

INVIVO THERAPEUTICS HOLDINGS CORP.

Form PRE 14A

April 17, 2018

Table of Contents

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 the use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material under §240.14a-12

InVivo Therapeutics Holdings Corp.

(Name of Registrant as Specified In Its Charter)

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

Payment of Filing Fee (Check the appropriate box):

No fee required.

Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

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

(2) The aggregate number of securities to which transaction applies:

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

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

Fee paid previously with preliminary materials.

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

(1) Amount Previously Paid:

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

(3) Filing Party:

(4) Date Filed:

Table of Contents

PRELIMINARY PROXY MATERIALS

SUBJECT TO COMPLETION

One Kendall Square, Suite B14402

Cambridge, MA 02139

April [], 2018

Dear InVivo Stockholder:

I am pleased to invite you to attend the 2018 Annual Meeting of Stockholders (the “Annual Meeting”) of InVivo Therapeutics Holdings Corp., to be held on Wednesday, May 30, 2018 at 9 am, local time, at the WilmerHale Law Offices, 60 State Street, Boston, Massachusetts 02109.

Specific details regarding admission to the Annual Meeting and the business to be conducted at the Annual Meeting are more fully described in the accompanying Notice of Annual Meeting and proxy statement. We encourage you to carefully read these materials, as well as the enclosed Annual Report for the fiscal year ended December 31, 2017.

Your vote is very important. Whether or not you plan to attend the Annual Meeting, I hope you will vote as soon as possible. You may vote via the Internet, by telephone, or if you received a paper copy of the proxy card, by completing and returning it in the envelope provided. Voting via the Internet, by telephone or by written proxy will ensure your representation at the Annual Meeting if you do not attend in person. Please review the instructions on the proxy card regarding each of these voting options.

Thank you for your continued support.

Sincerely,

Richard Toselli, M.D.
President, Chief Executive Officer and Director

YOUR VOTE IS EXTREMELY IMPORTANT!

To ensure your representation at the Annual Meeting, please submit your proxy and voting instructions by completing, signing and dating the proxy card as promptly as possible and returning it in the enclosed envelope (to which no postage needs to be affixed if mailed in the United States), or by using one of the voting methods set forth in the attached proxy statement.

Table of Contents

INVIVO THERAPEUTICS HOLDINGS CORP.

One Kendall Square, Suite B14402
Cambridge, MA 02139

NOTICE OF 2018 ANNUAL MEETING OF STOCKHOLDERS

To Be Held On Wednesday, May 30, 2018

To Our Stockholders:

Notice is hereby given that the 2018 Annual Meeting of Stockholders (the “Annual Meeting”) of InVivo Therapeutics Holdings Corp., a Nevada corporation, will be held on Wednesday, May 30, 2018 at 9 a.m., local time, at the WilmerHale Law Offices, 60 State Street, Boston, Massachusetts 02109, for the following purposes:

- (1) to elect two Class I directors, each for a three year term
- (2) to approve an amendment to the corporation’s Articles of Incorporation to increase the number of authorized shares of our common stock;
- (3) to approve the issuance and sale by us to Lincoln Park Capital Fund, LLC, or Lincoln Park (including our prior issuances and sales of our shares of common stock to Lincoln Park since January 2018), of up to 1,200,000 shares of our common stock pursuant to the Marketplace Rules of the Nasdaq Stock Market.
- (4) to ratify the selection by the Audit Committee of RSM US LLP as the corporation’s independent registered public accounting firm for the fiscal year ending December 31, 2018; and
- (5) to transact such other business as may properly come before the meeting or any adjournment thereof.

The Board of Directors has fixed Wednesday, April 25, 2018, as the record date for the determination of stockholders entitled to notice of, and to vote at, the Annual Meeting. Accordingly, only stockholders of record at the close of business on the record date will be entitled to notice of, and to vote at, the Annual Meeting, or any adjournments thereof.

All of our stockholders are cordially invited and encouraged to attend the Annual Meeting in person. To ensure your representation at the Annual Meeting, you are urged to vote your shares of common stock using one of the voting methods set forth in the attached proxy statement. Any stockholder attending the Annual Meeting may vote in person even if he or she previously submitted a proxy card. If your shares of common stock are held by a bank, broker, or other agent, please follow the instructions from your bank, broker, or other agent to have your shares voted.

By order of the Board of Directors,

Richard Toselli, M.D.
President, Chief Executive Officer and Director

Cambridge, Massachusetts

April [•], 2018

Table of Contents

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting to be Held on May 30, 2018:
This proxy statement, the Notice of Meeting and our Annual Report on Form 10 K for the fiscal year ended December 31, 2017 (the “Annual Report”), are available on the Internet, free of charge, at <http://www.cstproxy.com/invivotherapeutics/2018>. On this website, you will be able to access this proxy statement, our Annual Report and any amendments or supplements to the foregoing materials that are required to be furnished to stockholders.

Table of Contents

TABLE OF CONTENTS

Item	Page
<u>QUESTIONS AND ANSWERS ABOUT VOTING AT THE ANNUAL MEETING AND RELATED MATTERS</u>	2
<u>PROPOSAL NO. 1—ELECTION OF DIRECTORS</u>	6
<u>CORPORATE GOVERNANCE</u>	9
<u>Director Independence</u>	9
<u>Board Meetings and Attendance</u>	9
<u>Board Leadership Structure</u>	9
<u>Board Committees</u>	10
<u>Compensation Committee Interlocks and Insider Participation</u>	12
<u>Risk Management Oversight</u>	12
<u>Code of Business Conduct and Ethics</u>	12
<u>Stockholder Communications to the Board</u>	12
<u>DIRECTOR COMPENSATION</u>	13
<u>EXECUTIVE OFFICERS</u>	15
<u>COMPENSATION DISCUSSION AND ANALYSIS</u>	16
<u>COMPENSATION COMMITTEE REPORT</u>	24
<u>EXECUTIVE COMPENSATION</u>	25
<u>Summary Compensation Table</u>	25
<u>Grants of Plan-Based Awards</u>	26
<u>Option Exercises and Stock Vested Table</u>	26
<u>Outstanding Equity Awards at Fiscal Year End</u>	27
<u>Pension Benefits</u>	27
<u>Non-Qualified Deferred Compensation</u>	27
<u>Potential Payments Upon Termination or Change in Control</u>	28
<u>SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</u>	30
<u>SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE</u>	32
<u>CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS</u>	33
<u>AUDIT COMMITTEE REPORT</u>	34
<u>PROPOSAL NO. 2—APPROVAL OF AMENDMENT TO ARTICLES OF INCORPORATION TO INCREASE NUMBER OF AUTHORIZED SHARES OF COMMON STOCK</u>	35
<u>PROPOSAL NO. 3—APPROVAL OF ISSUANCE AND SALE OF SHARES OF COMMON STOCK TO LINCOLN PARK PURSUANT TO THE MARKETPLACE RULES OF THE NASDAQ STOCK MARKET</u>	38
<u>PROPOSAL NO. 4—RATIFICATION OF THE APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM</u>	43
<u>OTHER MATTERS</u>	45
<u>Householding Information</u>	45
<u>Expenses of Proxy Solicitation</u>	45
<u>Stockholder Proposals</u>	45
<u>Other Business</u>	46

NOTE REGARDING REVERSE STOCK SPLIT

On April 16, 2018, we effected a 1:25 reverse stock split (the “Reverse Split”). All share figures set forth in this Proxy Statement reflect the Reverse Split, unless otherwise noted.

Table of Contents

INVIVO THERAPEUTICS HOLDINGS CORP.

PROXY STATEMENT

FOR THE ANNUAL MEETING OF STOCKHOLDERS
TO BE HELD ON WEDNESDAY, MAY 30, 2018

This proxy statement is being furnished to you in connection with the solicitation by the Board of Directors (the “Board”) of InVivo Therapeutics Holdings Corp. (the “company,” “we,” “us,” or “our”) of proxies, in the accompanying form, to be used at our 2018 Annual Meeting of Stockholders (the “Annual Meeting”) to be held on Wednesday, May 30, 2018 at 9 a.m., local time, at the WilmerHale Law Offices, 60 State Street, Boston, Massachusetts 02109 and any adjournment or postponement thereof. This proxy statement and the accompanying form of proxy are being mailed to stockholders on or about April [], 2018.

1

Table of Contents

Questions and Answers about Voting at the Annual Meeting and Related Matters

What am I voting on?

At the Annual Meeting, you will be asked to vote on the following four proposals. Our Board recommendation for each proposal is set forth below.

Proposal	Board Recommendation
(1) to elect two Class I directors, each to serve a three-year term expiring at the 2021 annual meeting	FOR each Director Nominee
(2) to approve an amendment to our Articles of Incorporation to increase the number of authorized shares of our common stock	FOR
(3) to approve the issuance and sale by us to Lincoln Park (including our prior issuances and sales of our shares of common stock to Lincoln Park since January 2018) of up to 1,200,000 shares of our common stock pursuant to the Marketplace Rules of the Nasdaq Stock Market.	FOR
(4) to ratify the selection by the Audit Committee of RSM US LLP as our independent registered public accounting firm for the fiscal year ending December 31, 2018	FOR

If other matters properly come before the Annual Meeting, the proxy holders will have the authority to vote on those matters on your behalf at their discretion. As of the date of this proxy statement, we are not aware of any matters that will come before the Annual Meeting other than those disclosed in this proxy statement.

Who can vote?

Holders of record of our common stock at the close of business on April 25, 2018 are entitled to vote at the Annual Meeting. As of April 25, 2018, there were [] shares of our common stock issued and outstanding. Each share of common stock issued and outstanding is entitled to one vote.

What constitutes a quorum, and why is a quorum required?

We are required to have a quorum of stockholders present to conduct business at the Annual Meeting. The presence, in person or by proxy, of stockholders holding a majority of the shares of our common stock issued and outstanding and entitled to vote at the Annual Meeting constitutes a quorum, permitting us to transact business at the Annual Meeting. Abstentions and broker non-votes are counted as present for purposes of determining a quorum. If we do not have a quorum, we will be forced to adjourn the Annual Meeting to a later date.

What is the difference between a stockholder of record and a beneficial owner?

If your shares are registered directly in your name with our transfer agent, Continental Stock Transfer & Trust Company, such that your name appears on our stock ledger, you are considered the “stockholder of record” with respect to those shares.

If your shares are held by a brokerage firm, bank, trustee or other nominee, you are considered the “beneficial owner” of shares held in street name. This proxy statement and our Annual Report have been forwarded to you by your nominee who is considered the “stockholder of record” with respect to those shares. As the beneficial owner, you have the right to direct your nominee how to vote your shares by using the voting instruction form included in the mailing.

Table of Contents

How do I vote my shares?

Stockholder of Record

If your shares are registered directly in your name, you may vote:

- By mail. Complete and mail the enclosed proxy card in the enclosed postage-prepaid envelope. Your proxy will be voted in accordance with your instructions. If you sign the proxy card but do not specify how you want your shares voted, they will be voted as recommended by our Board. Your proxy card must be mailed by the date shown on the proxy card to be counted.
- Via the Internet. You may vote via the Internet by going to <http://www.cstproxyvote.com> and following the on-screen instructions. Please have your proxy card available when you access the web page. Your vote must be received by 7:00 p.m., Eastern Daylight Time, on May 29, 2018, to be counted.
- By Telephone. You may vote over the telephone by calling toll free 1 866 894 0536 in the U.S. or Canada and following the recorded instructions. Please have your proxy card available when you call. Your vote must be received by 7:00 p.m., Eastern Daylight Time, on May 29, 2018, to be counted.
- In Person at the Annual Meeting. If you attend the Annual Meeting, you may deliver your completed proxy card in person, or you may vote by completing a ballot, which will be available at the Annual Meeting.

Beneficial Owner of Shares Held in Street Name

If you hold shares in street name, the organization holding your account is considered the stockholder of record for purposes of voting at the Annual Meeting. The stockholder of record will provide you with instructions on how to vote your shares. Internet and telephone voting will be offered to stockholders owning shares through most banks and brokers. Additionally, if you would like to vote in person at the Annual Meeting, contact the broker or other nominee who holds your shares to obtain a legal proxy from the broker or other nominee, and bring it with you to the Annual Meeting. Please contact your broker or other nominee for instructions regarding obtaining a legal proxy. You will not be able to vote at the Annual Meeting if you hold shares in street name unless you have obtained a legal proxy from your broker.

What vote is required to approve each proposal?

The affirmative vote of the holders of a plurality of the votes cast at the Annual Meeting is required for Proposal No.1, the election of the Class I directors. The affirmative vote of the holders of a majority of the voting power of our outstanding common stock is required for Proposal No. 2, the approval of an amendment to our Articles of Incorporation to increase the number of authorized shares of our common stock. The affirmative vote of the holders of a majority of the votes cast by holders of our outstanding common stock is required for Proposal No. 3, the approval of the issuance of shares of common stock to Lincoln Park. For Proposal No. 4, the ratification of RSM US LLP as our independent registered public accounting firm, the number of votes cast at the Annual Meeting in favor of the proposal must exceed the number of votes cast in opposition to such proposal in order for the proposal to be approved.

What if I sign and return my proxy without making any selections?

If you sign and return your proxy without making any selections, your shares will be voted as recommended by the Board. If other matters properly come before the Annual Meeting, the proxy holders will have the authority to vote on those matters for you at their discretion. As of the date of this proxy statement, we are not aware of any matters that will come before the meeting other than those disclosed in this proxy statement.

Table of Contents

What if I am a beneficial owner and I do not give the nominee voting instructions?

Brokerage firms have the authority to vote shares for which their customers do not provide voting instructions on certain “routine” matters. A broker non-vote occurs when a nominee who holds shares for another does not vote on a particular item because the nominee does not have discretionary voting authority for that item and has not received instructions from the owner of the shares. Broker non-votes are included in the calculation of the number of votes considered to be present at the Annual Meeting for purposes of determining the presence of a quorum but are not counted as shares present and entitled to be voted with respect to a matter on which the nominee has expressly not voted. Other than Proposal No. 1, the election of the Class I directors and Proposal No. 3, the approval of the issuance of shares of common stock to Lincoln Park, all of the proposals described in this proxy statement relate to “routine” matters. As a result, without your voting instructions, a broker will be able to vote your shares with respect to Proposals 2 and 4 but will not be able to vote your shares with respect to Proposals 1 or 3.

What if I abstain or withhold authority to vote on a proposal?

On Proposal No. 1, the election of the Class I directors, votes withheld for a particular director nominee will have no effect on the outcome of the election of directors because directors are elected by a plurality of the votes cast. On Proposal No. 2, the approval of an amendment to our Articles of Incorporation, if you sign and return your proxy marked “ABSTAIN,” it will have the same effect as a vote “AGAINST” the proposal, because the proposal requires the affirmative vote of a majority of the voting rights of our outstanding common stock. On Proposals No. 3 and No. 4, if you sign and return your proxy marked “ABSTAIN,” your shares will not be voted on that proposal and will not be counted as votes cast with regard to that proposal and, accordingly, will have no effect on the voting on the approval of the issuance of shares of common stock or the ratification of our independent registered public accounting firm.

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

If you receive more than one proxy card, it means that you hold shares of our common stock in more than one account. To ensure that all your shares are voted, sign and return each proxy card. Alternatively, if you vote by telephone or via the Internet, you will need to vote once for each proxy card you receive.

Can I change my vote after I have mailed a signed proxy card?

If you are the stockholder of record, you can change your vote at any time before your proxy is voted at the Annual Meeting by the following means:

- You can send the company’s Secretary a written notice stating that you revoke your earlier dated proxy.
 - If you signed and returned a proxy card by mail and want to change your vote, you can complete, sign, date and deliver a new proxy card, dated a later date than the first proxy card.
- If you submitted your proxy by telephone or via the Internet, you may change your vote or revoke your proxy with a later telephone or Internet proxy, as the case may be. Your new vote must be received by 7:00 p.m., Eastern Daylight Time, on May 29, 2018, to be counted.
- You can attend the Annual Meeting and vote in person. Your attendance at the Annual Meeting will not, however, by itself revoke your proxy. Even if you plan to attend the Annual Meeting, we recommend that you also submit your proxy or voting instructions or vote by telephone or via the Internet so that your vote will be counted if you later decide not to attend the Annual Meeting.

