

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

**SCHEDULE 14A  
(Rule 14a-101)**

**INFORMATION REQUIRED IN PROXY STATEMENT**

**SCHEDULE 14A INFORMATION**

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

Filed by the Registrant  Filed by a Party other than the Registrant

Check the appropriate box:

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

**ARROWHEAD PHARMACEUTICALS, INC.**

(Name of Registrant as Specified in Its Charter)

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

Payment of filing fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
  - (1) Title of each class of securities to which transaction applies:
  - (2) Aggregate number of securities to which transaction applies:
  - (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):
  - (4) Proposed maximum aggregate value of transaction:
  - (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:



ARROWHEAD PHARMACEUTICALS, INC.  
225 SOUTH LAKE AVENUE, SUITE 1050  
PASADENA, CALIFORNIA 91101

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS  
TO BE HELD ON TUESDAY MARCH 21, 2017**

TO THE STOCKHOLDERS OF ARROWHEAD PHARMACEUTICALS, INC.:

NOTICE IS HEREBY GIVEN that the 2017 Annual Meeting of Stockholders of Arrowhead Pharmaceuticals, Inc., a Delaware corporation (the "Company"), will be held on Tuesday, March 21, 2017, at 10:00 a.m., local time, at the Sheraton Pasadena, 303 E. Cordova Street, Pasadena, California 91101, for the following purposes:

1. To elect the five directors named in the Proxy Statement to serve as members of the Company's Board of Directors until the next Annual Meeting or until their successors are elected;
2. To conduct an advisory (non-binding) vote on executive compensation; and
3. To ratify the selection of Rose, Snyder & Jacobs LLP as independent auditors of the Company for the fiscal year ending September 30, 2017;

The foregoing items of business are more fully described in the Proxy Statement accompanying this Notice. Proposal No. 1 relates solely to the election of the five directors nominated by the Board of Directors and does not include any other matters relating to the election of directors, including, without limitation, the election of directors nominated by any stockholder of the Company.

All stockholders of record are cordially invited to attend the Annual Meeting in person. We anticipate that on or about February 3, 2017, we will mail our stockholders a Notice Regarding the Availability of Proxy Materials (the "Notice of Internet Availability") containing instructions on how to access our 2017 Proxy Statement and 2016 Annual Report on Form 10-K and to vote online. If you prefer to receive paper copies of our proxy materials, please follow the instructions included in the Notice of Internet Availability. To ensure your representation at the meeting, you are urged to vote via the Internet or telephone as instructed in the Notice of Internet Availability, or to mark, sign, date and return the proxy card as promptly as possible in the postage-prepaid envelope enclosed for that purpose. Any stockholder of record attending the Annual Meeting may vote in person even if such stockholder has previously returned a proxy. Each shareholder may appoint only one proxy holder to attend the Annual Meeting on his or her behalf. Please note, however, that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.

/s/ Jane Davidson

Jane Davidson  
Secretary

Pasadena, California  
January 31, 2017

**Your vote is important, whether or not you expect to attend the Annual Meeting of Stockholders. Stockholders of record are urged to vote via the Internet or telephone as instructed, or if you are voting by mail, to mark, sign and date and promptly return the proxy in the postage-prepaid return envelope provided.**

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**Voting promptly will help avoid the additional expense of further solicitation to assure a quorum at the meeting.**

**Please note, however, that if your shares are held of record by a broker, bank or other nominee and you wish to vote at the meeting, you must obtain a proxy issued in your name from that record holder.**

**Important Notice Regarding the Availability of Proxy Materials for the Stockholder Meeting to be Held on Tuesday, March 21, 2017:**

You may access the following proxy materials at [www.edocumentview.com/ARWR](http://www.edocumentview.com/ARWR)

Notice of the 2017 Annual Meeting of Stockholders;  
Company's 2017 Proxy Statement;  
Company's Annual Report on Form 10-K for the year ended September 30, 2016; and  
Form of Proxy Card

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**ARROWHEAD PHARMACEUTICALS, INC.**  
**225 South Lake Avenue, Suite 1050**  
**Pasadena, California 91101**  
**(626) 304-3400**

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**PROXY STATEMENT FOR ANNUAL MEETING OF STOCKHOLDERS  
TO BE HELD ON TUESDAY, MARCH 21, 2017**

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**GENERAL INFORMATION CONCERNING SOLICITATION AND VOTING**

The enclosed Proxy is solicited on behalf of Arrowhead Pharmaceuticals, Inc. (the “**Company**” or “**Arrowhead**”) for use at the 2017 Annual Meeting of Stockholders (the “**Annual Meeting**”) to be held on Tuesday, March 21, 2017 at 10:00 a.m., local time, and at any adjournment(s) thereof, for the purposes set forth herein and in the accompanying Notice of Annual Meeting of Stockholders (the “**Notice**”). The Annual Meeting will be held at the Sheraton Pasadena, 303 E. Cordova Street, Pasadena, CA 91101.

The Company anticipates that the Notice Regarding the Availability of Proxy Materials (the “**Notice of Internet Availability**”) in connection with these proxy solicitation materials will first be mailed on or about February 3, 2017 to all stockholders entitled to vote at the Annual Meeting and we will post our proxy materials on the website referenced in the Notice of Internet Availability. As more fully described in the Notice of Internet Availability, all stockholders may choose to access our proxy materials on the website referred to in the Notice of Internet Availability or may request to receive a printed set of our proxy materials.

