares of common stock. As of the date of this proxy statement, we have no current plans, arrangements or understandings regarding the issuance of any additional shares of common stock that would be authorized pursuant to this proposal, and there are no negotiations pending with respect to the issuance thereof for any purpose. Our Board of Directors does not intend to issue any common stock except on terms which our Board of Directors deems to be in the best interests of our Company and its then existing stockholders.

### **Potential Effects of Not Approving the Authorized Shares Amendment**

Without an increase in the number of authorized shares of common stock, we may be constrained in our ability to raise capital in a timely fashion or at all and may be unable to complete our clinical programs, commercialize our products, or conduct important business activities, which could adversely affect our financial performance and growth. For example, if the stockholders do not approve this proposal, then we may not have needed additional shares available or may be required to seek stockholder approval in connection with a transaction, which may delay or otherwise have a material adverse effect on us. If our Company’s stockholders do not approve the increase in authorized shares of common stock, then our Company will not be able to increase the total number of authorized shares of common stock from 150,000,000 to 300,000,000, and therefore, the Company could be limited in its ability to use shares of common stock for financing, issuing stock options or other general corporate purposes.

## Potential Effects of Approving the Authorized Shares Amendment

The proposed increase in the number of authorized shares of common stock will not have any immediate effect on the rights of our existing stockholders. However, the Board will have the authority to issue the additional shares of common stock without requiring future stockholder approval of such issuances, except as may be required by applicable law or rules of any stock exchange on which our securities may be listed, including The Nasdaq Global Market. The issuance of additional shares of common stock may decrease the relative percentage of equity ownership of our existing stockholders, thereby diluting the voting power of their common stock.

While the issuance of additional shares of common stock may be deemed to have potential anti-takeover effects, including by delaying or preventing a change in control of our Company through subsequent issuances of these shares and the other reasons set forth above, which, among other things, could include issuances in one or more transactions that would make a change in control of our Company more difficult, and therefore, less likely, this proposal to increase the authorized common stock is not prompted by any specific effort of which we are aware to accumulate shares of our common stock or obtain control of our Company. A takeover may be beneficial to independent stockholders because, among other reasons, a potential suitor may offer such stockholders a premium for their shares of common stock as compared to the then-existing market price. Although the issuance of additional shares of common stock could, under certain circumstances, have an anti-takeover effect, this proposal to adopt the amendment is not in response to any effort to which our Company is aware to accumulate common stock or obtain control of our Company.

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. Stockholders do not have preemptive rights with respect to our common stock. Therefore, should the Board determine to issue additional shares of common stock, existing stockholders would not have any preferential rights to purchase such shares in order to maintain their proportionate ownership thereof.

We can provide no assurance that we will be successful in amending our Charter to increase the number of shares of common stock that are available for issuance, or that the Authorized Shares Amendment will not have an adverse effect on our stock price.

Our directors and executive officers have no substantial interests, directly or indirectly, in the matters set forth in this proposed amendment, except to the extent of their ownership in shares of our common stock and securities convertible or exercisable for common stock.

## Effectiveness of the Authorized Shares Amendment

The form of the Authorized Shares Amendment is attached as Appendix A to this proxy statement. If the Authorized Shares Amendment is approved by our stockholders, it will become effective upon the acceptance by the Secretary of State of the State of Delaware of the filing of the Authorized Shares Amendment. Such filing is expected to occur promptly after stockholder approval of this proposal. If this proposal is not approved, our Charter would remain unchanged and the number of authorized shares of common stock would remain 150,000,000. Other than as described herein, this proposed Authorized Shares Amendment effects no other changes to our Charter.

**THE BOARD OF DIRECTORS RECOMMENDS A VOTE IN FAVOR OF APPROVAL OF AN AMENDMENT TO OUR CERTIFICATE OF INCORPORATION, AS AMENDED, TO INCREASE THE NUMBER OF AUTHORIZED SHARES OF OUR COMMON STOCK.**

#### PROPOSAL NO. 4 - RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Our Audit Committee appointed Marcum LLP as our independent registered public accounting firm for 2019. Marcum LLP served as our independent registered public accounting firm and audited our consolidated financial statements for our fiscal years ended December 31, 2018, 2017, and 2016. Representatives of Marcum LLP are expected to be present at the Annual Meeting, will have an opportunity to make a statement if they so desire, and will be available to respond to appropriate questions.

At the Annual Meeting, our stockholders are being asked to ratify the appointment of Marcum LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2018. Our Audit Committee is submitting the appointment of Marcum LLP to our stockholders because we value our stockholders' views on our independent registered public accounting firm and as a matter of good corporate governance. Notwithstanding this appointment of Marcum LLP as our independent registered public accounting firm, and even if our stockholders ratify that appointment, our Audit Committee, in its discretion, may appoint another independent registered public accounting firm at any time during our 2018 fiscal year if our Audit Committee believes that such a change would be in the best interests of our Company and our stockholders.