If you hold your shares in “street name” and have instructed your broker, bank, or other agent to vote your shares for you, you must follow directions received from your broker, bank, or another agent to change or revoke those instructions.

Table of Contents

Who can attend the Annual Meeting?

Only stockholders and our invited guests are invited to attend the Annual Meeting. To gain admittance, you must bring a form of personal identification to the meeting, where your name will be verified against our stockholder list. If a broker or other nominee holds your shares and you plan to attend the Annual Meeting, you should bring a recent brokerage statement showing your ownership of the shares as of the record date or a letter from the broker or other nominee confirming such ownership, and a form of personal identification.

If I plan to attend the Annual Meeting, should I still vote by proxy?

Yes. Casting your vote in advance does not affect your right to attend the Annual Meeting. If you vote in advance and also attend the Annual Meeting, you do not need to vote again at the Annual Meeting unless you want to change your vote. Written ballots will be available at the meeting for stockholders of record. Beneficial owners who wish to vote in person must request a legal proxy from the broker or other nominee and bring that legal proxy to the Annual Meeting.

5

Table of Contents

PROPOSAL NO. 1

ELECTION OF DIRECTORS

Our Board currently consists of seven directors serving on a classified board, consisting of three classes. The directors in each class serve a three-year term. The terms of each class expire at successive annual meetings so that the stockholders elect one class of directors at each annual meeting. Directors appointed due to an increase in the size of the Board may serve for a term of office continuing only until the next election of directors by the company's stockholders.

Upon the recommendation of the Nominating and Corporate Governance Committee of the Board, the Board has nominated Rich Roberts for re-election as a Class I director at the Annual Meeting and has nominated C. Ann Merrifield, who is currently a Class III director, for election as a Class I director at the Annual Meeting. Each Class I director that is elected at the Annual Meeting will be elected to serve for a three-year term that will expire at our annual meeting of stockholders to be held in 2021. Each of Dr. Roberts and Ms. Merrifield have agreed to stand for election and to serve if elected. If either Dr. Roberts or Ms. Merrifield should become unable to accept election, the persons named on the proxy card as proxies may vote for another person selected by the Board. Management has no reason to believe that either Dr. Roberts or Ms. Merrifield will be unable to serve. Each nominee for election at the Annual Meeting is a current member of our Board of Directors.

In connection with her nomination as a Class I director, we anticipate that, prior to the Annual Meeting, Ms. Merrifield will tender a conditional resignation as a Class III director, which will become effective only if she is elected at the Annual Meeting. If Ms. Merrifield is not elected as a Class I director at the Annual Meeting, she would continue to serve as a Class III director until our annual meeting of stockholders to be held in 2020. The term of one of our directors, Kenneth DiPietro, will expire at the Annual Meeting and he is not standing for re-election. Upon the expiration of Mr. DiPietro's term, the authorized size of our Board of Directors will be six.

Biographical and certain other information concerning our director nominees and our directors continuing in office is set forth below. No director or executive officer is related by blood, marriage or adoption to any other director or executive officer.

Information as to our Board of Directors and Nominees

Nominees for Class I Director with Term to Expire at the 2021 Annual Meeting

Richard J. Roberts, Ph.D., 74, has been a director of our company since October 2010 and a director of InVivo Therapeutics Corporation, our wholly owned subsidiary, since November 2008. Dr. Roberts initially joined InVivo Therapeutics Corporation's Scientific Advisory Board in June 2007 and continued as a member of our Scientific Advisory Board. He has served as Chief Scientific Officer at New England Biolabs, a life sciences company, since February 2007. Dr. Roberts was awarded the 1993 Nobel Prize in Physiology of Medicine along with Phillip Allen Sharp for the discovery of introns in eukaryotic DNA and the mechanism of gene-splicing. He holds a B.Sc. in Chemistry and a Ph.D. in Organic Chemistry from the University of Sheffield, U.K. Dr. Roberts brings the Board his significant experience and understanding of the science and technology involved in our business.

C. Ann Merrifield, 67, has been the Chair of the Board since December 2017 and has been a director of our company since November 2014. She also serves as a director of Flexion Therapeutics, a public biotechnology company, and Juniper Pharmaceuticals, a public specialty pharmaceutical company. Ms. Merrifield most recently served as President, Chief Executive Officer, and a director of PathoGenetix, Inc., a genomics company focused on developing an automated system for rapid bacterial identification, from 2012 until July 2014 when the company filed for

Chapter 7 bankruptcy. Prior to then, she spent 18 years at Genzyme Corporation, serving in a number of leadership roles including President of Genzyme Biosurgery, President of Genzyme Genetics and Senior Vice President, Business Excellence. Ms. Merrifield also serves as trustee and director on several other boards including Partners Continuing Care, the post-acute care services division of Partners HealthCare; the YMCA of Greater Boston; and MassMutual Premier, MML, and Select/MML II Funds. She holds a B.A. in zoology and a Master of Education from the University of Maine, and an

Table of Contents

M.B.A. from the Tuck School of Business at Dartmouth College. Ms. Merrifield brings to our Board an invaluable amount of experience and expertise over her long career in the life sciences industry.

Continuing Class II Directors with Term Expiring at the 2019 Annual Meeting

Daniel R. Marshak, Ph.D., 60, has been a director of our company since September 2014. Dr. Marshak has served as Chief Scientific Officer of Ferghana Partners, an investment banking firm servicing the life sciences sector, since December 2016. He has also recently served as Senior Vice President and Chief Scientific Officer for PerkinElmer, Inc., a human and environmental health company, from 2006 until September 2014. Prior to joining PerkinElmer in 2006, Dr. Marshak was Vice President and Chief Technology Officer, Biotechnology, for Cambrex Corporation. Dr. Marshak has received numerous awards for scientific and academic achievements and is named as inventor on six issued U.S. patents. He currently serves on the International Society for Stem Cell Research Global Advisory Council and served on its board of directors from July 2008 to June 2014. Dr. Marshak is the author of more than 100 scientific publications, including one textbook, and has been the editor of five monographs. He recently held an appointment as Adjunct Associate Professor at the Johns Hopkins University School of Medicine and previously taught graduate biochemistry as an Assistant Professor at the State University of New York. Dr. Marshak received his B.A. degree in biochemistry and molecular biology from Harvard University, and he holds a Ph.D. in biochemistry and cell biology from The Rockefeller University. Dr. Marshak brings to our Board extensive industry experience and a deep understanding of the science and technology behind our business.

Christina Morrison, 51, has served as a director of our company since June 2016. Ms. Morrison has served as Chief Financial Officer of Physicians Endoscopy, an ambulatory surgical center management company, since April 2018. Prior to that Ms. Morrison served as the Senior Vice President of Finance of Aramark, a foodservice, facilities and uniform services provider, from June 2013 until July 2016. Prior to joining Aramark, Ms. Morrison was Senior Vice President of Business and Financial Planning at Merck & Co., Inc., a publicly traded pharmaceutical company, from November 2009 to June 2013. Before that, Ms. Morrison spent five years at Wyeth Pharmaceuticals, a publicly traded pharmaceutical company, serving in a number of leadership roles including Senior Vice President and Chief Financial Officer of the pharmaceutical division. Ms. Morrison holds an M.B.A. from the Tuck School of Business at Dartmouth College and a B.S. in Economics from the Wharton School at the University of Pennsylvania. Ms. Morrison brings to our Board significant financial experience and a decade of experience in the pharmaceutical industry.

Continuing Class III Directors with Terms to Expire at the 2020 Annual Meeting

Richard Toselli, 60, has served as our President and Chief Executive Officer and a director since February 2018. Prior to being appointed President and Chief Executive Officer and a director, Dr. Toselli served as our Acting Chief Executive Officer from December 2017 to February 2018. Since July 2017, Dr. Toselli has also served as our Chief Medical Officer. Before joining the company, Dr. Toselli served as the Chief Medical Officer for Cochlear Limited, a medical device company, from June 2016 until March 2017. Prior to that, Dr. Toselli served at Sanofi, a pharmaceutical company, from July 2012 to June 2016 in various levels of increasing responsibility, including Vice President of Global Medical Affairs — Immunology and Inflammation, Biologics Division; Vice President of Global Medical Affairs and Head of the Biosurgery Discovery Performance Unit; and Vice President of Global Medical Affairs, Biosurgery. Before his time at Sanofi, he served as Chief Medical/Technology Officer for Covidien Public Limited Company (now Medtronic Public Limited Company), a medical device company, and earlier held the position of Vice President of Evidence-Based Medicine for the device sector at Johnson & Johnson, a medical device, pharmaceutical and consumer packaged goods manufacturing company. Prior to that, Dr. Toselli held various roles at DePuy Synthes Spine, Inc., a medical device company, including Director of Medical Affairs, Worldwide Vice President of Research and Development, and Worldwide Vice President of Clinical Evidence and External Relations. Dr. Toselli holds a bachelor of arts from Providence College, his medical degree from Brown University, and a

masters of business administration from the UNC's Kenan-Flagler Business School. Dr. Toselli is a board-certified neurological surgeon.

Jeffrey S. Hatfield, 60, has been a director of our company since November 2016. Mr. Hatfield has served as Chief Executive Officer of Zafgen, Inc. since October 2017. Previously, he served as President, Chief Executive Officer and Board Member of Vitae Pharmaceuticals, Inc., a pharmaceutical company. He served in those capacities from

7

Table of Contents

March 2004 until September 2016, when Allergan Plc entered into a definitive agreement to purchase Vitae Pharmaceuticals. Prior to joining Vitae Pharmaceuticals, Mr. Hatfield worked at Bristol-Myers Squibb, a biopharmaceutical company, which he joined in 1985. While at Bristol-Myers Squibb, Mr. Hatfield held a variety of executive positions, including Senior Vice President of Bristol-Myers Squibb's Virology and Immunology Divisions from 2000 to 2004; President and General Manager, Canada from 1997 to 2000; and Vice President, U.S. Managed Health Care from 1996 to 1997. In 2014, Mr. Hatfield became a director of Ambit Biosciences, a biopharmaceutical company. Mr. Hatfield holds an M.B.A. from The Wharton School, University of Pennsylvania and received a bachelor's degree in Pharmacy from Purdue University. Mr. Hatfield brings to our Board extensive experience in general management and over 30 years of experience in the biopharmaceutical industry.

Vote Required

The affirmative vote of a plurality of the votes cast by the holders of our common stock, present or represented by proxy at the Annual Meeting and entitled to vote, is required for the election of our director nominees.

OUR BOARD UNANIMOUSLY RECOMMENDS A VOTE "FOR" THE ELECTION OF EACH OF THE CLASS I DIRECTOR NOMINEES.

Table of Contents

CORPORATE GOVERNANCE

Director Independence

Rule 5605 of the Nasdaq Listing Rules requires a majority of a listed company's board of directors to be comprised of independent directors within one year of listing. In addition, the Nasdaq Listing Rules require that, subject to specified exceptions, each member of a listed company's audit, compensation, and nominating and corporate governance committees be independent, that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and that compensation committee members also satisfy heightened independence requirements contained in the Nasdaq Listing Rules as well as Rule 10C-1 under the Exchange Act. Under Nasdaq Rule 5605(a)(2), a director will only qualify as an "independent director" if, in the opinion of our Board, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3 under the Exchange Act, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the Board, or any other Board committee, accept, directly or indirectly, any consulting, advisory, or other compensatory fee from the listed company or any of its subsidiaries or otherwise be an affiliated person of the listed company or any of its subsidiaries. When determining the independence of the members of our compensation committee under the heightened independence requirements contained in the Nasdaq Listing Rules and Rule 10C-1 under the Exchange Act, our Board is required to consider all factors specifically relevant to determining whether a director has a relationship with us that is material to that director's ability to be independent from management in connection with the duties of a compensation committee member, including, but not limited to: (1) the source of compensation of that director, including any consulting, advisory, or other compensatory fee paid by us to that director; and (2) whether that director is affiliated with our company, a subsidiary of our company, or an affiliate of a subsidiary of our company.

Our Board has reviewed the composition of our Board and its committees and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment, and affiliations, including family relationships, our Board has determined that each of our directors, other than Dr. Toselli, is an "independent director" as defined under Rule 5605(a)(2) of the Nasdaq Listing Rules.

Our Board also determined that Ms. Morrison, Mr. Hatfield, Dr. Marshak, and Ms. Merrifield, who comprise our audit committee, and Mr. DiPietro, Mr. Hatfield, Dr. Marshak, and Dr. Roberts, who comprise our compensation committee, satisfy the independence standards for such committees established by the Securities and Exchange Commission ("SEC") and the Nasdaq Listing Rules, as applicable. In making such determinations, our Board considered the relationships that each such non-employee director has with our company and all other facts and circumstances our Board deemed relevant in determining independence, including the beneficial ownership of our capital stock by each non-employee director.

Board Meetings and Attendance

The Board held thirteen (13) meetings during 2017. Each director attended at least 75% of the total (i) regular Board meetings held during the period for which he or she was a director and (ii) meetings of the committee(s) of our Board on which he or she served (during the periods that he or she served). Our directors are encouraged, but not required, to attend our Annual Meeting of Stockholders. All of our directors then serving on the Board were in attendance at our 2017 Annual Meeting of Stockholders.

Board Leadership Structure

Our Board has chosen to separate the role of our Chief Executive Officer and the role of the Chair of the Board. In December 2017, following the resignation of its then Chairman and Chief Executive Officer Mark Perrin, the Board appointed C. Ann Merrifield, its then Lead Director, as non-executive Chair of the Board. The Board's determination to separate the offices of Chair of the Board and Chief Executive Officer is expected to enhance board independence and oversight, and to allow the Chief Executive Officer to better focus on his responsibilities of managing the company,

Table of Contents

enhancing stockholder value and expanding and strengthening our business while allowing the Chair of the Board to lead the Board in its fundamental role of providing advice to and independent oversight of management.

The Board does not have a formal policy on whether the positions of Chairman and Chief Executive Officer should be separate and continues to believe that there is no uniform solution for a board leadership structure. The company has at times separated the positions of Chairman and Chief Executive Officer and at times combined the two. Our Board will periodically review the optimal leadership structure of the Board and believes that the right structure should be informed by the needs and circumstances of our company, the Board and our stockholders.

Board Committees

The Board has designated three principal standing committees: the Audit Committee, the Nominating and Corporate Governance Committee, and the Compensation Committee.

Audit Committee

The Audit Committee assists the Board in fulfilling its responsibilities concerning our financial reporting and internal controls. The Audit Committee facilitates open communication among the Audit Committee, the Board, our independent auditor, and management. The Audit Committee discusses with management and our independent auditor the financial information developed by us, our systems of internal controls and our audit process. The Audit Committee is solely and directly responsible for appointing, evaluating, retaining, and, where necessary, terminating the engagement of our independent auditor. The independent auditor meets with the Audit Committee (both with and without the presence of our management) to review and discuss various matters pertaining to the audit, including our financial statements and its report on the company's financial statements and internal controls, as well as the scope and terms of the work of our independent auditor and its recommendations concerning the financial practices, controls, procedures and policies employed by our company. The current members of our Audit Committee are Ms. Morrison (Chairwoman), Mr. Hatfield, Dr. Marshak, and Ms. Merrifield. The Audit Committee held four meetings in 2017.

The Audit Committee pre-approves all audit services to be provided to us by our independent auditor and all other services (including reviewing, attestation and non-audit services) to be provided to us by the independent auditor.