**Record Date**

Only holders of record of our common stock at the close of business on January 27, 2017 (the “**Record Date**”) are entitled to notice of the Annual Meeting and to vote at the Annual Meeting. On that date, the Company had outstanding 74,569,706 shares of common stock (“**Common Stock**”).

**Revocability of Proxies**

Any proxy given by a stockholder of record pursuant to this solicitation may be revoked by the person giving it at any time before its use by delivering to the Secretary of the Company, at or before the taking of the vote at the Annual Meeting, a written notice of revocation or a duly executed proxy bearing a later date or by attending the Annual Meeting and voting in person. Stockholders may also revoke their proxy by entering a new vote over the Internet or by telephone.

**Voting and Solicitation**

Each share of the Company’s Common Stock is entitled to one vote on all matters presented at the Annual Meeting. Stockholders do not have the right to cumulate their votes in the election of directors. Shares of Common Stock represented by properly executed proxies will, unless such proxies have been previously revoked, be voted in accordance with the instructions indicated thereon. In the absence of specific instructions to the contrary, properly executed proxies will be voted FOR all matters submitted to a vote of stockholders at the Annual Meeting pursuant to this proxy statement. No business other than that set forth in the accompanying Notice of Annual Meeting of Stockholders is expected to come before the Annual Meeting. Should any other matter requiring a vote of stockholders properly arise, the persons named in the enclosed form of proxy will vote such proxy in accordance with the recommendation of the Board of Directors (the “**Board**”).

If you will not be able to attend the Annual Meeting to vote in person, you may vote your shares via the Internet or by telephone or by mail as set forth in the Notice.

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The Company has engaged a proxy solicitor, Alliance Advisors, LLC, to encourage voting by our stockholders. It is estimated that the total cost for the solicitation campaign will be approximately \$10,000. Proxies may also be solicited by certain of the directors, officers and employees of the Company, without additional compensation. The Company will bear the costs of solicitation. In addition, the Company expects to reimburse brokerage firms and other persons representing beneficial owners of shares for their expenses in forwarding solicitation materials to such beneficial owners.

If your shares are held in street name, the voting instruction form sent to you by your broker, bank or other nominee should indicate whether the institution has a process for beneficial holders to provide voting instructions over the Internet or by telephone. A number of banks and brokerage firms participate in a program that also permits stockholders whose shares are held in street name to direct their vote over the Internet or by telephone. If your bank or brokerage firm gives you this opportunity, the voting instructions from the bank or brokerage firm that accompany this proxy statement will tell you how to use the Internet or telephone to direct the vote of shares held in your account. If your voting instruction form does not include Internet or telephone information, please complete and return the voting instruction form in the self-addressed, postage-paid envelope provided by your broker. Stockholders who vote by proxy over the Internet or by telephone need not return a proxy card or voting instruction form by mail.

#### **Quorum; Abstentions; Broker Non-Votes**

The required quorum for the transaction of business at the Annual Meeting is a majority of the votes eligible to be cast by holders of shares of Common Stock issued and outstanding on the Record Date. Shares that are voted "FOR," "AGAINST" or "ABSTAIN" on a matter are treated as being present at the meeting for purposes of establishing a quorum with respect to such matter. For certain proposals, brokers may not have discretionary authority to vote on a particular matter if they have not received specific instructions from the beneficial owner of the shares ("**broker non-votes**"). In accordance with the rules of Nasdaq, banks, brokerage firms and other nominees who hold Arrowhead shares in street name for their customers have authority to vote on "routine" proposals when they have not received instructions from beneficial owners. However, banks, brokerage firms and other nominees are precluded from exercising their voting discretion with respect to non-routine matters, such as Proposal Nos. 1 and 2 described in this proxy statement. Absent instruction from you, however, your broker can, using its voting discretion, vote on the proposal to ratify the selection of Rose, Snyder & Jacobs LLP as Arrowhead's independent auditor for the fiscal year ending September 30, 2017. Shares subject to a broker non-vote will be counted as present for the purpose of determining the presence or absence of a quorum for the transaction of business at the Annual Meeting; the effect of abstentions and broker non-votes on the proposals presented herein is discussed below.

With regard to the election of directors, votes may be cast in favor of a director nominee or withheld. Because directors are elected by plurality, abstentions from voting and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome. If a quorum is present at the meeting, the nominees receiving the greatest number of votes, up to five directors, will be elected. Because Proposal Nos. 2 and 3 must be approved by the affirmative vote of a majority of the shares of Common Stock entitled to vote thereon and present in person or by proxy at the Annual Meeting (the "Required Vote"), abstentions will be counted in tabulations of the votes cast on each such proposal and will have the same effect as a vote against the proposal, whereas broker non-votes (with respect to Proposal No. 2) will be excluded from the vote and will have no effect on its outcome.

#### **Deadline for Receipt of Stockholder Proposals**

Any stockholder who meets the requirements of the proxy rules under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), who intends to present a proposal at the Company's 2018 Annual Meeting of Stockholders must ensure that the proposal is received by the Corporate Secretary at Arrowhead Pharmaceuticals, Inc., 225 South Lake Avenue, Suite 1050, Pasadena, CA 91101, not later than October 6, 2017, in order to be considered for inclusion in our proxy materials for that meeting; provided, however, that if the Company's 2018 Annual Meeting of Stockholders is held before February 19, 2018 or after April 20, 2018, you must provide specified information to us a reasonable time before we begin to print and send our proxy statement for our 2018 Annual Meeting. Proposals received after the specified dates may be excluded from the Company's proxy statement.