If our stockholders do not ratify the appointment of Marcum LLP, our Audit Committee may reconsider the appointment.

#### Fees Paid to the Independent Registered Public Accounting Firm

The following table presents fees for professional audit services and other services rendered to our Company by Marcum LLP for our fiscal years ended December 31, 2018 and 2017, respectively.

	2018	2017
Audit fees:	\$ 375,965	\$ 329,148
Audit related fees:	\$ -	\$ -
Tax fees:	\$ -	\$ -
All other fees:	\$ -	\$ -
Total	\$ 375,965	\$ 329,148

In the above table, "audit fees" are fees for professional services for the audit of the Company's financial statements included in its Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and the fiscal year ended December 31, 2017, including internal control attestations, and review of financial statements included in its quarterly reports on Form 10-Q and for services that are normally provided in connection with regulatory filings and public offerings. "Audit-related fees" represent fees for professional services for assurance and related services that are reasonably related to the performance of the audit or review of financial statements and that are not reported under the "audit fees" category. "Tax fees" are fees for tax compliance, tax advice and tax planning.

Our Audit Committee of our Board of Directors considered whether the provision of the services described above for the fiscal years ended December 31, 2018 and 2017, is compatible with maintaining the auditor's independence. All audit and non-audit services that may be provided by our principal accountant to us require pre-approval by the Audit Committee of our Board of Directors. Further, our auditor shall not provide those services to us specifically prohibited by the SEC, including bookkeeping or other services related to the accounting records or financial statements of the audit client; financial information systems design and implementation; appraisal or valuation services, fairness opinion, or contribution-in-kind reports; actuarial services; internal audit outsourcing services; management functions; human resources; broker-dealer, investment adviser, or investment banking services; legal services and expert services unrelated to the audit; and any other service that the Public Company Accounting Oversight Board determines, by regulation, is impermissible.

## **Auditor Independence**

In our fiscal year ended December 31, 2018, there were no other professional services provided by Marcum LLP that would have required our audit committee to consider their compatibility with maintaining the independence of Marcum LLP.

## **THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE RATIFICATION OF THE APPOINTMENT OF MARCUM LLP OTHER MATTERS**

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

Section 16(a) of the Exchange Act requires our Company’s executive officers and directors, and persons who own more than 10% of a registered class of our Company’s equity securities, to file reports of ownership and changes in ownership with the SEC. Executive officers, directors and greater than 10% stockholders are required by SEC regulations to furnish our Company with copies of all Section 16(a) forms they file.

SEC regulations require us to identify in this proxy statement anyone who filed a required report late during the most recent fiscal year. Based solely on our review of forms we received, or written representations from reporting persons stating that they were not required to file these forms, we believe that during the fiscal year ended December 31, 2017, all filings required under Section 16(a) of the Exchange Act, were filed in a timely manner.

### **Fiscal Year 2018 Annual Report and SEC Filings**

Our financial statements for our fiscal year ended December 31, 2018 are included in our 2018 Annual Report, which we will make available to stockholders at the same time as this proxy statement. This proxy statement and our annual report are posted on our website at [www.iovance.com](http://www.iovance.com) and are also available from the SEC at its website at [www.sec.gov](http://www.sec.gov). You may also obtain a copy of our annual report without charge by sending a written request to the Corporate Secretary, at Iovance Biotherapeutics, Inc., 999 Skyway Road, Suite 150, San Carlos, California 94070.

\* \* \*

Our Board of Directors does not know of any other matters to be presented at the Annual Meeting. If any additional matters are properly presented at the Annual Meeting, the persons named in the enclosed proxy card will have discretion to vote the shares of our common stock they represent in accordance with their own judgment on such matters.

It is important that your shares of our common stock be represented at the Annual Meeting, regardless of the number of shares that you hold. You are, therefore, urged to vote by telephone or by using the internet as instructed on the enclosed proxy card or execute and return, at your earliest convenience, the enclosed proxy card in the envelope that has also been provided.

**THE BOARD OF DIRECTORS**  
San Carlos, California  
April 30, 2019

**APPENDIX A**

**CERTIFICATE OF AMENDMENT TO THE  
CERTIFICATE OF INCORPORATION, AS AMENDED, OF  
IOVANCE BIOTHERAPEUTICS, INC.**

Iovance Biotherapeutics, Inc., a corporation duly organized and validly existing under and by virtue of the General Corporation Law of the State of Delaware (the "Company"), does hereby certify as follows:

**FIRST:** The Certificate of Incorporation of the Company is hereby amended by deleting the first sentence of Article IV thereof in its entirety and inserting the following in lieu thereof:

"The total number of shares of all classes of stock which the Corporation shall have authority to issue is Three Hundred Fifty Million (350,000,000), consisting of (a) Three Hundred Million (300,000,000) shares of Common Stock, \$0.000041666 par value per share ("Common Stock"), and (b) Fifty Million (50,000,000) shares of Preferred Stock, \$0.001 par value per share ("Preferred Stock")."