The Audit Committee is also charged with establishing procedures for (i) the receipt, retention, and treatment of complaints received by us regarding accounting, internal accounting controls or auditing matters; and (ii) the confidential, anonymous submission by our employees of concerns regarding questionable accounting or auditing matters. The Audit Committee reviews and oversees all related party transactions on an ongoing basis. The Audit Committee is authorized, without further action by the Board, to engage independent professional advisers and counsel as it deems necessary or appropriate to carry out its responsibilities. The Board has adopted a written charter for the Audit Committee, which is reviewed annually and a copy of which is available on the "Corporate Governance" page of the "Investor Relations" section of our website at www.invivotherapeutics.com.

The Board has determined that Ms. Morrison is an "audit committee financial expert," as defined in Item 407(d)(5) of Regulation S-K.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee is charged with the responsibility of reviewing our corporate governance policies, overseeing the annual review of succession planning by the Board and with proposing potential director nominees to the Board for consideration. The Board has adopted a written charter for the Nominating and Corporate Governance Committee, which is reviewed annually and a copy of which is available in the "Investor

Relations” section of our website at www.invivotherapeutics.com.

The current members of our Nominating and Corporate Governance Committee are Ms. Merrifield (Chairwoman), Messrs. DiPietro, Dr. Roberts and Ms. Morrison. The Nominating and Corporate Governance Committee held four meetings in 2017.

10

Table of Contents

Process for Stockholder Nominations

The Nominating and Corporate Governance Committee will consider director nominees recommended by security holders pursuant to our company's Policy Governing Director Nominations and Stockholder Board Communications, which policy is reviewed by the Nominating and Corporate Governance Committee annually, a copy of which is available on the "Corporate Governance" page of the "Investor Relations" section of our website. To recommend a nominee, please write to the Nominating and Corporate Governance Committee, InVivo Therapeutics Holdings Corp., One Kendall Square, Suite B14402 Cambridge, MA 02139, Attn: Chair, Nominating and Corporate Governance Committee.

The Nominating and Corporate Governance Committee has established a set of criteria by which it will seek to evaluate candidates to serve on our Board. The evaluation includes selection based on criteria including factors such as experience and ability to exercise sound judgments in matters that relate to the current and long-term objectives of the company, high standards of personal and professional integrity, demonstrated business judgment, complimentary skill sets that can add to the functionality and collaboration with the current Board members, independence, knowledge of our company generally, age and dedication to the success of the company. While the value of diversity is considered, it would not be weighted any more or less in any evaluation process than any other criteria. The Nominating and Corporate Governance Committee will assess all director nominees using the same criteria and does not distinguish Board candidates based on whether the candidate is recommended by a stockholder of the company. During 2017, we did not receive any director nominee suggestions from stockholders. Stockholder recommendations for nomination must be in writing and include the following:

- the name and address of the stockholder making the recommendation;
- the number of shares of our common stock that such stockholder owns beneficially and holds of record;
- the name and address of the individual recommended for consideration as a director nominee;
- the principal occupation and experience of the director nominee;
- the total number of shares of our common stock that the stockholder making the recommendation will vote for the director nominee;
- a written statement from the stockholder making the recommendation stating whether the director nominee has indicated his or her willingness to serve if elected and why such recommended candidate would be able to fulfill the duties of a director; and
- any other information regarding the director nominee that is required to be included in a proxy statement filed pursuant to the rules of the SEC.

Compensation Committee

The Compensation Committee reviews and recommends compensation arrangements for our directors, management, and employees and also assists the Board in reviewing and approving matters such as company benefits and insurance plans, including monitoring the performance thereof, as discussed in more detail below under "Compensation Discussion and Analysis." The Board has adopted a written charter for the Compensation Committee, which is reviewed annually and a copy of which is available on the "Corporate Governance" page of the "Investor Relations" section of our website at www.invivotherapeutics.com.

The Compensation Committee is authorized under its charter to retain consultants to assist it in the evaluation of executive compensation and to approve the fees and other retention terms for its consultants. The Compensation Committee has retained Pearl Meyer & Partners ("Pearl Meyer") as a compensation consultant to review our compensation programs and provide advice to the Compensation Committee with respect to executive compensation.

Table of Contents

Pearl Meyer does not provide any other services to InVivo. The Committee annually reviews the independence of the consultant's work under rules adopted by the SEC and Nasdaq and found no conflicts. As appropriate, the Compensation Committee also looks to our human resources department to support the Compensation Committee in its work and to provide necessary information.

The current members of our Compensation Committee are Mr. DiPietro (Chairman) and Mr. Hatfield and Drs. Marshak and Roberts. The Compensation Committee held four meetings in 2017. Dr. Marshak will become Chairman of the Compensation Committee immediately following the Annual Meeting.

Compensation Committee Interlocks and Insider Participation

None of the members of the Compensation Committee was at any time during 2017 or at any other time an officer or employee of our company. None of our executive officers serves as a member of the board of directors or compensation committee of any other entity that has one or more executive officers serving as a member of our Board or the Compensation Committee.

Risk Management Oversight

The Board takes an active role, as a whole and at the committee level, in overseeing management of our company's risks. Generally, the Board, with the assistance of its committees, is involved in overseeing our major risk exposures and monitors and assesses those risks in reviews with management and with our outside advisors and independent registered public accounting firm. The Audit Committee reviews regulatory risk, operational risk, and enterprise risk, particularly as they relate to financial reporting, on a regular basis with management and our independent registered public accounting firm. The Nominating and Corporate Governance Committee oversees the Board's annual review of our succession planning. The Compensation Committee monitors compensation policies and compensation-related risks by review with management and outside advisors.

Code of Business Conduct and Ethics

We have adopted a Code of Business Conduct and Ethics, as amended, that applies to all employees, officers, and directors of our company, including our principal executive officer, principal financial officer and principal accounting officer or controller, or persons performing similar functions. Our Code of Business Conduct and Ethics is available on the "Corporate Governance" page of the "Investor Relations" section of our website at www.invivotherapeutics.com. A copy of our Code of Business Conduct and Ethics can also be obtained free of charge by contacting our Secretary, c/o InVivo Therapeutics Holdings Corp., One Kendall Square, Suite B14402, Cambridge, MA 02139. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8 K regarding any amendment to, or waiver from, a provision of our Code of Business Conduct and Ethics by posting such information on our website.

Stockholder Communications to the Board

All communications to our Board, our Board committees or any individual director must be in writing and addressed to our Secretary, c/o InVivo Therapeutics Holdings Corp., One Kendall Square, Suite B14402, Cambridge, MA 02139. All communications will be reviewed by the Secretary and, unless otherwise indicated in such communication, submitted to the Board or an individual director, as appropriate.

Table of Contents

DIRECTOR COMPENSATION

2017 Director Compensation

The following table sets forth the compensation of our non-employee directors for 2017. All share and share-based numbers in the footnotes to this table reflect the Reverse Split. Mr. Perrin, as an employee, did not receive any compensation as a director. For information on the compensation of Dr. Toselli, our current Chief Executive Officer, and Mr. Perrin, our former Chief Executive Officer, see “Executive Compensation” above.

Name	Fees Earned or		
	Paid in Cash (\$)	Option Awards \$(1)(2)	Total (\$)
Kenneth DiPietro	48,750	44,085	92,835
Daniel Marshak	47,500	44,085	91,585
C. Ann Merrifield(3)	65,000	44,085	109,085
Richard Roberts	43,750	44,085	87,835
Christina Morrison	53,219	44,085	97,304
Jeffrey Hatfield	46,969	—	46,969

- (1) The amounts shown in this column represent the aggregate grant date fair value of the option awards computed in accordance with ASC 718, not the actual amounts paid to or realized by the director during 2017. The assumptions used in determining grant date fair value of these awards are set forth in Note 12 to our Consolidated Financial Statements appearing in Item 8 of our Annual Report on Form 10 K for the year ended December 31, 2017 filed with the SEC on March 12, 2018.
- (2) As of December 31, 2017, the aggregate number of options to purchase shares of our common stock outstanding for each director listed above, including both vested and unvested shares, was as follows: Mr. DiPietro, 3,000; Mr. Marshak, 2,000; Ms. Merrifield, 2,000; Dr. Roberts, 4,000; Ms. Morrison, 1,500; Mr. Hatfield, 1,000. In accordance with our director compensation policy, Mr. Hatfield did not receive an annual grant of stock options in 2017 because he joined the Board within three months of the annual grant date.
- (3) Ms. Merrifield was appointed as Chair of the Board of Directors effective December 18, 2017 and the annual retainer for her role as Chair of the Board was established as \$25,000 effective January 1, 2018, replacing her annual retainer of \$15,000 as independent Lead Director. Ms. Merrifield was not paid as Chair for 2018 and the table reflects her annual retainer of \$15,000 as Independent Lead Director.

Our director compensation policy in place in 2017 provided for the following compensation to our non-employee directors:

- an annual retainer of \$35,000 per year, paid quarterly, to each non-employee director;
- an annual retainer of \$15,000, paid quarterly, to the Audit Committee chairperson, and an annual retainer of \$7,500, paid quarterly, to each member of the Audit Committee of the Board;
- an annual retainer of \$10,000, paid quarterly, to the Compensation Committee chairperson, and an annual retainer of \$5,000, paid quarterly, to each member of the Compensation Committee of the Board;
- an annual retainer of \$7,500, paid quarterly, to the Nominating and Corporate Governance Committee chairperson, and an annual retainer of \$3,750, paid quarterly, to each member of the Nominating and Corporate Governance Committee of the Board; and
- an annual retainer of \$15,000, paid quarterly, to the independent Lead Director.

Table of Contents

Non-employee directors are reimbursed for reasonable travel expenses in connection with attendance at meetings of the Board or any of its committees that are conducted in person and other activities directly related to the service to the company.

Each non-employee director also receives an annual grant of a stock option to purchase 500 shares of our common stock (post Reverse Split) at an exercise price equal to the closing price of our common stock on the date of grant. The options vest in 12 equal installments on each monthly anniversary of the date of grant until fully vested on the first anniversary of the date of grant, provided that such director remains a director of our company on each such vesting date.

Table of Contents

EXECUTIVE OFFICERS

Our executive officers as of April 1, 2018 are as follows:

Richard Toselli is our President, Chief Executive Officer, and a Director of the Board. Please see “Information as to our Board of Directors and Nominees” above for biographical information regarding Dr. Toselli.

Christopher McNulty, 41, has served as our Chief Financial Officer since March 2017. Prior to being appointed Chief Financial Officer, Mr. McNulty served as our Senior Vice President, Business Development & Investor Relations from August 2015 to March 2017. In that role, he led the company’s business development and partnering activities as well as corporate communications, including investor relations and public relations. From June 2014 to August 2015, he served as the company’s Vice President, Business Development and Investor Relations, and from November 2013 to July 2014, he served as the company’s Vice President, Business Development. Prior to joining the company, Mr. McNulty served at Repligen Corporation, a pharmaceutical and bioprocessing company, from 2010 to 2013, most recently as Senior Director of Business Development. From 2009 to 2010, he was Director of Corporate Development at Seventh Sense Biosystems, Inc., a medical device company. From 2006 to 2009, Mr. McNulty served at Genzyme Corporation, a biotechnology company, most recently as Associate Director of Alliance Management and Business Development. Before joining Genzyme, Mr. McNulty held technical roles at Transform Pharmaceuticals, Inc. from 2000 to 2004 and at Cereon Genomics, LLC from 1998 to 2000. Mr. McNulty received his B.S. and M.Eng. degrees in electrical engineering and computer science from the Massachusetts Institute of Technology. He also holds an M.B.A. from Harvard Business School.

Table of Contents

COMPENSATION DISCUSSION AND ANALYSIS

Executive Summary

This Compensation Discussion and Analysis explains our compensation philosophy, objectives, policies, and practices with respect to our Chief Executive Officer and our other named executive officers. For 2017, our named executive officers are:

- Richard Toselli, M.D., our President and Chief Executive Officer and a director, who formerly served as our Acting Chief Executive Officer from December 2017 to February 2018;
- Christopher McNulty, our Chief Financial Officer;
- Pamela Stahl, our former Chief Commercial Officer, who resigned from the company effective March 7, 2018;
- Tamara Joseph, our former SVP, General Counsel, and Chief Compliance Officer, who resigned from the company effective February 7, 2018;
- Mark D. Perrin, our former Chief Executive Officer and former Chairman of the Board, who resigned from the company effective December 18, 2017;
- Thomas Ulich, M.D., our former Chief Scientific Officer, whose position with the company was eliminated on August 28, 2017 as part of a strategic corporate restructuring; and
- Melanie Morel-Ferris, our former interim Chief Financial Officer; who served in this capacity from January 2, 2017 through March 28, 2017 and who resigned from the company effective October 27, 2017.

All share and share-based numbers in this Compensation Discussion and Analysis reflect the Reverse Split.

Compensation Philosophy and Objectives

The primary objectives of our executive compensation program are to attract, motivate, retain and reward high-quality executives, to compensate our executives with a “pay-for-performance” philosophy that rewards executives for meeting performance-based goals, and to align the interests of our executives with our stockholders by having equity-based compensation as an important portion of our executives’ total compensation.

As part of our overall compensation philosophy, we target the 25th percentile of our peer group companies for target cash compensation to our executive officers, and the median of our peer group companies for their total direct compensation (cash plus equity-based compensation). Our annual bonus program is based on the achievement of certain corporate performance goals and, in the case of our named executive officers other than our Chief Executive Officer, individual performance goals. This approach enables us to deploy more of our cash resources to advancing our clinical development programs while providing executives with strong equity opportunities, further linking their interests with those of our stockholders. In addition to aligning our compensation practices for our named executive officers with comparable companies in our industry, we also seek to have an executive compensation structure that is fair relative to other professionals within our company. Our objective is to foster a performance-oriented culture, where individual performance is aligned with business objectives and the creation of long-term stockholder value.

Role of the Compensation Committee

The Compensation Committee approves or recommends to the Board for approval the compensation of our Chief Executive Officer and all other executive officers, administers our incentive compensation and stock plans and oversees our employee benefit plans. Our Compensation Committee is appointed by the Board and consists entirely of

Table of Contents

directors who are “independent” under the Nasdaq Listing Rules, “outside directors” for purposes of Section 162(m) of the Internal Revenue Code and “non-employee directors” for purposes of Rule 16b-3 under the Exchange Act. Our Compensation Committee is currently composed of Messrs. DiPietro and Hatfield and Drs. Marshak and Roberts.

Compensation-Setting Process

The Compensation Committee reviews and recommends to our Board the compensation of our Chief Executive Officer, and reviews and approves, with input from management, the compensation of our other executive officers, including our named executive officers. This review is based on an evaluation of each officer’s performance, corporate goals and objectives, and such other information as the Compensation Committee may request, including surveys of executive compensation practices at comparable companies.

Role of our Management

Our Chief Executive Officer and our human resources and finance departments work together to develop and prepare materials requested by and to be presented to the Compensation Committee, including analyses of financial data, peer data comparisons, and other briefing materials. Our Chief Executive Officer and our Vice President, Human Resources present the compensation proposals for our named executive officers (other than our Chief Executive Officer), along with any background information, to the Compensation Committee for review and consideration. The Compensation Committee may approve, modify, or reject those proposals, or may request additional information from management on those matters. Our Chief Executive Officer does not attend any portion of meetings at which his compensation is determined.

Role of Independent Compensation Consultant

Pursuant to its charter, the Compensation Committee has the authority to select and retain independent compensation consultants or advisors, at our expense, to assist it in carrying out its duties and responsibilities. In 2017 the Compensation Committee engaged Pearl Meyer to perform duties requested by the committee including:

- providing recommendations on the composition of the Peer Group described under Competitive Market Assessment below;
- analyzing executive compensation in comparison to market benchmarks;
- updating the Compensation Committee on executive compensation market trends; and
- advising the Committee on the 2017 short-term and long-term incentive designs.