Additionally, our Bylaws provide for notice procedures to recommend a person for nomination as a director or to propose business to be considered by stockholders at a meeting. To be considered timely under these provisions, the stockholder's notice must be received by the Corporate Secretary at our principal executive offices at the address set forth above between 90 and 120 days prior to the one-year anniversary of the date of the 2017 Annual Meeting; *provided, however*, that if the 2018 Annual Meeting date is advanced by more than 30 days before or delayed by more than 60 days after the anniversary date of the 2017 Annual Meeting, then stockholders must provide notice within time periods specified in our Bylaws. Our Bylaws also specify requirements as to the form and content of a stockholder's notice.

**PROPOSAL ONE  
ELECTION OF DIRECTORS**

The Board has nominated the following five persons as directors to serve until the 2018 Annual Meeting and until their successors have been duly elected. Each of the nominees is currently a director of Arrowhead. Except as set forth in the biographical information below, none of the nominees is related by blood, marriage or adoption to any other nominee or any executive officer of the Company. The five nominees receiving the greatest numbers of votes at the Annual Meeting will be elected to the five director positions. Unless otherwise instructed, the proxy holders will vote the proxies received by them for the five nominees named below. If any nominee is unable or declines to serve as director at the time of the Annual Meeting, the proxies will be voted for any nominee who is designated by our present Board to fill the vacancy. The table below sets forth, with respect to each nominee for election, his age and current position with Arrowhead.

**Nominees for Election as Directors.** The Board unanimously adopted a resolution proposing the nominees set forth below for election as Directors of the Company for the next year.

**OUR BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” EACH OF THE NOMINEES LISTED BELOW.**

<u>Name</u>	<u>Age</u>	<u>Position with Arrowhead</u>
Christopher Anzalone	47	Chief Executive Officer, President & Director
Mauro Ferrari*	57	Director
Edward W. Frykman*	80	Director
Douglass Given	64	Director and Chairman of the Board
Michael S. Perry*	57	Lead Director

\* Member of the Audit Committee, Compensation Committee and Nomination Committee.

**Dr. Christopher Anzalone** has been President, Chief Executive Officer and Director of the Company since December 1, 2007. In 2005, Dr. Anzalone formed and served as CEO of the Benet Group LLC, a private equity firm focused on creating and building new nano-biotechnology companies from university-generated science. Prior to his tenure at the Benet Group, from 1999 until 2003, he was a partner at the Washington, DC-based private equity firm Galway Partners, LLC, where he was responsible for sourcing, structuring and building new business ventures. Dr. Anzalone holds a Ph.D. in Biology from UCLA and a B.A. in Government from Lawrence University. We believe Dr. Anzalone's qualifications to serve on the Board include his deep understanding of the business through his role as Chief Executive Officer; in addition, Dr. Anzalone has extensive experience in biotechnology, nanotechnology, company-building and venture capital.

**Dr. Mauro Ferrari** has been a director of the Company since 2010. Dr. Ferrari is the President and CEO of The Houston Methodist Hospital Research Institute (TMHRI), Executive Vice President of Houston Methodist Hospital and Senior Associate Dean of Weill Cornell Medical College in New York. He is also the President of The Alliance for NanoHealth. Dr. Ferrari is an internationally recognized expert in nanomedicine and biomedical nanotechnology. Prior to assuming leadership of TMHRI, Dr. Ferrari was Professor and Chairman of The Department of NanoMedicine and Biomedical Engineering at The University of Texas Health Science Center at

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Houston, Professor of Experimental Therapeutics at the MD Anderson Cancer Center, Adjunct Professor of Bioengineering at Rice University and Adjunct Professor of Biomedical Engineering at the University of Texas in Austin. His previous academic appointments include tenured professorships at UC Berkeley and The Ohio State University.

From 2003 to 2005, Dr. Ferrari served as Special Expert on Nanotechnology and Eminent Scholar at The National Cancer Institute, where he led in the development of NCI's program in Nanotechnology, which remains the largest program in NanoMedicine in the world. Dr. Ferrari has been serving as the Editor-in-Chief for "Biomedical Microdevices: BioMEMS and Biomedical Nanotechnology" since 1997. We believe Dr. Ferrari's qualifications to serve on the Board include his extensive training and experience in the fields of nanotechnology, biotechnology and biomedical applications. Dr. Ferrari has significant technical training, several academic appointments, over 300 published articles, over 30 issued patents and is the recipient of most prestigious academic awards in nanomedicine and drug delivery technology. Additionally, Dr. Ferrari has extensive experience in developmental stage organizations having founded several startup companies.