**SECOND:** Except as explicitly amended by the foregoing amendment, the language of Article IV of the Certificate of Incorporation shall remain unchanged.

**THIRD:** All other provisions of the Certificate of Incorporation shall remain in full force and effect.

**FOURTH:** The foregoing amendment was duly adopted in accordance with the provisions of Section 242(b) of the General Corporation Law of the State of Delaware.

**FIFTH:** That this Certificate of Amendment to the Certificate of Incorporation shall be effective upon filing.

**IN WITNESS WHEREOF**, the undersigned has duly executed this Certificate of Amendment on this \_\_ day of June, 2019.

**IOVANCE BIOTHERAPEUTICS, INC.**

By: \_\_\_\_\_  
Name: Maria Fardis  
Title: Chief Executive Officer

**YOUR VOTE IS IMPORTANT. PLEASE VOTE TODAY.**


Vote by Internet – QUICK \*\*\* EASY  
IMMEDIATE – 24 Hours a Day, 7 Days a Week or by Mail

**IOVANCE  
BIOTHERAPEUTICS, INC.**

Your Internet vote authorizes the named proxies to vote your shares in the same manner as if you marked, signed and returned your proxy card. Votes submitted electronically over the Internet must be received by 11:59 p.m., Eastern Time, on June 9, 2019.

 **INTERNET/MOBILE** —  
[www.cstproxyvote.com](http://www.cstproxyvote.com)

Use the Internet to vote your proxy. Have your proxy card available when you access the above website. Follow the prompts to vote your shares.

 **MAIL** – Mark, sign and date your proxy card and return it in the postage-paid envelope provided.

**PLEASE DO NOT RETURN THE PROXY CARD  
IF YOU ARE VOTING ELECTRONICALLY.**

▲ FOLD HERE · DO NOT SEPARATE · INSERT IN ENVELOPE PROVIDED ▲

**PROXY**

Please mark  
your votes  
like this



THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED IN THE MANNER DIRECTED HEREIN BY THE UNDERSIGNED STOCKHOLDER(S). IF NO SUCH DIRECTION IS MADE, THIS PROXY WILL BE VOTED IN ACCORDANCE WITH THE BOARD OF DIRECTORS' RECOMMENDATIONS.

The Board of Directors recommends a vote "FOR" the following:

The Board of Directors recommends that you vote FOR the proposals 2, 3, and 4.

1. Election of Directors

- (1) Iain Dukes, D. Phil
- (2) Maria Fardis, Ph.D.
- (3) Ryan Maynard
- (4) Merrill A. McPeak
- (5) Wayne P. Rothbaum
- (6) Michael Weiser, M.D., Ph.D.

FOR ALL	WITHHOLD ALL	FOR ALL EXCEPT
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. To approve, by non-binding advisory vote, the compensation of our named executive officers.

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. To approve an amendment to our Certificate of Incorporation to increase authorized shares of common stock from 150,000,000 to 300,000,000.

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. To ratify the appointment of Marcum LLP as our independent registered public accounting firm for our fiscal year ending December 31, 2019.

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Instruction: To withhold authority to vote for any individual nominee, mark "For All Except" and write the nominee's name on the line below)

\_\_\_\_\_

CONTROL NUMBER

Signature \_\_\_\_\_ Signature, if held jointly \_\_\_\_\_ Date \_\_\_\_\_, 2019

Note: Please sign exactly as name appears hereon. When shares are held by joint owners, both should sign. When signing as attorney, executor, administrator, trustee, guardian, or corporate officer, please give title as such.

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

**The Annual Report, Notice and Proxy Statement are available at  
<http://www.cstproxy.com/iovance/2019>**

▲FOLD HERE · DO NOT SEPARATE · INSERT IN ENVELOPE PROVIDED ▲

**PROXY**

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

**IOVANCE BIOTHERAPEUTICS, INC.**

**Annual Meeting of Stockholders June 10, 2019 at 9:00 a.m. ET**

The undersigned stockholder(s) of Iovance Biotherapeutics, Inc. hereby appoint(s) Maria Fardis and Timothy E. Morris, or either of them, as proxies, each with the power to appoint his/her substitute, and hereby authorizes them to represent and to vote, as designated on the reverse side, all of the shares of common stock of IOVANCE BIOTHERAPEUTICS, INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held on Monday, June 10, 2019 at 9:00 a.m. at the offices of DLA Piper LLP, 1251 6th Avenue, New York, New York 10020 and any adjournment or postponement of the annual meeting.

Such proxies are authorized to vote in their discretion (i) for the election of any person to the Board of Directors if the nominees named herein becomes unable to serve or for good cause will not serve; and (ii) on such other business, if any, as may properly be brought before the meeting or any adjournment or postponement of the meeting.

(Continued, and to be marked, dated and signed, on the other side)