The consultant spoke with the chair of the Compensation Committee, as well as with management, in preparing for committee meetings, regularly attended committee meetings and met from time to time in executive session with the Compensation Committee without the presence of management.

Competitive Market Assessment

On an annual basis, the Compensation Committee reviews, with its compensation consultant, relevant market benchmarks for the company’s executive compensation. The Compensation Committee uses this information to ensure that it is acting on an informed basis and to establish points of reference to determine whether and to what extent it is establishing competitive levels of compensation for our named executive officers.

For 2017 compensation decisions, the Compensation Committee considered compensation information of peer group public companies in the biotechnology and pharmaceutical industries. The criteria for selection of the companies in the peer group included the size of a company, its business development stage, and how recently a company had become publicly owned. All companies in the peer group have less than 300 employees and a primary industry focus

of

17

Table of Contents

pharmaceutical products, diagnostic substances, or therapeutic preparations, with most peers having products in the preclinical to phase II product development stages. Companies were selected with various revenue sizes because we are recruiting from and competing for executive talent with companies that are generating revenue. For 2017, the peer group companies consisted of:

Acceleron Pharma, Inc.	Epizyme, Inc.
Agenus Inc.	Flexion Therapeutics, Inc.
Akebia Therapeutics, Inc.	Genocea Biosciences, Inc.
AxoGen Inc.	Idera Pharmaceuticals, Inc.
Cerulean Pharma Inc.	Organovo Holdings Inc.
Curis, Inc.	OvaScience, Inc.
Dicerna Pharmaceuticals, Inc.	Sarepta Therapeutics, Inc.
Dimension Therapeutics Inc.	Verastem, Inc.
Eleven Biotherapeutics, Inc.	ZIOPHARM Oncology, Inc.
Enanta Pharmaceuticals, Inc.	

The Compensation Committee also considered market data compiled by Pearl Meyer from industry-relevant published compensation survey data, employing the appropriate headcount and executive role perspectives, as an additional market check.

Say-on-Pay Advisory Vote

Our most recent shareholder advisory vote on executive compensation was held at our 2016 annual meeting of stockholders. At our 2016 annual meeting, approximately 84% of the votes cast approved the compensation of our named executive officers as disclosed in the proxy statement delivered to our stockholders in connection with the 2016 annual meeting. We understood this to mean that stockholders generally approved of our compensation policies and determinations in 2016. However, the Compensation Committee still undertook a review of our compensation policies and determinations following the 2016 annual meeting. After this review and in consideration of evolving best practices in executive compensation by comparable public companies in our industry, upon the recommendation of the Compensation Committee, we determined not to make any significant changes to our executive compensation decisions and policies.

Elements of Executive Compensation Program

Generally, our executive compensation program consists of five components: base salary, annual bonus incentives, long-term equity incentives, benefits, and severance or termination protection.

Base Salary. Base salary is the primary fixed component of our executive compensation program. The Compensation Committee believes that a competitive base salary is necessary to attract and subsequently retain a management team with the requisite skills to lead our company. The Compensation Committee typically reviews salaries for potential adjustments in January of each fiscal year and may make adjustments at other times as needed. Generally, our Compensation Committee believes that adjustments to base salary should reflect the responsibilities of the executive, the executive's performance for the preceding year, demand in the market for the particular executive position, and the pay of the other members of the executive team, as well as targeting our cash compensation at the 25th percentile of our peer group companies. Base salaries for our named executive officers are further described below.

Annual Incentive Bonus Plan. Our annual incentive bonus plan provides performance-based incentives that motivate and reward achievement of corporate and individual performance goals. Under the annual incentive bonus plan, goals are set at the beginning of each year that are appropriate in light of our business plans and take into consideration our financial, operational and strategic priorities. Currently, payouts under our annual incentive bonus plan to our Chief Executive Officer are based on the achievement of corporate objectives, and for other named executive officers, payouts are based on a combination of corporate objectives and individual performance goals. Corporate objectives are recommended by the Committee, with input from management and an independent external compensation consultant,

Table of Contents

and discussed with and approved by the Board. Individual performance goals for our named executive officers, other than our Chief Executive Officer, are determined by the Compensation Committee with input from our Chief Executive Officer and are intended to measure our executive officers' achievement of specific projects. At the end of each year, the Compensation Committee determines the degree to which individual performance goals have been met. The Board determines the degree to which corporate performance objectives have been met and the associated payouts to each named executive officer. The Compensation Committee may grant bonuses that are above, at, or below the individual target bonus for named executive officers, except the Chief Executive Officer, based on the level of achievement if it determines that such bonuses are warranted and are in the best interests of our company and our stockholders. The Board may grant the Chief Executive Officer a bonus that is above, at, or below the target bonus based on the level of achievement of corporate objectives if it determines that such bonus is warranted and is in the best interests of the company and our stockholders. Goals, results and approved payouts under our annual incentive plan for 2017 are further described below.

Long-Term Equity Incentives. Consistent with the practices of peer group companies, we provide equity incentive compensation to our named executive officers. These awards aim to align the interests of our executive officers with those of our stockholders to create long-term stockholder value, as well as motivate and retain talented executives.

Our named executive officers are eligible to receive annual equity awards, although an annual award is not guaranteed. Individual equity award determinations for named executive officers, except the Chief Executive Officer, are made by the Compensation Committee with respect to the frequency and size of the equity award to be granted to the named executive officers. The determination for equity awards for the Chief Executive Officer is recommended by the Compensation Committee to the Board and approved by the Board, with respect to the frequency and size of the equity award to be granted to the Chief Executive Officer. In making these determinations, the Compensation Committee considers performance relative to the strategic and financial objectives of our company and the individual performance of each named executive officer. Our equity awards generally vest over a four-year period, with 25% vesting on the first anniversary of the date of grant and thereafter on a monthly basis in 36 equal installments. At the time of hire, we typically provide our named executive officers with an equity incentive award in the form of stock options although we have also granted restricted stock units, or RSUs, in connection with hire.

We currently grant stock options and RSUs and no other forms of equity to our executive officers because we believe stock options and RSUs are consistent with the risk profile of a pre-commercial company. We review our program annually to determine the appropriate form and terms of awards in light of our business strategy.

Benefits and Perquisites. We provide the following benefits to our named executive officers generally on the same basis as the benefits provided to all employees: medical, dental and vision insurance, including a flexible spending account option, life insurance, short and long-term disability, and certain commuting expenses. We also match, in the form of shares of our common stock, contributions to our 401(k) profit sharing plan, in amounts up to 5% of each named executive officer's annual compensation. Our matching contributions become 100% vested after the employee has been employed by us for four years. In addition, in 2015 we adopted, and our stockholders approved, an employee stock purchase plan to allow our employees to purchase shares of our common stock at a discount using after-tax payroll deductions. We may also provide additional benefits or perquisites under contractual agreements to our named executive officers, including housing allowances and commuting expenses.

Severance/Termination Benefits. Under contractual agreements with our named executive officers, we have agreed to provide severance payments in connection with the termination of the executive, including in connection with a change in control. These arrangements are described in the Executive Compensation section under "Potential Payments upon Termination or Change in Control."

Compensation Decisions for 2017

Base Salaries. The initial base salaries of our named executive officers were determined upon each officer's hire based on such officer's industry experience, expertise, and demand within our industry, and may be adjusted from

Table of Contents

time to time following hiring. Please see the Summary Compensation Table below for the actual amounts paid to our named executive officers in 2017.

Named Executive Officer	2016 Salary \$(1)	Increase %	2017 Salary \$(2)
Richard Toselli(3)	n/a	n/a	435,000
Mark Perrin(4)	445,050	16.6	% 519,000
Christopher McNulty(5)	276,863	11.6	% 309,000
Melanie Morel-Ferris(6)	155,000	16.1	% 180,000
Pamela J Stahl(7)	335,000	0.0	% 335,000
Tamara Joseph(8)	256,680	3.4	% 265,491
Thomas Ulich(9)	336,375	3.8	% 349,000

- (1) Annual salaries as of January 1, 2016, including any annual increase, for incumbent executive officers, and as of the start date for new executive officers hired mid-year.
- (2) Annual salaries as of January 1, 2017, including any annual increase, for incumbent executive officers, and as of the start date for new executive officers hired mid-year.
- (3) Dr. Toselli joined our company as Acting Chief Executive Officer effective December 18, 2017 and began serving as President, Chief Executive Officer, and Director effective February 2, 2018.
- (4) Mr. Perrin resigned from our company effective December 18, 2017. Mr. Perrin's annual salary increase contemplated the elimination of certain allowances relating to relocation.
- (5) In addition to an annual increase, Mr. McNulty's salary increased from \$309,000 to \$335,000 on March 28, 2017, following his promotion to Chief Financial Officer, and Mr. McNulty's salary increased from \$276,863 to \$300,000 on June 13, 2016 in connection with expanded responsibilities.
- (6) In addition to an annual increase, Ms. Morel-Ferris' salary increased in connection with her assumption of the acting Chief Financial Officer duties on January 2, 2017. Ms. Morel-Ferris resigned from our company effective October 27, 2017.
- (7) Ms. Stahl resigned from our company effective March 7, 2018.
- (8) Ms. Joseph resigned from our company effective February 7, 2018.
- (9) Dr. Ulich's employment was terminated on August 28, 2017 as part of a strategic corporate restructuring.

Annual Incentive Bonuses. All of our named executive officers were eligible to participate in our 2017 incentive bonus plan, which consisted of corporate objectives and, for our named executive officers other than our Chief Executive Officer, individual objectives. For each of our executive officers, the Compensation Committee sets a target bonus amount expressed as a percentage of base salary. For 2017, the target bonus amount was set at 50% of base salary for our Chief Executive Officer and 35% of base salary for our other named executive officers.

For our named executive officers other than our Chief Executive Officer, the 2017 incentive bonus was weighted 75% to achievement of corporate objectives and 25% to achievement of individual objectives. For Mr. Perrin, our former Chief Executive Officer, the 2017 bonus was weighted 100% to achievement of corporate objectives. Dr. Toselli did not participate in the 2017 incentive bonus plan because he was serving as a consulting Chief Medical Officer from July 2017 to December 2017, when he assumed the role of Acting Chief Executive Officer.

The corporate objectives were set with a reasonable level of difficulty that required our named executive officers to perform at a high level to meet the objectives, and the likelihood of attaining the objectives was not assured. The Board has full discretion with respect to the amount and payment of bonuses, including adjustments to the objectives, weightings and actual amounts, and payout terms of the annual bonuses. This discretion is communicated to the

executives. In January 2018, the Board, following the recommendation of the Compensation Committee, determined that no bonuses would be awarded for 2017 for named executive officers regardless of whether any bonus objectives were met, including corporate objectives or individual objectives.

Table of Contents

The 2017 corporate objectives and weightings recommended by the Compensation Committee and approved by the Board in 2017, and the actual weightings achieved as determined by the Board for 2017 performance, were as follows:

Objective	Target Weighting	Level of Attainment(1)
1. 20 evaluable patients implanted with Neuro-Spinal Scaffold implant in probable benefit pivotal thoracic SCI clinical study	35	% 0 %
2. Initiate ex-US cervical SCI study by the end of Q 2	15	% 15 %
3. Evaluate localized delivery strategies that improve the efficacy or safety of therapeutic agents, and recommend and execute two business transactions that support the advancement of one or more therapeutic products (i.e., a cell, protein, or gene therapy) to an initial FDA meeting.(2)	25	% 0 %
4. Maintain sufficient financial resources to support company operations	25	% 0 %
Total	100	% 15 %

(1) Although the level of attainment for the objectives was 15%, in January 2018 the Board, following the recommendation of the Compensation Committee, determined that no bonuses would be awarded for 2017 for named executive officers.

(2) Examples of strategic transactions include a licensing of technology or intellectual property, a business deal to acquire or codevelop a therapeutic product such as a cell, protein, or gene therapy, a letter of commitment/intent from another institution with a synergistic asset, a manufacturing or supply partnership or agreement, or an out-license of our spinal cord delivery intellectual property.

Long-Term Equity Incentive Awards. We use equity awards to reward long-term value creation and as a retention tool. The size of the equity awards approved by our Compensation Committee for each named executive officer reflects individual contributions to company performance and competitive positioning relative to the market. In 2016, we opted to shift the timing of our annual equity awards from December to January. The long-term equity awards granted in January 2017 to our named executive officers were comprised of stock option awards.

Annual equity awards were made in January 2017, based on company and individual performance in 2016, expected future individual performance, retention considerations, and market data provided by our compensation consultant. In January 2017, the Compensation Committee awarded stock options to our named executive officers, other than our Chief Executive Officer, and the Board awarded stock options to our Chief Executive Officer, as follows (which reflect the Reverse Split):

Named Executive Officer	Stock Options (#)
Rich Toselli	n/a
Mark Perrin	12,800
Christopher McNulty	3,000
Melanie Morel-Ferris	1,000
Pamela J. Stahl(1)	1,400
Tamara Joseph	4,800
Thomas Ulich	6,000

(1) The number of options granted was pro-rated based on Ms. Stahl's appointment as Chief Commercial Officer on

September 14, 2016.

In January 2018, the Board, following the recommendation of the Compensation Committee, determined that no annual equity awards would be granted to named executive officers based on performance in 2017.

21

Table of Contents

In March 2017, the Compensation Committee granted Mr. McNulty a stock option award to purchase 1,199 shares of common stock in connection with his appointment as Chief Financial Officer, as further described below. The award to Mr. McNulty vests over a four-year period, with 25% vesting on the first anniversary of the grant date and the remainder vesting monthly in 36 equal installments until fully vested on the fourth anniversary of the grant date, provided that Mr. McNulty remains continually employed by the company on each such vesting date.

In September 2017, the Compensation Committee approved a grant to Ms. Morel-Ferris of an RSU award for 2,400 shares under the company's 2015 Equity Incentive Plan and a Restricted Stock Unit Agreement in connection with an employee retention program. The award to Ms. Morel-Ferris vested over a two-year period, with 50% vesting on the first anniversary of the grant date and 50% vesting on the second anniversary of the grant date, provided that Ms. Morel-Ferris remained continually employed by the company on each such vesting date. Ms. Morel-Ferris resigned from the company effective October 27, 2017.

In December 2017, the Compensation Committee recommended and the Board approved a grant to Dr. Toselli of an RSU award for 12,000 shares under the company's 2015 Equity Incentive Plan and a Restricted Stock Unit Agreement in connection with his appointment as Acting Chief Executive Officer, as further described below. The award to Dr. Toselli vests over a four-year period, with 25% vesting on the first anniversary of the grant date and the remainder vesting monthly in 36 equal installments until fully vested on the fourth anniversary of the grant date, provided that Dr. Toselli remains continually employed by the company on each such vesting date.

Compensation Practices and Risk

The Compensation Committee has reviewed our compensation policies as generally applicable to our employees and believes that our policies do not encourage excessive and unnecessary risk-taking, and that the level of risk that they do encourage is not reasonably likely to have a material adverse effect on the company. In making this determination, the Compensation Committee considered the following:

- Our salaries, annual bonuses and annual equity grants are largely determined based on comparisons with peer companies, and annual incentive bonuses are based on financial and/or operational performance goals and business criteria such as capital raising, regulatory filings/approvals, progress in pre-clinical and clinical trials, intellectual property filings or issuances, and business development transactions, and individual performance objectives, set by the Committee.
- The Committee has discretion to modify amounts awarded under our programs, and our system of internal control over financial reporting and code of business conduct and ethics reduce the likelihood of manipulation of our financial performance to enhance payments under any of our incentive plans.
- There is balance between short-term (bonus measures) and long-term (stock options or RSUs with service-based vesting) performance focus.
- Our severance benefits neither insulate management from risky business strategies nor provide an enticement to pursue risky strategies.