**Edward W. Frykman** has been a director of the Company since January 2004. Mr. Frykman was an Account Executive with Crowell, Weedon & Co., a position he held from 1992 until 2008 when he retired. Before his service at Crowell, Weedon & Co., Mr. Frykman served as Senior Vice President of L.H. Friend & Co. Both Crowell Weedon & Co. and L.H. Friend & Co. are investment brokerage firms located in Southern California. In addition, Mr. Frykman was a Senior Account Executive with Shearson Lehman Hutton, where he served as the Manager of the Los Angeles Regional Retail Office of E. F. Hutton & Co. Mr. Frykman is also a director of Acacia Research Corporation, a publicly-held corporation based in Newport Beach, California. We believe Mr. Frykman's qualifications to serve on the Board include his long tenure as a member of the Board, which has enabled Mr. Frykman to gain a deep understanding of the company's operations, strategy and finances. Mr. Frykman has over 20 years of Audit Committee leadership in his roles of Audit Committee Chairman at both Acacia and Arrowhead and an extensive knowledge and experience in financial statement analysis gained in his career in finance and management.

**Dr. Douglass Given** has been a director of the Company since November 2010. Dr. Given is the founder and managing partner of G5 Partners LLC and Director and Chief Executive Officer of Health 2047, Inc., a San Francisco, California based health information start up. He joined Bay City Capital, LLC in 2000, served as a General Partner and Investment Partner from 2004-2014 and participated in more than 50 investments. He has co-founded 14 startup companies. He formerly held positions as Corporate Senior Vice President and Chief Technology Officer at Mallinckrodt, Vice President at Schering Plough, Vice President at Monsanto/GD Searle and Medical Advisor at Lilly. He has been a Director at 8 public and 8 private companies and is currently Chairman at Arrowhead, Vivaldi Biosciences Inc. and Medical eXcellence Inc. He has held positions as CEO at Progenitor Inc, Mercator Genetics Inc, NeoRx Corp, VIA Pharmaceuticals Inc., and Vivaldi Biosciences Inc. Dr. Given has been a member of the University of Chicago Medical Center and Pritzker School of Medicine Visiting Committee since 1995 and served as its Chair from 2007-2013.

Additional University of Chicago activities include the Center for Global Health External Advisory Board and Investment Committee for the Innovation Fund. He is a member of the Johns Hopkins Bloomberg School of Public Health Advisory Board and its Development Committee and Innovation and Commercialization Committee. He is a member of the Harvard School of Public Health International Advisory Council and the Stanford Medicine Community Council. He received his MD & PhD from the University of Chicago and MBA from the Wharton School, University of Pennsylvania. Dr. Given was a Clinical and Research Fellow in Internal Medicine and Infectious Diseases at Massachusetts General Hospital and Harvard Medical School. We believe Dr. Given's qualifications to serve on the Board include his extensive experience as a physician scientist, in finance and business transactions, particularly investments in the life sciences industry, as well as directorship roles in biopharmaceutical companies. Dr. Given also has significant leadership roles, including CTO and Senior Vice President, at several large pharmaceutical companies. Dr. Douglass Given is a brother of Dr. Bruce Given, our chief operating officer.

**Dr. Michael S. Perry** has been a director of the Company since 2011. Dr. Perry is currently Senior Vice President and Chief Scientific Officer, Global Business Development and Licensing at Novartis Pharma. Prior to his appointment at Novartis, Dr. Perry was a Venture Partner with Bay City Capital LLP from 2005 until November 2012 and President and Chief Medical Officer of Poniard Pharmaceuticals from 2010 to November 2012. He also currently serves as a member of the board of directors of AmpliPhi Biosciences Corporation and Avita

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Medical. He was Chief Development Officer at VIA Pharmaceuticals, Inc., a publicly held drug development company, from April 2005 until May 2009. Prior thereto, he served as Chairman and Chief Executive Officer of Extropy Pharmaceuticals, Inc., a privately held pediatric specialty pharmaceutical company, from June 2003 to April 2005. From 2002 to 2003, Dr. Perry served as President and Chief Executive Officer of Pharsight Corporation, a publicly held software and consulting services firm. From 2000 to 2002, Dr. Perry served as Global Head of Research and Development for Baxter BioScience. From 1997 to 2000, Dr. Perry was President and Chief Executive Officer of both SyStemix Inc. and Genetic Therapy Inc., two wholly owned subsidiaries of Novartis Corp. and from 1994 to 1997, he was Vice President of Regulatory Affairs for Novartis Pharma (previously Sandoz Pharmaceuticals). Prior to 1994, Dr. Perry held various management positions with Syntex Corporation, Schering-Plough Corporation and BioResearch Laboratories, Inc. Dr. Perry holds a Doctor of Veterinary Medicine, a Ph.D. in Biomedical Pharmacology and a B.Sc. in Physics from the University of Guelph, Ontario, Canada. He is a graduate of the International Management Program at Harvard Business School. We believe Dr. Perry's qualifications to serve on the board include his medical expertise and his extensive experience in preclinical and clinical drug development, including executive level leadership roles in several publicly held biotech companies.