Arrangements with Named Executive Officers

Richard Toselli, President, Chief Executive Officer, and Director. Under our employment agreement with Dr. Toselli, Dr. Toselli receives an annual base salary, subject to adjustment from time to time, and is eligible to receive an annual cash bonus equal to 50% of his annual salary, subject to his performance of specified objectives to be established by the Board (or a designated Board committee) each year. Dr. Toselli is eligible to receive all medical, dental and other benefits to the same extent as provided to other senior management employees. Dr. Toselli received a one-time sign-on bonus in the amount of \$100,000 that was conditioned on his remaining an active employee on January 31, 2018 and was paid on February 1, 2018. Additionally, Dr. Toselli received a one-time bonus of \$150,000 that was conditioned upon the approval by the U.S. Food and Drug Administration of the company's proposed plans with

respect to one or more clinical trials and was paid in March 2018. In connection with becoming the company's

22

Table of Contents

Chief Executive Officer rather than Acting Chief Executive Officer, Dr. Toselli is eligible for certain severance benefits under his employment agreement.

Mark Perrin, Former Chief Executive Officer. Under our employment agreement with Mr. Perrin, Mr. Perrin received an annual base salary, subject to adjustment from time to time, and was eligible to receive an annual cash bonus equal to 50% of his annual salary, subject to his performance of specified objectives to be established by the Board (or a designated Board committee) each year. Mr. Perrin was eligible to receive all medical, dental and other benefits to the same extent as provided to other senior management employees. In connection with his relocation to the Boston area, we agreed to arrange up to 12 months of corporate housing for Mr. Perrin, and we extended this corporate housing benefit through January 2017, such amount to be subject to a tax gross-up. Mr. Perrin was eligible for certain severance benefits under his employment agreement.

Consistent with the severance terms provided to Mr. Perrin pursuant to his employment agreement, the company agreed, pursuant to the terms of a separation agreement effective December 18, 2017, to pay severance (consisting of base salary in effect at the time of termination) to Mr. Perrin upon his termination for a period of 18 months, plus health insurance benefits for a period of 6 months. In addition, the company accelerated the vesting of the unvested portion of any options held by Mr. Perrin to the extent of 12 additional months upon his termination date. The severance payments are in addition to any accrued obligations to Mr. Perrin unpaid by the company prior to the date of termination. Mr. Perrin's separation agreement includes a general release of claims.

Thomas Ulich, Former Chief Scientific Officer. Under the employment agreement with Dr. Ulich, Dr. Ulich received an annual base salary, subject to adjustment from time to time, and was eligible to receive benefits to the same extent as provided to our other senior management employees, including medical and dental benefits. We agreed to reimburse Dr. Ulich for commuting expenses related to travel between his home in New York and our headquarters. In addition, Dr. Ulich was eligible to receive an annual target bonus equal to 35% of his annual salary, subject to his performance of specified objectives to be established by our Chief Executive Officer each year. Consistent with the severance terms provided to Dr. Ulich pursuant to his employment agreement, the company agreed, in connection with his separation, to pay severance (consisting of base salary in effect at the time of termination) to Dr. Ulich upon his termination for a period of 12 months, plus health insurance benefits for a period of 6 months. The severance payments are in addition to any accrued obligations to Dr. Ulich unpaid by the company prior to the date of termination. Dr. Ulich signed a general release of claims in connection with his separation.

Christopher McNulty, Chief Financial Officer. We entered into an employment agreement with Mr. McNulty in March 2017. Under the terms of his agreement, Mr. McNulty receives an annual base salary, subject to adjustment from time to time, and is eligible to receive an annual cash bonus equal to 35% of his annual salary, subject to his performance of specified objectives to be established by the Board (or a designated Board committee) each year. Mr. McNulty is eligible to receive all medical, dental and other benefits to the same extent as provided to other senior management employees. Mr. McNulty is eligible for certain severance benefits as described in more detail under the heading "Potential Payments Upon Termination or Change in Control."

Tamara Joseph, Former SVP, General Counsel & Chief Compliance Officer. We entered into an employment agreement with Ms. Joseph in August 2015, which replaced the terms of an offer letter dated March 14, 2014, which previously governed the terms of Ms. Joseph's employment with the company. Under the terms of her agreement, Ms. Joseph received an annual base salary, subject to adjustment from time to time, and was eligible to receive an annual cash bonus equal to 35% of her annual salary, subject to her performance of specified objectives to be established by the Board (or a designated Board committee) each year. Ms. Joseph was eligible to receive all medical, dental and other benefits to the same extent as provided to other senior management employees.

Pursuant to a letter agreement dated January 19, 2018, Ms. Joseph's employment terminated effective February 7, 2018 and Ms. Joseph was entitled to the severance benefits provided under her employment agreement as described in more detail under the heading "Potential Payments Upon Termination or Change in Control." In addition, Ms. Joseph has agreed to provide consulting services to the company for six months following the termination of her employment pursuant to the terms of a consulting agreement made and entered into as of January 19, 2018 and commencing on February 9, 2018. Under the consulting agreement, Ms. Joseph will be paid an hourly rate of \$400.

Table of Contents

Pamela J. Stahl, Former Chief Commercial Officer. We entered into an employment agreement with Ms. Stahl in August 2016. Under the terms of her agreement, Ms. Stahl received an initial annual base salary, subject to adjustment from time to time, and was eligible to receive benefits to the same extent as provided to our other senior management employees, including medical and dental benefits. In addition, under the agreement, Ms. Stahl is eligible to receive an annual target bonus equal to 35% of her annual salary, subject to her performance of specified objectives to be established by our Chief Executive Officer each year. Ms. Stahl is currently eligible for certain severance benefits under her employment agreement Pursuant to a letter agreement dated March 7, 2018, Ms. Stahl's employment terminated effective March 7, 2018 and Ms. Stahl is entitled to the severance benefits provided under her employment agreement as described in more detail under the heading "Potential Payments Upon Termination or Change in Control".

COMPENSATION COMMITTEE REPORT

The Compensation Committee has reviewed and discussed with management the Compensation Discussion and Analysis included in this proxy statement. Based on those reviews and discussions, the Compensation Committee has recommended to the Board that the Compensation Discussion and Analysis be included in this proxy statement for filing with the Securities and Exchange Commission.

By the Compensation Committee of the Board of Directors of InVivo Therapeutics Holdings Corp.

Kenneth DiPietro, Chairman
Daniel Marshak
Richard Roberts
Jeffrey Hatfield

Table of Contents

EXECUTIVE COMPENSATION

Set forth below is information regarding the compensation of (i) all persons serving as our Chief Executive Officer or Chief Financial Officer at any time during 2017 and (ii) our other most highly compensated executive officers at the end of 2017. Such officers are collectively referred to as our “named executive officers.”

Summary Compensation Table

The following table sets forth information regarding the compensation awarded to, earned by, or paid to the named executive officers.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)(1)	Option Awards (\$)(1)	Non-Equity Incentive Plan Compensation (\$)	All Other Compensation (\$)	
Richard Toselli President and Chief Executive Officer (2)	2017	285,785	—	264,000	764,402	—	6,280	
Mark Perrin Former Chief Executive Officer and Chairman of the Board (5)	2017	537,539	(3)	—	1,134,088	—	799,705	(4)
	2016	445,050	—	—	—	111,263	185,623	
Christopher McNulty Chief Financial Officer	2017	328,127	—	—	362,290	—	17,220	(6)
	2016	289,322	—	—	207,902	54,000	15,307	
	2015	252,200	—	—	555,789	78,244	13,513	
Melanie Morel-Ferris Former Chief Financial Officer (9)	2017	159,373	(7)	50,000	75,000	89,066	9,468	(8)
Tamara Joseph Former Senior Vice President, General Counsel and Chief Compliance Officer (11)	2017	265,491	—	—	427,953	—	16,995	(10)
	2016	256,680	—	—	—	56,149	16,377	
Pamela J. Stahl (12) Former Chief Commercial Officer	2017	335,000	—	—	123,574	—	50,076	(13)
	2016	92,202	465,962	—	1,020,056	—	102,776	
Thomas Ulrich Former Chief Scientific Officer (15)	2017	254,788	(14)	—	533,873	—	367,020	(15)
	2016	336,375	—	—	—	77,997	48,907	
	2015	318,643	—	—	722,345	118,016	68,505	

(1) The amounts shown in these columns represent the aggregate grant date fair value of awards computed in accordance with Financial Accounting Standards Board Accounting Standards Codification Topic 718 or ASC

718, not the actual amounts paid or realized by the named executive officer. The assumptions used in determining grant date fair value of these awards are set forth in Note 12 to our Consolidated Financial Statements appearing in Item 8 of our Annual Report on Form 10 K for the year ended December 31, 2017 filed with the SEC on March 12, 2018.

- (2) Dr. Toselli joined our company as Acting Chief Executive Officer effective December 18, 2017 and was appointed our President, Chief Executive Officer, and Director effective February 2, 2018. Previously, he served as a consultant Chief Medical Officer. The amount earned under “salary” in 2017 includes prorated salary based on a base salary of \$435,000 on and after December 18, 2017 plus consulting fees before that date.
- (3) Mr. Perrin’s salary includes a payment of 10 days salary in conjunction with his resignation in lieu of the notice period in his Employment Agreement and four days salary for unused vacation.
- (4) Represents (i) \$782,504 in severance to be paid out over 18 months from date of resignation, (ii) \$13,482 in 401(k) company stock matching contributions under our 401(k) profit sharing plan and (iii) \$3,720 in commuting expenses.
- (5) Mr. Perrin resigned from his position as Chief Executive Officer effective December 18, 2017.
- (6) Represents (i) \$13,500 in 401(k) company stock matching contributions under our 401(k) profit sharing plan and (ii) \$3,720 in commuting expenses.
- (7) Ms. Morel-Ferris’s salary includes 11 days unused vacation.
- (8) Represents (i) \$6,553 in 401(k) company stock matching contributions under our 401(k) profit sharing plan and (ii) \$2,915 in commuting expenses.
- (9) Ms. Morel-Ferris resigned from the company effective October 27, 2017.

Table of Contents

- (10) Represents (i) \$13,275 in 401(k) company stock matching contributions under our 401(k) profit sharing plan and (ii) \$3,720 in commuting expenses.
- (11) Ms. Joseph resigned from the company effective February 7, 2018.
- (12) Ms. Stahl resigned from the company effective March 7, 2018.
- (13) Represents (i) \$12,856 in 401(k) company stock matching contributions under our 401(k) profit sharing plan, (ii) \$33,500 in outplacement services and (iii) \$3,720 in commuting expenses.
- (14) Dr. Ulich's salary includes 12 days unused vacation.
- (15) Represents (i) \$327,965 in severance to be paid out over 18 months from date of resignation and (ii) \$39,055 in commuting expenses.
- (16) Dr. Ulich's employment was terminated on August 28, 2017 as part of a strategic corporate restructuring.
- Grants of Plan-Based Awards

The following table provides information regarding grants of plan-based awards to our named executive officers during 2017.

Name	Estimated Future Payouts Under Non-Equity Incentive Plan Awards (1)		Maximum (\$)	Award Grant Date	All Other Stock Awards: Number of Shares of Stock or Units (#)	All Other Option Awards: Number of Securities Underlying Options (#)(2)	Exercise or Base Price of Option Awards (\$/Sh)	Grants of Stock Awards: Fair Value of Stock and Awards (\$)(3)
	Threshold (\$)	Target (\$)						
Richard Toselli	n/a	n/a	n/a	12/18/2017 7/5/2017	12,000	13,000	63.75	264,764
Mark Perrin	—	222,525	—	1/18/2017		12,800	108.75	1,111
Christopher McNulty	—	117,250	—	3/29/2017 1/18/2017		1,199 3,000	100.00 108.75	97,264
Melanie Morel-Ferris	—	36,000	—	9/14/2017 1/18/2017	2,400	1,000	108.75	75,891
Pamela J. Stahl	—	117,250	—	1/18/2017		1,400	108.75	123,427
Tamara Joseph	—	92,982	—	1/18/2017		4,800	108.75	427,533
Thomas Ulich	—	122,150	—	1/18/2017		6,000	108.75	533,427

(1) There were no set "Threshold" or "Maximum" performance bonus amounts established with respect to our 2017 incentive bonus plan. The actual amounts paid to each of the executive officers for 2017 are set forth in the Summary Compensation Table under the column entitled "Non-Equity Incentive Plan Compensation."

(2)

Each option award vests as to 25% of the total underlying shares on the first anniversary of the grant date and the remainder vests monthly in 36 equal monthly installments until fully vested on the fourth anniversary of the grant date. Dr. Toselli's award represents 13,000 non-qualified options awarded on July 5, 2017, subject to the vesting schedule described in the previous sentence, provided that Dr. Toselli remains continually employed by the company on each such vesting date.

- (3) The amounts shown in this column represents the aggregate grant date fair value of the awards computed in accordance with ASC 718, not the actual amounts paid to or realized by the named executive officer in 2017. The assumptions used in determining grant date fair value of these awards are set forth in Note 12 to our Consolidated Financial Statements appearing in Item 8 of our Annual Report on Form 10 K for the year ended December 31, 2017 filed with the SEC on March 12, 2018.

Option Exercises and Stock Vested Table

None of our named executive officers exercised stock options or had stock awards vest during the fiscal year ended December 31, 2017.

Table of Contents

Outstanding Equity Awards at Fiscal Year End

The following table summarizes the option and stock awards made to our named executive officers that were outstanding at December 31, 2017. Each award reflected in the below table vests as to 25% of the total underlying shares on the first anniversary of the grant date and the remainder vests monthly in 36 equal monthly installments until fully vested on the fourth anniversary of the grant date.

Name	Option Awards				Stock Awards		
	Award Grant Date	No. of Securities Underlying Unexercised Options (#) Exercisable	No. of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Award Grant Date	Number of Shares or Units of Stock That Have Not Vested (#)
Richard Toselli	7/5/2017	—	13,000	63.75	7/5/2027	12/18/2017	—
Mark Perrin	01/6/2014	20,000	—	235.00	1/6/2024		
	12/10/2014	5,000	—	105.00	12/10/2024		
	12/10/2015	5,178	—	184.25	12/10/2025		
	1/18/2017	6,134	—	108.75	1/18/2027		
Christopher McNulty	11/18/2013	1,500	—	205.00	11/18/2023		
	12/10/2014	282	94	105.00	12/10/2024		
	7/31/2015	846	555	363.75	7/31/2025		
	12/10/2015	376	376	184.25	12/10/2025		
	6/13/2016	600	1,000	154.75	6/13/2026		
	1/18/2017	—	3,000	108.75	1/18/2027		
	3/29/2017	—	1,199	100.00	3/29/2027		
Melanie Morel Ferris	5/23/2016	107	—	162.00	5/23/2026		
Pamela J. Stahl	9/14/2016	2,353	5,176	161.75	9/14/2026		
	1/18/2017	—	1,400	108.75	1/18/2027		
Tamara Joseph	3/24/2014	2,813	188	188.00	3/24/2024		
	12/10/2014	1,032	344	105.00	12/10/2024		
	7/31/2015	303	198	363.75	7/31/2025		
	12/10/2015	1,841	1,841	184.25	12/10/2025		
	1/18/2017	—	4,800	108.75	1/18/2027		

(1) Represents 12,000 RSUs awarded to Dr. Toselli, subject to the vesting schedule described in the lead in to the table, provided that Dr. Toselli remains continually employed by the company on each such vesting date.

(2) The value of the awards is based on a price per RSU award of \$22.00, which was the closing sale price of our common stock on December 18, 2017.

All of Dr. Ulich's options have expired.

Ms. Morel-Ferris received an RSU award for 2,400 shares on September 14, 2017. The award to Ms. Morel-Ferris vested over a two-year period, with 50% vesting on the first anniversary of the grant date and 50% vesting on the second anniversary of the grant date, provided that Ms. Morel-Ferris remained continually employed by the company on each such vesting date. Ms. Morel-Ferris resigned from the company effective October 27, 2017.

Pension Benefits

We do not offer to our executive officers or employees any pension plan or similar plan that provides for payments or other benefits at, following or in connection with retirement.

Non-Qualified Deferred Compensation

We do not offer to our executive officers or employees any defined contribution or similar plan that provides for the deferral of compensation on a basis that is not tax-qualified. We offer a 401(k) profit sharing plan to all of our employees eligible to participate. We make matching contributions on behalf of participating employees, in the form of shares of our common stock, up to a maximum of 5% of the employee's annual compensation. Our matching contributions become 100% vested after the employee has been employed by us for four years. Any company matching contributions made to our named executive officers are reflected in the "All Other Compensation" column of the Summary Compensation Table above.

Table of Contents

Potential Payments Upon Termination or Change in Control

Certain of our named executive officers are entitled to payments upon a termination of employment or a change in control.

Richard Toselli, President, Chief Executive Officer, and Director. Under our employment agreement with Dr. Toselli, if his employment is terminated by us without cause, or by Dr. Toselli for “good reason,” in the absence of a “change in control” (as defined in our 2015 Equity Incentive Plan) then (i) we are obligated to pay severance (consisting of base salary in effect at the time of termination) to Dr. Toselli for a period of 18 months, plus continued health insurance benefits for a period of 18 months and (ii) the unvested portion of any stock options held by him will vest as with respect to an additional 12 months. If Dr. Toselli’s employment is terminated by us without cause, or by Dr. Toselli for “good reason” within 12 months following of a “change in control,” then (a) we are obligated to pay severance (consisting of two times base salary in effect at the time of termination and 100% of his target annual bonus) to Dr. Toselli, plus continued health insurance benefits for a period of 18 months, (b) pay a pro rata portion of the annual bonus for the year in which the termination occurs based on a good faith determination of the attainment of the applicable goals and (c) the unvested portion of any stock options held by him will vest fully. The severance payments and the accelerated vesting of options are contingent on execution of a general release of claims against our company and are in addition to any accrued obligations to Dr. Toselli unpaid by us prior to the time of termination. Had his employment been terminated on December 31, 2017, Dr. Toselli would not have been entitled to any payment.

Christopher McNulty, Chief Financial Officer. Under our agreement with Mr. McNulty, if his employment is terminated by us without cause, or by Mr. McNulty for “good reason,” in the absence of a “change in control” (as defined in our 2015 Equity Incentive Plan) then we are obligated to pay severance (consisting of base salary in effect at the time of termination) to Mr. McNulty for a period of one year, plus continued health insurance benefits for a period of 6 months. If Mr. McNulty’s employment is terminated by us without cause, or by Mr. McNulty for “good reason” within 12 months following a “change in control,” then (i) we are obligated to pay severance (consisting of 1.5 times base salary in effect at the time of termination and 100% of his target annual bonus) to Mr. McNulty, plus continued health insurance benefits for a period of one year, and (ii) the unvested portion of any stock option held by him will vest fully. The severance payments and the accelerated vesting of options are contingent upon execution of a general release of claims against our company and are in addition to any accrued obligations to Mr. McNulty unpaid by us prior to the date of termination. Had his employment been terminated on December 31, 2017 by us without cause or by Mr. McNulty for “good reason” in the absence of a “change in control,” Mr. McNulty would have been entitled to \$346,315. Had his employment been terminated on December 31, 2017 by us without cause, or by Mr. McNulty for “good reason” within 12 months following a “change in control,” Mr. McNulty would have been entitled to \$642,381.

Pamela J. Stahl, Former Chief Commercial Officer. Under our agreement with Ms. Stahl, if her employment is terminated by us without cause, or by Ms. Stahl for “good reason,” in the absence of a “change in control” (as defined in our 2015 Equity Incentive Plan) then we are obligated to pay severance (consisting of base salary in effect at the time of termination) to Ms. Stahl for a period of one year, plus continued health insurance benefits for a period of 6 months. If Ms. Stahl’s employment is terminated by us without cause, or by Ms. Stahl for “good reason” within 12 months following a “change in control,” then (i) we are obligated to pay severance (consisting of 1.5 times base salary in effect at the time of termination and 100% of her target annual bonus) to Ms. Stahl, plus continued health insurance benefits for a period of one year, and (ii) the unvested portion of any stock option held by her will vest fully. The severance payments and the accelerated vesting of options are contingent upon execution of a general release of claims against our company and are in addition to any accrued obligations to Ms. Stahl unpaid by us prior to the date of termination. Ms. Stahl resigned from the company effective March 7, 2018. In connection with her resignation, Ms. Stahl will receive \$392,700 in termination related benefits, which includes \$33,500 in outplacement services.

Tamara Joseph, Former SVP, General Counsel & Chief Compliance Officer. Under our agreement with Ms. Joseph, if her employment is terminated by us without cause, or by Ms. Joseph for “good reason,” in the absence of a “change in control” (as defined in our 2015 Equity Incentive Plan) then we are obligated to pay severance (consisting of base salary in effect at the time of termination) to Ms. Joseph for a period of one year, plus continued health insurance benefits for a period of 6 months. If Ms. Joseph’s employment is terminated by us without cause, or by Ms. Joseph for “good reason” within 12 months following a “change in control,” then (i) we are obligated to pay severance (consisting

Table of Contents

of 1.5 times base salary in effect at the time of termination and 100% of her target annual bonus) to Ms. Joseph, plus continued health insurance benefits for a period of one year, and (ii) the unvested portion of any stock option held by her will vest fully. The severance payments and the accelerated vesting of options are contingent upon execution of a general release of claims against our company and are in addition to any accrued obligations to Ms. Joseph unpaid by us prior to the date of termination. Ms. Joseph resigned from the company effective February 7, 2018. In connection with her resignation, Ms. Joseph will receive \$287,197 in termination-related benefits.

Pay Ratio

Following is a reasonable estimate, prepared under applicable SEC rules, of the ratio of the annual total compensation of our Chief Executive Officer to the median of the annual total compensation of our other employees. We determined our median employee based on base salary (annualized in the case of full- and part-time employees who joined the company during 2017) of each of our 16 employees (excluding the Chief Executive Officer) as of December 1, 2017.

Of the two potential median employees, we selected the employee without significant severance payments. The annual total compensation of our median employee (other than the Chief Executive Officer) for 2017 was \$384,528. As disclosed in the Summary Compensation Table appearing on page 76, our former Chief Executive Officer's annual total compensation for 2017 was \$2,471,333. Our former Chief Executive Officer served in this capacity from January 1, 2017 to December 18, 2017, which includes December 1, 2017, the date of determination for the median employee. As noted in the footnotes of the Summary Compensation Table, Mr. Perrin's salary in the Summary Compensation Table includes a payment of 10 days salary in conjunction with his resignation in lieu of the notice period in his Employment Agreement, so his annual total compensation includes salary for a full year. Based on the foregoing, our estimate of the ratio of the annual total compensation of our CEO to the median of the annual total compensation of all other employees was 6.4 to 1. Given the different methodologies that various public companies will use to determine an estimate of their pay ratio, the estimated ratio reported above should not be used as a basis for comparison between companies.

Table of Contents

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information as of March 31, 2018 (including the effects of the Reverse Split) with respect to the beneficial ownership of our common stock by:

- each of our directors;
- each of our named executive officers;
- all of our executive officers and directors as a group; and
- each person that is known by us to beneficially own more than 5% of the outstanding shares of our common stock.

Unless otherwise indicated in the footnotes to the following table, each person named in the table has sole voting and investment power, and his or her address is c/o InVivo Therapeutics Holdings Corp., One Kendall Square, Suite B14402, Cambridge, MA 02139. Shares of our common stock subject to options or warrants currently exercisable or exercisable within 60 days of March 31, 2018 are deemed outstanding for computing the share ownership and percentage of the person holding such options and warrants, but are not deemed outstanding for computing the percentage of any other person. The percentage ownership of our common stock of each person or entity named in the following table is based on 1,562,284 shares of our common stock outstanding as of March 31, 2018 (including the effects of the Reverse Split).

Directors and Officers

Name of Beneficial Owner	Number of Shares of Common Stock Beneficially Owned	Percentage of Shares of Common Stock Beneficially Owned	
Directors and Named Executive Officers:			
Richard Toselli, M.D.(1)	107	*	
Mark Perrin	1,966	*	
Christopher McNulty(2)	6,560	*	
Melanie Golarz	146	*	
Tamara Joseph(3)	8,566	*	
Pamela Stahl(4)	3,316	*	
Thomas Ulrich, M.D.	215	*	
Kenneth DiPietro(5)	3,167	*	
Dr. Daniel Marshak(6)	2,167	*	
C. Ann Merrifield(7)	2,247	*	
Dr. Richard J. Roberts(8)	12,843	*	
Christina Morrison(9)	1,625	*	
Jeffrey Hatfield(10)	917	*	
All current executive officers and directors as a group (13 persons)(11)	43,842	2.8	%

*Percentage of shares beneficially owned does not exceed one percent.

(1) None of Dr. Toselli's stock options or RSUs will become exercisable or vested within 60 days of March 31, 2018.

(2) Consists of (a) 1,206 shares of common stock owned by Mr. McNulty and (b) 5,354 shares of common stock underlying options held by Mr. McNulty that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.

- (3) Consists of (a) 1,200 shares of common stock owned by Ms. Joseph and (b) 7,366 shares of common stock underlying options held by Ms. Joseph that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.

Table of Contents

- (4) Consists of (a) 270 shares of common stock owned by Ms. Stahl and (b) 3,046 shares of common stock underlying options held by Ms. Stahl that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.
- (5) Consists of shares of common stock underlying options held by Mr. DiPietro that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.
- (6) Consists of shares of common stock underlying options held by Dr. Marshak that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.
- (7) Consists of (a) 80 shares of common stock owned by Ms. Merrifield and (b) 2,167 shares of common stock underlying options held by Ms. Merrifield that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.
- (8) Consists of (a) 8,676 shares of common stock owned by Dr. Roberts and (b) 4,167 shares of common stock underlying options held by Dr. Roberts that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.
- (9) Consists of shares of common stock underlying options held by Ms. Morrison that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.
- (10) Consists of shares of common stock underlying options held by Mr. Hatfield that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.
- (11) Includes 29,976 shares of common stock underlying options that are exercisable as of March 31, 2018 or will become exercisable within 60 days after such date.

Stockholders Known by Us to Own 5% or More of Our Common Stock

No stockholders are known by us to own 5% or more of our common stock.

Table of Contents

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors and executive officers and persons who own more than 10% of a registered class of our equity securities to file reports of beneficial ownership and changes in beneficial ownership with the SEC. To our knowledge, based solely on a review of copies of such reports furnished to us by our officers and directors, we believe that, during the fiscal year ended December 31, 2017, no person required to file reports under Section 16(a) of the Exchange Act failed to file such reports on a timely basis during such fiscal year.

32

Table of Contents

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Related Party Transaction Policy

Our board of directors has adopted written policies and procedures for the review of related party transactions. The Audit Committee reviews and oversees all related party transactions on an ongoing basis. A “related party transaction” is a transaction that meets the minimum threshold for disclosure in the proxy statement under applicable SEC rules (generally, transactions involving amounts exceeding \$120,000 in which a “related person” or entity has a direct or indirect material interest). “Related persons” include our executive officers, directors, beneficial owners of 5% or more of our common stock, immediate family members of these persons and entities in which one of these persons has a direct or indirect material interest. When a potential related party transaction is identified, management presents it to the Audit Committee to determine whether to approve or ratify it.

The Audit Committee reviews the material facts of any related party transaction and either approves or disapproves of entering into the transaction. In the course of reviewing the related party transaction, the Audit Committee considers whether (i) the transaction is fair and reasonable to our company, (ii) the transaction is in, or not inconsistent with, our company’s best interests under all possible circumstances, and (iii) the transaction will be on terms no less favorable to our company than we could have obtained in an arm’s-length transaction with an unrelated third party. If advance approval of a related party transaction is not feasible, then the transaction will be considered and, if the Audit Committee determines it to be appropriate, ratified by the Audit Committee. No director may participate in the approval of a transaction for which he or she is a related party. When a related party transaction is ongoing, any amendments or changes are reviewed, and the transaction is reviewed annually for reasonableness and fairness to our company.

Related Party Transactions

In January 2017, we entered into a consulting agreement with Dr. Robert Langer, a member of our Scientific Advisory Board, who at the time of entering into the consulting agreement was a holder of over 5% of our common stock, for certain consulting services. Dr. Langer was one of the original co-founders of our company. Pursuant to the terms of the agreement, we initially agreed to pay Dr. Langer \$250,000 per year in consulting fees, but that amount was reduced effective October 2017 to \$100,000 per year in consulting fees. For the year ended December 31, 2017, the company paid Dr. Langer \$204,166 in consulting fees.

Indemnification Agreements

Our articles of incorporation require that we indemnify our officers, directors, employees, and agents to the full extent permitted by the laws of the State of Nevada. Our bylaws include an indemnification provision under which we have the power to indemnify our directors and officers against all costs, charges and expenses actually and reasonably incurred, including an amount paid to settle an action or satisfy a judgment to which a director or officer is made a party by reason of being or having been a director or officer of the company. In addition, we have entered into an indemnification agreement with each of our officers and directors pursuant to which they will be indemnified by us, subject to certain limitations, for any liabilities incurred by them in connection with their role as officers or directors of the company.

Table of Contents

AUDIT COMMITTEE REPORT

The Audit Committee has reviewed our audited financial statements for the fiscal year ended December 31, 2017 and discussed them with our management and RSM US LLP, our registered public accounting firm.

The Audit Committee has also discussed with RSM US LLP the matters required to be discussed by the statement on Auditing Standards No. 61, as amended (AICPA, Professional Standards, Vol. 1, AU section 380), as adopted by the Public Company Accounting Oversight Board in Rule 3200T.

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

Based on the review and discussions referred to above, the Audit Committee recommended to the Board that the audited financial statements of InVivo Therapeutics Holdings Corp. be included in our Annual Report on Form 10 K for the year ended December 31, 2017, which has been filed with the SEC.

By the Audit Committee of the Board of Directors of InVivo Therapeutics Holdings Corp.

Christina Morrison, Chairwoman

Daniel Marshak

C. Ann Merrifield

Jeffrey Hatfield

Table of Contents

PROPOSAL NO. 2

APPROVAL OF AMENDMENT TO ARTICLES OF INCORPORATION TO INCREASE AUTHORIZED SHARES OF COMMON STOCK

Our Board of Directors has adopted a resolution (i) approving an amendment to Article IV of our articles of incorporation that would increase the number of authorized shares of common stock, par value \$0.00001 per share, from 4,000,000 to 25,000,000 shares (the “Amendment”) and (ii) directing that the Amendment be submitted to the stockholders for approval at the Annual Meeting.

The Proposed Amendment

If the proposed Amendment is approved by our stockholders and subsequently filed with the Nevada Secretary of State, Article IV of the articles of incorporation would be amended and restated in its entirety to read:

“The total number of shares that this corporation is authorized to issue is Twenty-Five Million (25,000,000) shares of Common Stock having a par value of \$0.00001 per share.”

Only the number of shares of common stock the company is authorized to issue would be affected by this Amendment. Except for this change, the proposed Amendment would not affect any other provision of the articles of incorporation. If approved by a majority of holders of our outstanding shares of common stock entitled to vote as of the record date, we will file the Amendment, in substantially the form attached hereto as Appendix A, with the Nevada Secretary of State.

Reasons for the Amendment

Our Board believes that an increase in the number of authorized shares of the company’s common stock from 4,000,000 to 25,000,000 shares is in the best interests of our stockholders. Increasing the number of authorized shares of common stock will enable us to engage in capital raising transactions and other strategic transactions involving the issuance of equity securities. We have limited capital and in order for us to execute on our business plan and remain viable as a going concern, we must have the flexibility to engage in capital raising transactions until we are able to generate sufficient revenue and cash flow. Investors in prior transactions have purchased our common stock or our derivative securities, such as warrants, for which we must reserve unissued common stock.