### **Corporate Governance Policies and Practices**

The following is a summary of our corporate governance policies and practices:

- The positions of Chairman of the Board and Chief Executive Officer are separated, which allows our Chief Executive Officer to focus on our day-to-day business, while allowing the Chairman of the Board to lead the Board in its fundamental role of providing advice to and oversight of management. While our Bylaws do not require that our Chairman and Chief Executive Officer positions be separate, our Board believes that having separate positions is the appropriate leadership structure for us at this time and demonstrates our commitment to good corporate governance.
- A majority of the members of the Board are independent directors, as defined by Nasdaq Marketplace Rules. The Board has determined that all of the Company's directors are independent, except Dr. Anzalone, due to his employment relationship with the Company, and Dr. Given, who is the brother of Bruce Given, the Company's Chief Operating Officer. Non-employee directors do not receive consulting or other fees from the Company, other than Board and Committee compensation.
- The Board has appointed an independent Lead Director. The Lead Director is tasked with assuring that the Board committees and other relevant issues have independent leadership.
- The Board has overall responsibility for the oversight of the Company's risk management process, which is designed to support the achievement of organizational objectives, including strategic objectives, to improve long-term organizational performance and enhance stockholder value. Risk management includes not only understanding company-specific risks and the steps management implements to manage those risks, but also what level of risk is acceptable and appropriate for the Company. Management is responsible for establishing our business strategy, identifying and assessing the related risks and implementing appropriate risk management practices. The Board regularly reviews our business strategy and management's assessment of the related risk, and discusses with management the appropriate level of risk for the Company.
- All of the Company's employees, officers and directors are subject to the Company's Code of Business Conduct and Ethics Policy, which is available on the Company's website at [www.arrowheadpharma.com](http://www.arrowheadpharma.com). The ethics policy meets the requirements of Nasdaq Marketplace Rules, as well as the code of ethics requirements of the SEC.
- The Audit, Compensation and Nomination Committees consist entirely of independent directors.
- The independent directors meet separately in executive session on a regular basis to discuss matters relating to the Company and the Board, without members of the management team present.
- The Board reviews at least annually the Company's business initiatives, capital projects and budget matters.
- The Audit Committee reviews and approves all related-party transactions or, if the size and nature of the transaction warrants, a special committee of non-related Board members is formed to negotiate and approve the transaction.



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## Stockholder Communications with Directors

Stockholders who wish to communicate with the Board or any individual director can write to: Jane Davidson, Corporate Secretary, Arrowhead Pharmaceuticals, Inc., 225 South Lake Avenue, Suite 1050, Pasadena, CA 91101. Your letter should indicate that you are an Arrowhead stockholder. Depending on the subject matter, management will:

- Forward the communication to the director or directors to whom it is addressed;
- Forward the communication to the Chairman of the Board, if addressed to the board of directors; or
- If not addressed to any director or directors, attempt to handle the inquiry directly (for example, requests for information or stock-related matters).

## Board Meetings and Committees

The Board held a total of eight meetings during the fiscal year ended September 30, 2016. The Board has three standing committees: an Audit Committee, a Compensation Committee and a Nomination Committee.

The functions of the Audit Committee are to select independent public accountants, to review the scope and results of the year-end audit with management and the independent auditors, to review the Company's accounting principles and its system of internal accounting controls, to review the Company's annual and quarterly reports before filing with the Securities and Exchange Commission and to review any related-party transactions. The Audit Committee met four times during fiscal 2016. The current members of the Audit Committee are Edward W. Frykman, Chairman, Mauro Ferrari and Michael S. Perry. The Board has determined that all members of the Audit Committee are independent directors under the Rules of the SEC and the listing standards of Nasdaq Marketplace Rules and are financially literate. The Board has determined that Mr. Frykman is an "audit committee financial expert" in accordance with the applicable regulations, based on his experience as noted above. The Audit Committee Charter is available on the Company's website at [www.arrowheadpharma.com](http://www.arrowheadpharma.com).

The functions of the Compensation Committee are to review the goals and achievements of the Company and the Chief Executive Officer for the prior year and approve the goals of the Company and the Chief Executive Officer for the next year, to review and approve salaries, bonuses and other benefits payable to the Company's executive officers and to administer the Company's 2004 Equity Incentive Plan and 2013 Incentive Plan. The Compensation Committee is specifically responsible for determining the compensation of the Chief Executive Officer and the other executive officers. The Compensation Committee reviews compensation recommendations made by the Chief Executive Officer for other senior executives of the Company at least annually; the Chief Executive Officer is not present during discussions or deliberations regarding his compensation. The Compensation Committee engaged a consultant to provide advice and guidance with regard to compensation for our named executive officers for fiscal 2016. The decision to engage the consultant was not made or recommended by management and the Committee has the sole discretion to engage or change the consultant. The Compensation Committee met three times during fiscal 2016. The current members of the Compensation Committee are Michael S. Perry, Chairman, Edward Frykman and Mauro Ferrari. The Board has determined that all members of the Compensation Committee are independent directors under the listing rules of Nasdaq Marketplace Rules. The Compensation Committee's charter is available on the Company's website at [www.arrowheadpharma.com](http://www.arrowheadpharma.com). The Committee has not delegated any of its responsibilities or authorities granted under its charter.

The Nomination Committee is responsible for proposing a slate of directors for election by the stockholders at each Annual Stockholders Meeting and for proposing candidates to fill any vacancies. The Nomination Committee met once during fiscal 2016. The current members of the Nomination Committee are Michael S. Perry, Chairman, Edward Frykman and Mauro Ferrari. The Nomination Committee's charter is available on the Company's website at [www.arrowheadpharma.com](http://www.arrowheadpharma.com). The Nomination Committee manages the process for evaluating current Board members at the time they are considered for re-nomination. After considering the appropriate skills and characteristics required on the Board, the current makeup of the Board, the results of the evaluations and the wishes of the Board members to be re-nominated, the Nomination Committee recommends to the Board whether those individuals should be re-nominated.

On at least an annual basis, the Nomination Committee reviews with the Board whether it believes the Board would benefit from adding new members and, if so, the appropriate skills and characteristics required for any new members. If the Board determines that a new member would be beneficial, the Nomination Committee solicits and receives recommendations for candidates and manages the process for evaluating candidates. All potential candidates, regardless of their source, are reviewed under the same process. The Nomination Committee (or its chairman) screens the available information about the potential candidate(s). Based on the results of the initial screening, interviews with viable candidates are scheduled with Nomination Committee members, other members of the Board and senior members of management. Upon completion of these interviews and other due diligence, the Nomination Committee may recommend to the Board the election or nomination of a candidate.

Candidates for independent Board member positions have historically been identified through recommendations from directors or others associated with the Company. Arrowhead stockholders may also recommend candidates by sending the candidate's name and resume to the Nomination Committee pursuant to the procedures, set forth above, for communication with the Board. As described above, our Bylaws also provide for separate notice procedures to recommend a person for nomination as a director to be considered by stockholders at a meeting, including requirements as to the timing, form and content of a stockholder's notice.

The Nomination Committee has no predefined minimum criteria for selecting Board nominees, although it believes that all directors should share qualities such as business experience at the corporate level, relevant non-competitive experience and strong communication and analytical skills. Independent directors must meet the criteria for independence set forth by Nasdaq and the SEC. In any given search, the Nomination Committee may also define particular characteristics for candidates to balance the overall skills and characteristics of the Board and the needs of the Company. During any search, the Nomination Committee reserves the right to modify its stated search criteria for exceptional candidates. While the Board does not have a policy with regard to consideration of diversity for selecting candidates, the Nomination Committee may consider diversity, including diversity with respect to experience, skill set, age, areas of expertise and professional background, as well as race, gender, national origin and any other criteria deemed appropriate by the Nomination Committee.

No incumbent director attended fewer than 75% of the aggregate of (i) the total number of meetings of the Board held during fiscal 2016, and (ii) the total number of meetings held by all committees of the Board during fiscal 2016 on which such person served.

In addition, a majority (three) of the directors attended the 2016 Annual Meeting of Stockholders. It is the Company's policy to encourage, but not require, that all directors attend our annual stockholder meetings.

#### DIRECTOR COMPENSATION

Directors who are also employees of the Company receive no separate compensation from the Company for their service as members of the Board. The below table sets forth compensation levels for each of our outside directors for calendar 2016 and 2017.

<u>Name &amp; Position</u>	<u>2017 Annual Fee (1)</u> <small>(effective 1/1/17)</small>	<u>2017 Stock Award (2)</u>	<u>2017 Grant Date Value</u>	<u>2016 Annual Fee (1)</u> <small>(effective 1/1/16)</small>	<u>2016 Stock Award (2)</u>	<u>2016 Grant Date Value</u>
Douglass Given Chairman	\$ 78,750	80,000	\$124,000	\$ 75,000	35,000	\$215,250
Michael S. Perry Lead Director	\$ 68,250	80,000	\$124,000	\$ 65,000	30,000	\$184,500
Edward W. Frykman Director	\$ 52,500	50,000	\$ 77,500	\$ 50,000	25,000	\$153,750
Mauro Ferrari Director	\$ 50,000	50,000	\$ 77,500	\$ 50,000	8,517	\$ 49,995

- (1) The annual fee for service as a Company director for 2017 is \$52,500. An additional fee of \$26,250 is paid for the service of the Chairman and an additional \$15,750 for the service of the lead director. The annual fee for 2016 was \$50,000 for each director with an additional \$25,000 and \$15,000 for the Chairman and the lead director, respectively. Dr. Ferrari declined compensation for his service as a director until January 1, 2016 based on the policies of his employer, so the cash compensation shown represents payments for 3 quarters in fiscal 2016.

- (2) For services in 2017, each non-employee director received a grant of 50,000 restricted stock units (“RSUs”). Two additional grants of 30,000 RSUs were awarded for the service of the Chairman and the lead director. RSU grants to non-employee directors vest on the one-year anniversary of the date of grant. In 2016, the grant for each director was 25,000 RSUs with an additional grant to the Chairman of 10,000 RSUs and to the lead director of 5,000 RSUs. In 2016, Dr. Ferrari was eligible to receive an RSU grant of up to 25,000 shares of common stock vesting on the one year anniversary of the date of grant. Dr. Ferrari’s employer limited the amount of compensation he could accept in 2016 and several prior years. After approval by his employer, a stock award of 8,517 shares was granted in lieu of an RSU grant. In 2017, Dr. Ferrari and his employer negotiated an arrangement which allowed him to accept the director’s RSU grant for 50,000 shares and to donate his cash compensation to his employer.

The following table sets forth the total compensation paid to our non-employee directors in fiscal 2016. Dr. Anzalone’s compensation is set forth in the discussion of Executive Compensation and in the Summary Compensation Table.