As discussed in more detail below in the section titled “Number of Shares of Common Stock Currently Outstanding and Subject to Issuance,” we significantly rely on our authorized common stock. We are therefore may be limited in future capital raising opportunities that would require the issuance of shares of our common stock. Increasing the number of authorized shares of common stock will enable us to issue common stock or securities convertible or exercisable into common stock to investors and other strategic partners. These transactions, if they can be successfully negotiated and consummated, will help us fund our business plan, including the funding of our clinical trials. You should be aware that these potential capital raising transactions or other strategic transactions involving the issuance of additional shares of common stock will have a dilutive effect on our existing stockholders, as further described in the section below titled “Effects of Increase.”

If the increase is not approved, we will be limited in our efforts to raise additional capital. In such event, our operations, financial condition and our ability to continue as a going concern may be materially and adversely affected.

Number of Shares of Common Stock Currently Outstanding and Subject to Issuance

As of March 31, 2018, we had the following shares of common stock issued and outstanding and shares of common stock reserved for issuance under the following securities convertible or exercisable into common stock, in each case including the effects of the Reverse Split:

- 1,562,284 shares of our common stock issued and outstanding;

35

Table of Contents

- 86,415 shares of our common stock issuable upon exercise of outstanding warrants;
- 101,277 shares of our common stock issuable upon exercise of outstanding stock options;
- 156,733 shares of our common stock reserved for future issuance under our incentive compensation plans and 401(k) plan; and
- 9,933 shares of common stock reserved for future sale under our employee stock purchase plan.

Effects of Increase

The additional authorized but unissued shares of common stock may generally be issued from time to time for such proper corporate purposes as may be determined by our Board or, as required by law or the rules of the Nasdaq Stock Market, with the approval and authorization of our stockholders. Our Board does not intend to solicit further stockholder approval prior to the issuance of additional shares of common stock, except as may be required by applicable law or by the rules of the Nasdaq Stock Market.

The possible future issuance of shares of our common stock or securities convertible or exercisable into our common stock could affect our current stockholders in a number of ways. The issuance of new shares of common stock will cause immediate dilution of the ownership interests and the voting power of our existing stockholders. New issuances of common stock may also affect the number of dividends, if any, paid to such stockholders and may reduce the share of the proceeds that they would receive upon the future liquidation, if any, of the company.

In addition, the future issuance of shares of our common stock or securities convertible or exercisable into shares of our common stock could:

- dilute the market price of our common stock, to the extent that the shares of common stock are issued and sold at prices below current trading prices, or, if the issuance consists of securities convertible or exercisable into common stock, to the extent that the securities provide for the conversion or exercise into common stock at prices that could be below current trading prices of the common stock, which dilution, in each case, may increase the volatility and affect the market value of our trading securities;
- dilute the earnings per share, if any, and book value per share of the outstanding shares of our common stock; and
- make the payment of dividends on common stock, if any, potentially more expensive.

Anti-Takeover Effects

Although the Amendment is not motivated by anti-takeover concerns and is not considered by our Board to be an anti-takeover measure, the availability of additional authorized shares of common stock could enable the Board to issue shares defensively in response to a takeover attempt or to make an attempt to gain control of our company more difficult or time-consuming. For example, shares of common stock could be issued to purchasers who might side with management in opposing a takeover bid that the Board determines is not in the best interests of our stockholders, thus diluting the ownership and voting rights of the person seeking to obtain control of our company. In certain circumstances, the issuance of common stock without further action by the stockholders may have the effect of delaying or preventing a change in control of the company, may discourage bids for our common stock at a premium over the prevailing market price and may adversely affect the market price of our common stock. As a result, increasing the authorized number of shares of our common stock could render more difficult and less likely a hostile takeover of our company by a third party, or a tender offer or proxy contest, assumption of control by a holder of a large block of our stock, and the possible removal of our incumbent management. We are not aware of any proposed attempt to take over the company or of any present attempt to acquire a large block of our common stock.

Table of Contents

Vote Required

The affirmative vote of stockholders that represent a majority of the voting power entitled to vote on the Amendment is required to approve the Amendment. Abstaining from voting on this Proposal will have the effect of a vote “AGAINST” this Proposal.

OUR BOARD RECOMMENDS A VOTE “FOR” THE APPROVAL OF THE AMENDMENT.

37

Table of Contents

PROPOSAL NO. 3

APPROVAL OF ISSUANCE OF SHARES OF COMMON STOCK TO LINCOLN PARK PURSUANT TO THE MARKETPLACE RULES OF THE NASDAQ STOCK MARKET

We are seeking stockholder approval, as required by Nasdaq Listing Rule 5635(d), of the potential issuance of up to 1,200,000 shares of our Common Stock in a private placement at a price per share lower than the greater of book or market value of our shares of common stock on January 25, 2018, the date we entered into a purchase agreement with Lincoln Park, or the Purchase Agreement. Because the Purchase Agreement may not be amended, in the event that we and Lincoln Park do desire to amend the Purchase Agreement, we will be required to enter into a new purchase agreement on substantially the same terms as set forth in the January 25, 2018 Purchase Agreement. Any references herein to Purchase Agreement shall include the existing purchase agreement with Lincoln Park and any subsequent purchase agreement that supersedes the terms of the existing purchase agreement, provided that the aggregate amount of common stock that we can sell under all purchase agreements with Lincoln Park does not exceed \$15,000,000.

Overview

Pursuant to the terms of the Purchase Agreement, Lincoln Park has agreed to purchase from us up to \$15,000,000 of our common stock (subject to certain limitations) from time to time during the term of the Purchase Agreement.

Pursuant to the terms of the Purchase Agreement, at the time we signed the Purchase Agreement we issued 17,192 shares to Lincoln Park as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement, which we refer to as the Commitment Shares. Since our entry into the Purchase Agreement we have sold an aggregate of 173,474 shares to Lincoln Park under the Purchase Agreement (excluding the Commitment Shares).

Under the Purchase Agreement, we may, from time to time and at our sole discretion over the 24 month period commencing on February 12, 2018 (the date our resale registration statement relating to the shares sold to Lincoln Park was declared effective, which date we refer to as the Commencement), direct Lincoln Park to purchase an initial amount of shares of our common stock upon the Commencement, as well as shares of our common stock in amounts up to 6,000 shares on any single business day from and after the Commencement, which amounts may be increased to up to 10,000 shares of our common stock depending on the market price of our common stock at the time of sale, subject to a maximum of \$1,000,000 per purchase. In addition, upon notice to Lincoln Park, we may, from time to time and at our sole discretion, direct Lincoln Park to purchase additional shares of our common stock in “accelerated purchases,” “additional accelerated purchases” and/or “additional purchases” as set forth in the Purchase Agreement. The purchase price per share is based on the market price of our common stock at the time of sale as computed under the Purchase Agreement. Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement. We estimate that the net proceeds to us from the sale of our common stock to Lincoln Park pursuant to the Purchase Agreement will be up to \$14,799,607 over an approximately 24 month period, assuming that we sell the full amount of our common stock that we have the right, but not the obligation, to sell to Lincoln Park under the Purchase Agreement, and after other estimated fees and expenses. We currently intend to use the estimated net proceeds we receive under the Purchase Agreement to fund continued clinical development, with the remainder of any net proceeds being used for general corporate purposes.

The Purchase Agreement prohibits us from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park, would result in Lincoln Park and its affiliates having beneficial ownership, at any single point in time, of more than 4.99% of

the then total outstanding shares of our common stock, or the Beneficial Ownership Cap, as calculated pursuant to Section 13(d) of the Exchange Act and Rule 13d-3 thereunder.

38

Table of Contents

Stockholder Approval Requirement

Pursuant to Nasdaq Listing Rule 5635(d), stockholder approval is required prior to the issuance of securities in connection with a transaction (or a series of related transactions) other than a public offering involving the sale, issuance or potential issuance of common stock (or securities convertible into or exercisable for common stock) equal to 20% or more of the common stock or 20% or more of the voting power outstanding before the issuance for less than the greater of book or market value of the stock. Therefore, in no event may we issue or sell to Lincoln Park under the Purchase Agreement more than 19.99% of the shares of our common stock outstanding immediately prior to the execution of the Purchase Agreement (which is 274,098 shares based on 1,371,179 shares outstanding immediately prior to the execution of the Purchase Agreement), or the Exchange Cap, unless (i) we obtain stockholder approval to issue shares of common stock in excess of the Exchange Cap or (ii) the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds \$17.775 per share (which represents the split-adjusted closing consolidated bid price of our common stock on January 24, 2018, plus an incremental amount to account for our issuance of the Commitment Shares to Lincoln Park), such that the transactions contemplated by the Purchase Agreement are exempt from the Exchange Cap limitation under applicable Nasdaq rules.

Reasons for Seeking Stockholder Approval

Because the total number of shares issued by us to date in connection with the Purchase Agreement has not exceeded 19.99%, we were not required to seek stockholder approval for those sales. However, future use of the Purchase Agreement may result in the issuance by us of more than 19.99% of our outstanding common stock, which requires stockholder approval under NASDAQ rules. Accordingly, we are seeking approval from our stockholders of the proposed issuances of shares under the Purchase Agreement of up to 1,200,000 shares of our common stock.

Summary of Terms of Purchase Agreement

Purchase of Shares Under the Purchase Agreement

Regular Purchases

Under the Purchase Agreement, on any business day selected by us on which the closing sale price of our common stock is not below \$6.25 (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), we may direct Lincoln Park to purchase up to 6,000 shares of our common stock on such business day (or the purchase date), which we refer to as a Regular Purchase, provided, however, that (i) the Regular Purchase may be increased to up to 7,000 shares, provided that the closing sale price is not below \$18.75 on the applicable purchase date, (ii) the Regular Purchase may be increased to up to 8,000 shares, provided that the closing sale price is not below \$25.00 on the applicable purchase date, and (iii) the Regular Purchase may be increased to up to 10,000 shares, provided that the closing sale price is not below \$37.50 on the applicable purchase date. In each case, the maximum amount of any single Regular Purchase may not exceed \$1,000,000 per purchase. We may direct Lincoln Park to purchase shares in a Regular Purchase only if at least one business day has passed since the most recent Regular Purchase notice, as applicable, was delivered to Lincoln Park.

The purchase price per share for each such Regular Purchase will be equal to the lower of:

- the lowest sale price for our common stock on the purchase date of such shares; and
- the arithmetic average of the three lowest closing sale prices for our common stock during the 10 consecutive business days ending on the business day immediately preceding the purchase date of such shares.

Table of Contents

Accelerated Purchases

We may also direct Lincoln Park, on any business day on which we have properly submitted a Regular Purchase notice and the closing sale price of our common stock is not below \$7.50 (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), to purchase an additional amount of our common stock, which we refer to as an Accelerated Purchase, of up to the lesser of:

- 68,000 shares; and
- 30% of the aggregate shares of our common stock traded during all or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed on the applicable Accelerated Purchase date, the portion of the normal trading hours on the applicable Accelerated Purchase date prior to such time that any one of such thresholds is crossed, which period of time on the applicable Accelerated Purchase date we refer to as the “Accelerated Purchase Measurement Period”.

The purchase price per share for each such Accelerated Purchase will be equal to the lower of:

- 97% of the volume weighted average price of our common stock during the applicable Accelerated Purchase Measurement Period on the applicable Accelerated Purchase date; and
- the closing sale price of our common stock on the applicable Accelerated Purchase date.

Additional Accelerated Purchases

We may also direct Lincoln Park, not later than 1:00 p.m., Eastern time, on any business day on which an Accelerated Purchase has been completed and all of the shares to be purchased thereunder have been properly delivered to Lincoln Park in accordance with the Purchase Agreement, provided that the closing price of our common stock on the business day immediately preceding such business day is not below \$7.50 (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), to purchase an additional amount of our common stock, which we refer to as an Additional Accelerated Purchase, of up to the lesser of:

- 68,000 shares; and
- 30% of the aggregate shares of our common stock traded during a certain portion of the normal trading hours on the applicable Additional Accelerated Purchase date as determined in accordance with the Purchase Agreement, which period of time on the applicable Additional Accelerated Purchase date we refer to as the Additional Accelerated Purchase Measurement Period.

We may, in our sole discretion, submit multiple Additional Accelerated Purchase notices to Lincoln Park prior to 1:00 p.m., Eastern time, on a single Accelerated Purchase date, provided that all prior Accelerated Purchases and Additional Accelerated Purchases (including those that have occurred earlier on the same day) have been completed and all of the shares to be purchased thereunder have been properly delivered to Lincoln Park in accordance with the Purchase Agreement.

The purchase price per share for each such Additional Accelerated Purchase will be equal to the lower of:

- 97% of the volume weighted average price of our common stock during the applicable Additional Accelerated Purchase Measurement Period on the applicable Additional Accelerated Purchase date; and
- the closing sale price of our common stock on the applicable Additional Accelerated Purchase date.

Table of Contents

Additional Purchases

From and after Commencement, we may also direct Lincoln Park, on any business day that the closing price of our common stock is not below \$11.25 (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction), to purchase additional amounts of our common stock, or an Additional Purchase, provided that (i) we may direct Lincoln Park to purchase shares in an Additional Purchase only if at least 15 business days have passed since the most recent Additional Purchase, as applicable, was completed, (ii) we may direct Lincoln Park to purchase shares in an Additional Purchase only if at least 30 business days have passed since the Initial Purchase, if exercised, was completed, (iii) Lincoln Park's committed obligation under any single Additional Purchase shall not exceed \$500,000, and (iv) Lincoln Park's committed obligation under all Additional Purchases shall not exceed \$2,500,000 in the aggregate.

The purchase price for each such Additional Purchase shall be equal to the lower of:

- 96% of the lower of (i) the lowest sale price for our common stock on the purchase date of such shares, and (ii) the arithmetic average of the three lowest closing sale prices for our common stock during the 10 consecutive business days ending on the business day immediately preceding the purchase date of such shares; or
- \$37.50 per share.

In the case of the Regular Purchases, Accelerated Purchases, Additional Accelerated Purchases, Initial Purchase and Additional Purchases, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute the purchase price.

Other than as described above, there are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Lincoln Park.

Depending on the trading of our common stock, we may request that Lincoln Park enter into a new Purchase Agreement, on substantially the same terms as the existing Purchase Agreement except that the maximum number of shares for Regular Purchases and the floor prices for Regular Purchases, Accelerated Purchases, Additional Accelerated Purchases, and Additional Purchases may be amended.

Events of Default

Events of default under the Purchase Agreement include the following:

- the effectiveness of the registration statement relating to resale of shares by Lincoln Park lapses for any reason (including, without limitation, the issuance of a stop order), or any required prospectus supplement and accompanying prospectus are unavailable for the resale by Lincoln Park, and such lapse or unavailability continues for a period of 10 consecutive business days or for more than an aggregate of 30 business days in any 365 day period;
- suspension by our principal market of our common stock from trading for a period of one business day;
- the de-listing of our common stock from The Nasdaq Global Market, our principal market, provided our common stock is not immediately thereafter trading on the New York Stock Exchange, the Nasdaq Global Select Market, the Nasdaq Capital Market, the NYSE American, the NYSE Arca, the OTC Bulletin Board or OTC Markets (or nationally recognized successor thereto);
- the failure of our transfer agent to issue to Lincoln Park shares of our common stock within three business days after the applicable date on which Lincoln Park is entitled to receive such shares;

Table of Contents

- any breach of the representations or warranties or covenants contained in the Purchase Agreement or the registration rights agreement that we entered into with Lincoln Park that has or could have a material adverse effect on us and, in the case of a breach of a covenant that is reasonably curable, that is not cured within five business days;
- if at any time the Exchange Cap is reached, to the extent applicable;
- any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us; or
- if at any time we are not eligible to transfer our common stock electronically.