<u>Name</u>	<u>Fee Earned or Paid in Cash (S)</u>	<u>Stock Awards (S) (1) (2)</u>	<u>Total (S)</u>
Douglass Given	\$ 75,000	212,250	287,250
Michael S. Perry	\$ 65,000	184,500	249,500
Edward W. Frykman	\$ 50,000	153,750	203,750
Mauro Ferrari (3)	\$ 37,500	49,995	87,495

- (1) This column represents the total grant date fair value, computed in accordance with ASC 718, of restricted stock units granted during fiscal year 2016 for each director.
- (2) RSUs to non-employee directors vest one year from date of grant, with the exception of Dr. Ferrari’s grant. Dr. Ferrari’s grant was adjusted to meet the policies of his employer, and the grant vested immediately. In 2016, Dr. Ferrari was eligible to receive an RSU grant of up to 25,000 shares of common stock vesting on the one year anniversary of the date of grant. Dr. Ferrari’s employer limited the amount of compensation he could accept in 2016 and several prior years. After approval by his employer, a stock award of 8,517 shares was granted in lieu of an RSU grant.
- (3) Dr. Ferrari declined compensation for his service as a director until January 1, 2016 based on the policies of his employer. The cash compensation shown represents payments for 3 quarters in fiscal 2016.

As of the last day of fiscal year 2016, the directors held the following outstanding stock option and restricted stock unit grants in the aggregate: Douglass Given – 65,000 stock options and 35,000 restricted stock units; Michael S. Perry – 77,000 stock options and 30,000 restricted stock units; Edward Frykman – 76,500 stock options and 25,000 restricted stock units; and Mauro Ferrari – 25,469 stock options.

#### **Vote Required; Recommendation of the Board**

The five nominees receiving the greatest numbers of votes at the meeting, assuming a quorum is present, will be elected to the five director positions to serve until their terms expire or until their successors have been duly elected and qualified. Because directors are elected by plurality, abstentions from voting and broker non-votes will be entirely excluded from the vote and will have no effect on its outcome.

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**THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” EACH OF THE NOMINEES  
FOR DIRECTOR IN PROPOSAL ONE.**

**PROPOSAL TWO  
ADVISORY VOTE ON EXECUTIVE COMPENSATION**

The compensation paid to our Named Executive Officers (“NEOs”) is described below in the Compensation Discussion and Analysis on pages 9 through 23 of this proxy statement for the year ended September 30, 2016. The Board of Directors is asking stockholders to cast a non-binding, advisory vote FOR the following resolution:

“RESOLVED, that the compensation paid to the Company’s named executive officers, as disclosed pursuant to Item 402 of Regulation S-K, as set forth in the compensation tables and narrative discussion, is hereby APPROVED.”

Although the vote we are asking you to cast is non-binding, the Compensation Committee and the Board value the views of our stockholders and will consider the outcome of the vote when determining future compensation arrangements for our named executive officers.

The Board has adopted a policy providing for annual advisory votes on executive compensation. Unless the Board modifies its policy on the frequency of holding advisory votes on executive compensation, the next such advisory vote will occur in 2018.

**Vote Required; Recommendation of the Board**

Proposal Two must be approved by the Required Vote, assuming a quorum is present. For this purpose, abstentions will be counted as a vote against the proposal, while broker non-votes will have no effect on the outcome of the vote.

**THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” PROPOSAL TWO.**

**EXECUTIVE COMPENSATION**

**COMPENSATION DISCUSSION AND ANALYSIS**

*The following compensation discussion and analysis contains statements regarding future individual and Company performance targets and goals. These targets and goals are disclosed in the limited context of Arrowhead’s compensation programs and should not be understood to be statements of management’s expectations or guidance. Arrowhead cautions investors not to apply these statements to other contexts.*

Our Compensation Committee reviews and approves our executive compensation philosophy, objectives and methods, evaluates our performance and the performance of our executive officers, and approves executive compensation. The members of our Compensation Committee are appointed by our Board, and each member is an independent director (as “independence” is currently defined in Rule 5605(a)(2) of the Nasdaq listing standards). The members of our Compensation Committee are Michael S. Perry (Chairman), Mauro Ferrari and Edward Frykman.

This Compensation Discussion and Analysis explains our compensation philosophy, policies and practices for the following executives, who are referred to in this Compensation Discussion and Analysis and in the subsequent tables as our “Named Executive Officers” or “NEOs”:

- Christopher Anzalone, President and Chief Executive Officer;
- Bruce Given, Chief Operating Officer;
- Kenneth Myszkowski, Chief Financial Officer;
- Patrick O’Brien, General Counsel
- David Lewis, Chief Scientific Officer

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We provide a summary of our recent business achievements, a description of our executive compensation program, a description of the overall objectives of the program and an analysis of each component of compensation that we provide to our named executive officers. In addition, we explain how and why the Compensation Committee arrived at the specific compensation policies and decisions involving the named executive officers during and for 2016. We describe measures that the Compensation Committee has taken in response to feedback we received from stockholders and prior years' stockholder advisory vote on our executive compensation program (the "Say-on-Pay Vote").

## **Summary**

### **Company Performance**

In 2016, Arrowhead made broad progress toward our strategic objectives. Most notably, the Company entered into two license and collaboration agreements with Amgen, Inc., a leading biopharma company, to develop and commercialize two RNAi therapeutics for cardiovascular targets, including our preclinical program ARO-LPA and a novel therapeutic for an undisclosed target identified by Amgen. The agreements provide for \$56.5 million of upfront cash payments as well as option payments, milestone payments and royalties on sales of products of up to \$617 million. Aside from the immediate and future financial impact, this collaboration with a large biopharma partner provides validation for the Company's technology in several key ways: validation of our strategic positioning as a platform company, validation of the science underpinning our technology platform, validation of our RNAi delivery capabilities including subcutaneous administration, and validation of our ARO-LPA program. Additionally, the collaboration provides both therapeutics with access to the development and commercialization capabilities of a large biopharma company while limiting the financial investment by the Company.