Lincoln Park does not have the right to terminate the Purchase Agreement upon any of the events of default set forth above. During an event of default, all of which are outside of Lincoln Park's control, we may not direct Lincoln Park to purchase any shares of our common stock under the Purchase Agreement.

Our Termination Rights

We have the unconditional right, at any time, for any reason and without any payment or liability to us, to give notice to Lincoln Park to terminate the Purchase Agreement. In the event of bankruptcy proceedings by or against us, the Purchase Agreement will automatically terminate without action of any party.

No Short-Selling or Hedging by Lincoln Park

Lincoln Park has agreed that neither it nor any of its affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

Prohibitions on Variable Rate Transactions

There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement other than a prohibition on entering into certain "equity line of credit," "at-the-market" or other similar offerings, as described in the Purchase Agreement.

Vote Required

The affirmative vote of the majority of votes cast by the holders of our common stock, present or represented by proxy at the Annual Meeting and entitled to vote, is required to approve the issuance and sale by us to Lincoln Park (including our prior issuances and sales of our shares of common stock to Lincoln Park since January 2018), of up to 1,200,000 shares of our common stock pursuant to the Marketplace Rules of the NASDAQ Stock Market.

OUR BOARD UNANIMOUSLY RECOMMENDS A VOTE "FOR" THE APPROVAL OF THE ISSUANCE OF UP TO 1,200,000 SHARES OF COMMON STOCK TO LINCOLN PARK.

Table of Contents

PROPOSAL NO. 4

RATIFICATION OF THE APPOINTMENT OF
INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Audit Committee has selected RSM US, LLP (“RSM”) as our independent registered public accounting firm to audit our financial statements for the fiscal year ending December 31, 2018. The Board is asking our stockholders to ratify the appointment of RSM as our independent registered public accounting firm. Although stockholder approval of our Audit Committee’s appointment of RSM as our independent registered public accounting firm for the year ended December 31, 2018 is not required, we believe that it is advisable to give stockholders an opportunity to ratify this appointment. If the stockholders do not ratify the appointment of RSM as our independent registered public accounting firm, the Audit Committee may reconsider its appointment. Even if the appointment is ratified, the Audit Committee, in its discretion, may direct the appointment of a different independent registered public accounting firm at any time during the year if the Audit Committee determines that such a change would be in the best interests of our company and stockholders. A representative of RSM is expected to be present at the Annual Meeting and will have the opportunity to make a statement if he or she desires to do so and will be available to respond to appropriate questions from stockholders.

Effective August 7, 2015, our Audit Committee dismissed Wolf & Company, P.C. (“Wolf & Co.”) as our independent registered public accounting firm, and approved the engagement of RSM as our independent registered public accounting firm.

The reports of Wolf & Co. on the company’s consolidated financial statements for the fiscal years ended December 31, 2013, and December 31, 2014, did not contain an adverse opinion or disclaimer of opinion, nor were they qualified or modified as to uncertainty, audit scope, or accounting principles, except that the report for the fiscal year ended December 31, 2013, contained an explanatory paragraph with respect to substantial doubt as to the company’s ability to continue as a going concern. During the company’s fiscal years ended December 31, 2013 and December 31, 2014, and the subsequent interim period through the date of dismissal of Wolf & Co., (i) there were no disagreements with Wolf & Co. on any matter of accounting principles or practices, financial statement disclosure, or auditing scope and procedure, which disagreements, if not resolved to the satisfaction of Wolf & Co., would have caused Wolf & Co. to make reference to the subject matter of the disagreement in connection with its reports on the consolidated financial statements for such years, and (ii) there were no “reportable events,” as that term is defined in Item 304(a)(1)(v) of Regulation S-K.

During the company’s fiscal years ended December 31, 2013 and December 31, 2014, and the subsequent interim period of January 1, 2015 through the engagement of RSM on August 7, 2015, neither the company, nor anyone on its behalf, consulted with RSM regarding either (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on the company’s consolidated financial statements, and neither a written report nor oral advice was provided to the company that RSM concluded was an important factor considered by the company in reaching a decision as to the accounting, auditing or financial reporting issue, or (ii) any matter that was either the subject of a “disagreement,” as defined in Item 304(a)(1)(iv) of Regulation S-K and the related instructions, or a “reportable event,” as that term is defined in Item 304(a)(1)(v) of Regulation S-K.

Table of Contents

Independent Registered Public Accounting Firm Fees

Audit Fees

Firm	Year	Fees \$(1)
RSM US, LLP	2017	227,874
	2016	205,800
WOLF & COMPANY, P.C.	2017	—
	2016	8,300

(1) Audit fees in each of 2017 and 2016 consisted of fees incurred for professional services rendered for the audit of consolidated financial statements and internal control over financial reporting and for reviews of our interim consolidated financial statements included in our quarterly reports on Form 10 Q.

Audit-Related Fees

Firm	Year	Fees \$(1)
RSM US, LLP	2017	78,750
	2016	111,921
WOLF & COMPANY, P.C.	2017	9,000
	2016	10,670

(1) Audit-related fees in 2017 paid to RSM consisted of fees related to the delivery of comfort letters in conjunction with proposed common stock financings. Audit-related fees in 2016 paid to RSM consisted of fees related to the delivery of a comfort letter in conjunction with a common stock financing and fees related to a Form S 3. Audit-related fees in 2017 paid to Wolf & Co. consisted of fees related to consents provided in connection with preparing the company's Form 10 K for the 2016 fiscal year. Audit-related fees in 2016 paid to Wolf & Co. consisted of fees related to consents provided in connection with a Form S 3 filing and a common stock financing.

Tax Fees

There were no fees paid to RSM or Wolf & Company, P.C. for any tax related services in 2017 or 2016.

All Other Fees

There were no other fees paid to RSM or Wolf & Company, P.C. in 2017 or 2016.

Policy on Audit Committee Pre-Approval of Audit and Permissible Non-Audit Services

Our Audit Committee is responsible for pre-approving all services provided by our independent registered public accounting firm. All of the above services and fees were reviewed and approved by the Audit Committee before the services were rendered. The Audit Committee has considered the nature and amount of fees billed by RSM and believes that the provision of services for activities unrelated to the audit is compatible with maintaining RSM's independence.

Vote Required

The number of votes cast at the Annual Meeting in favor of the proposal must exceed the number of votes cast in

opposition to the proposal to ratify the appointment of RSM as our independent registered public accounting firm for the fiscal year ending December 31, 2018.

OUR BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” THE RATIFICATION OF THE APPOINTMENT OF RSM US, LLP AS OUR INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM FOR THE FISCAL YEAR ENDING DECEMBER 31, 2018.

44

Table of Contents

OTHER MATTERS

Householding Information

Some banks, brokers and other nominee record holders may participate in the practice of “householding” proxy statements and annual reports. This means that only one copy of our proxy statement and Annual Report may have been sent to multiple stockholders in your household. We will promptly deliver a separate copy of the proxy statement and the Annual Report to any beneficial owner at a shared address to which a single copy of any of those documents was delivered if you write or call us at the following address or telephone number: InVivo Therapeutics Holdings Corp., One Kendall Square, Suite B14402, Cambridge, MA 02139, Attn: Secretary, telephone: (617) 863 5500. If you want to receive separate copies of the proxy statement and the annual report in the future, or if you are receiving multiple copies and would like to receive only one copy for your household, you should contact your bank, broker, or other nominee record holder, or you may contact us at the above address and telephone number.

Expenses of Proxy Solicitation

The solicitation of proxies will be conducted by telephone or mail, and we will bear all attendant expenses. These expenses will include the expense of preparing and mailing proxy materials for the Annual Meeting. Brokerage firms and other custodians, nominees and fiduciaries will be requested to forward the proxy materials to beneficial owners and to obtain authorization for the execution of proxies, and we will reimburse such brokerage firms, other custodians, nominees and fiduciaries for reasonable expenses incurred in sending proxy materials to beneficial owners of our common stock. We may conduct further solicitation personally or telephonically through our directors, officers, and employees, none of whom will receive additional compensation for assisting with the solicitation. We have retained the services of Laurel Hill Advisory Group, LLC to assist in the solicitation of proxies at the cost of approximately \$4,500, plus reimbursement of certain expenses.

Stockholder Proposals

Stockholder proposals for inclusion in our proxy statement: If a stockholder wishes to present a proposal to be included in our proxy statement and form of proxy for the 2019 annual meeting of stockholders, the proposal must be received by our Secretary c/o InVivo Therapeutics Holdings Corp., One Kendall Square, Suite B14402, Cambridge, MA 02139, no later than the close of business on December [], 2018. Such proposal must comply with the applicable rules of the SEC in order to be included in our proxy statement and proxy relating to the 2019 annual meeting of stockholders. If the date of next year’s annual meeting is changed by more than 30 days from the anniversary date of the Annual Meeting, then the deadline to submit a proposal for inclusion in our proxy statement is a reasonable time before we begin to print and mail proxy materials.

Other stockholder proposals: A stockholder proposal not included in our proxy statement for the 2019 annual meeting of stockholders, including proposed nominations for director, will not be eligible for presentation at the 2019 annual meeting unless the stockholder gives timely notice of the proposal in writing to our Secretary at our principal executive offices and otherwise complies with the provisions of our amended and restated bylaws. To be timely, the stockholder is required to give written notice to our Secretary c/o InVivo Therapeutics Holdings Corp., One Kendall Square, Suite B14402, Cambridge, MA 02139, of his or her proposed director nomination or the proposal of other business to be considered by the stockholders. Such written notice must be made in accordance with Article II, Section 13 of our amended and restated bylaws, which require appropriate notice to us of a director nomination or proposal of other business for consideration not less than 60 days nor more than 90 days prior to the date of the first anniversary of this Annual Meeting. If, however, the 2019 annual meeting of stockholders is more than 30 days before, or more than 60 days after, such anniversary date, then to be timely notice must be provided not earlier than the close of business the 90th day prior to the 2019 annual meeting of stockholders and not later than the close of

business on the later of the 60th day prior to the 2019 annual meeting of stockholders or the 10th day following the day on which public announcement of the date of the 2019 annual meeting of stockholders is first made by us. Assuming that the 2019 annual meeting is held on schedule, we must receive written notice of a proposal to nominate a director or proposal of other business for consideration no earlier than the close of business on March 1, 2019 and no later than the close of business on March 31, 2019.

Table of Contents

The notice must also meet all other requirements contained in our amended and restated bylaws, including the requirement to contain specified information about the stockholder making the proposal and the proposed business to be brought before the meeting or the director nominee.

Other Business

As of the date of this proxy statement, we do not know of any matters to be presented at the Annual Meeting other than those described in this proxy statement. If any other matters should properly come before the Annual Meeting, proxies in the enclosed form will be voted on those matters in accordance with the judgment of the person or persons voting the proxies, unless otherwise specified.

Table of Contents

Appendix A

CERTIFICATE OF AMENDMENT
TO
ARTICLES OF INCORPORATION
FOR NEVADA PROFIT CORPORATIONS
(Pursuant to NRS 78.385 and 78.390).

First: The name of the Corporation is InVivo Therapeutics Holdings Corp. (the “Corporation”)

Second: The Corporation’s Articles of Incorporation (the “Articles”) shall be amended by replacing Article IV with the following:

FOURTH

The total number of shares that this corporation is authorized to issue is Twenty-Five Million (25,000,000) shares of Common Stock having a par value of \$0.00001 per share.

Third: The vote by which the stockholders holding shares in the Corporation entitling them to exercise a least a majority of the voting power, or such greater proportion of the voting power as may be required in the case of a vote by classes or series, or as may be required by the provisions of the Articles have voted in favor of the amendment is .

Effective as of .

INVIVO THERAPEUTICS
HOLDINGS CORP.

By:
Christopher McNulty,
Chief Financial Officer

Table of Contents

Fitch Proof - 92394-InVivo Proxy Card Rev 02 - Front YOUR VOTE IS IMPORTANT. PLEASE VOTE TODAY. Vote by Internet or Telephone - QUICK EASY IMMEDIATE - 24 Hours a Day, 7 Days a Week or by Mail Your phone or Internet vote authorizes the named proxies to vote your shares in the same manner as if you marked, signed and returned the proxy card. Votes submitted electronically over the Internet or by telephone must be received by 7:00 p.m., Eastern Time, on May 29, 2018. INVIVO THERAPEUTICS HOLDINGS CORP. INTERNET/MOBILE – 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. PHONE – 1 (866) 894-0536 Use a touch-tone telephone to vote your proxy. Have your proxy card available when you call. Follow the voting instructions to vote your shares. MAIL – Mark, sign and date your proxy card and return it in the postage-paid envelope provided. FOLD HERE • DO NOT SEPARATE • INSERT IN ENVELOPE PROVIDED Please mark your votes like this PROXY THE BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE ELECTION OF EACH OF THE NOMINEES FOR DIRECTOR AND “FOR” PROPOSALS 2, 3, AND 4. 1. Election of Directors. To elect two Class I directors, each for a three-year term. 3. Approval of Issuance and Sale. To approve the issuance and sale by us to Lincoln Park Capital Fund, LLC, or Lincoln Park (including our prior issuances and sales of our shares of common stock to Lincoln Park since January 2018), of up to 1,200,000 shares of our common stock pursuant to the Marketplace Rules of the Nasdaq Stock Market. FOR AGAINST ABSTAIN FOR NOMINEE WITHHOLD AUTHORITY Class I Nominees (1) C. Ann Merrifield (2) Richard Roberts 2. Approval of Amendment. To approve an amendment to the corporation’s Articles of Incorporation to increase the number of authorized shares of our common stock from 4,000,000 to 25,000,000 shares. FOR AGAINST ABSTAIN 4. Ratification of Auditors. To ratify the selection by the Audit Committee of RSM US LLP as the corporation’s independent registered public accounting firm for the fiscal year ending December 31, 2018. FOR AGAINST ABSTAIN CONTROL NUMBER Signature Signature, if held jointly Date, 2018 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. X PLEASE DO NOT RETURN THE PROXY CARD IF YOU ARE VOTING ELECTRONICALLY OR BY PHONE.

Table of Contents

Fitch Proof - 92394-InVivo Proxy Card Rev 02 - Back Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be held on May 30, 2018 To access the Company's Proxy Statement for the 2018 Annual Meeting of Stockholders and the Company's 2017 Annual Report, visit: <http://www.cstproxy.com/invivotherapeutics/2018> FOLD HERE • DO NOT SEPARATE • INSERT IN ENVELOPE PROVIDED PROXY THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS INVIVO THERAPEUTICS HOLDINGS CORP. ANNUAL MEETING OF STOCKHOLDERS – MAY 30, 2018 The undersigned hereby appoints Richard Toselli, M.D., Christopher McNulty, and Heather Hamel, and each of them severally, as proxies of the undersigned, each with full power to appoint his or her substitute, to represent the undersigned at the 2018 Annual Meeting of Stockholders (the "Annual Meeting") of InVivo Therapeutics Holdings Corp. (the "Company") to be held at the WilmerHale Law Offices, 60 State Street, Boston, Massachusetts 02109 on May 30, 2018 at 9:00 a.m., local time, or at any adjournments or postponements thereof, and to vote thereat all shares of common stock of the Company held of record by the undersigned at the close of business on April 25, 2018 in accordance with the instructions set forth on this proxy card and, in their discretion, to vote such shares on any other business as may properly come before the Annual Meeting and on matters incident to the conduct of the Annual Meeting. Any proxy heretofore given by the undersigned with respect to such stock is hereby revoked. THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED AS INDICATED. IF NO CONTRARY INDICATION IS MADE, THIS PROXY WILL BE VOTED FOR THE ELECTION OF THE DIRECTOR NOMINEES, FOR PROPOSALS 2, 3, AND 4 AND IN ACCORDANCE WITH THE DISCRETION OF THE PERSONS NAMED AS PROXIES HEREIN ON ANY OTHER MATTERS THAT MAY PROPERLY COME BEFORE THE ANNUAL MEETING. (Continued, and to be marked, dated and signed, on the other side)