Arrowhead made good progress on its preclinical programs, including adding subcutaneously delivered candidates for hepatitis B (ARO-HBV) and alpha-1 antitrypsin deficiency (ARO-AAT) to its preclinical pipeline. In addition, promising data from our preclinical programs showing delivery and knockdown of our oncology and cardiovascular drug candidates was presented at several scientific conferences.

Through the fiscal year, the Company continued to progress its clinical program, initiating a Phase 2b multi-dose study for ARC-520 (hepatitis B), a Phase 1/2 study for ARC-521 (follow-on for hepatitis B) and a Phase 2b study for ARC-AAT (alpha-1 antitrypsin deficiency). Although the Company's intravenously administered programs were terminated in November 2016, these studies provided important safety and knockdown data in human subjects that will inform the Company's follow-on subcutaneously administered programs for hepatitis B, alpha-1 antitrypsin deficiency and our other programs. Following the termination of the clinical programs, the Company reduced its workforce by approximately 30%, while maintaining resources necessary to support current and potential future partner-based programs and Arrowhead's internal candidates. Based on the streamlined cost structure and cash secured from the Amgen transaction and another financing transaction in 2016, the Company has a cash runway expected to extend to fiscal 2019.

### **Executive Compensation Program and 2016 Actions**

Our executive compensation program consists primarily of the following forms of compensation:

- **Base Salary:**

A base level of compensation is set appropriate to each executive's scope of responsibility and level of experience. Base salary is targeted to market-based levels to allow the Company to attract and retain top talent. In 2016, base salary for each executive was increased by 4-6% which was consistent with prior year increases and reflects the Compensation Committee's decision to provide a modest increase for each executive in recognition of continuing service.

- **Annual Incentive Compensation:**

Each named executive officer is eligible to be considered for an annual cash incentive compensation award based on Company and individual performance. Target awards are set based on each executive's role in the Company. At higher levels of control and accountability for the Company's overall performance, a higher percentage of each named executive officer's total cash compensation (base salary plus annual cash incentive compensation) is comprised of performance-based cash incentive compensation. For 2016, target awards ranged from 35-100%, which was consistent with prior years.

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The CEO's bonus was paid out at only 75% of target because, while not under the CEO's control, circumstances arose that led to the Company's termination of its intravenously administered programs in November 2016. Bonuses were paid out at or near target for other named executives reflecting the Company's and each individual's achievement of the results described in more detail below.

- **Equity Compensation:**

Consistent with the Company's stage of development and to align compensation with long term performance, overall executive compensation is weighted toward equity compensation. Each executive officer is eligible to be considered for an equity award, generally annually, and the Company has historically granted a mix of stock options and restricted stock units. In 2016, the large majority of equity awards granted to the Company's CEO are eligible to vest based on the achievement of rigorous performance milestones, some of which were met in 2016. The Company is a standout among its peer group in awarding performance-based grants to its CEO. Only a small number of its peers use performance based equity awards for its CEO and the proportion of performance vs. time-based award is minor. Amounts relating to equity awards granted to other NEOs in fiscal 2016, which appear in the Summary Compensation Table below, reflect awards made early in 2016 in recognition of 2015 performance.

The Compensation Committee contends that entering into revenue-generating licenses and collaboration arrangements with partners, progress with respect to the Company's clinical and preclinical development programs, and maintaining an appropriate cash position to support our continued development, are the most important factors in building stockholder value, and this focus is reflected in the performance metrics and milestones which are at the core of our executive compensation program. Long-term stockholder value will ultimately depend on successfully bringing the products we develop to market, or partnering them with collaborators to bring them to market, and the Compensation Committee strives to incentivize our senior management to create that value through a robust and attractive pipeline of drug candidates. The Committee closely tracks the progress against these objectives to monitor our success as a company over that development period and evaluates executive management primarily on that progress.

#### ***Response to 2016 Say-on-Pay Vote***

We held an advisory stockholder vote on executive compensation at our annual stockholder meeting in March 2016. Our stockholders approved, on an advisory basis, our say-on-pay proposal, with approximately 53% of stockholders voting on such matter voting in favor of the proposal. This is in line with the 2015 vote, when stockholders approved that year's say-on-pay vote with 58% of those casting votes. While we received an overall positive vote in 2016, the Compensation Committee is committed to being responsive to stockholder feedback regarding executive compensation, including concerns expressed through the say-on-pay vote on executive compensation.

In addition to holding an annual advisory vote on executive compensation, we are committed to ongoing engagement with our stockholders on executive compensation and corporate governance issues. The Compensation Committee directed Arrowhead's management to maintain our efforts to obtain feedback from stockholders. Our Compensation Committee's goal in soliciting feedback was to (1) better understand stockholders' views on executive compensation, and (2) based on that understanding, better communicate the rationale behind the decisions of the Compensation Committee. Although Arrowhead's stockholder base currently consists primarily of individual investors, we were able to identify and solicit feedback from individual and institutional holders of approximately 21 million shares or 28% of our outstanding stock. The Company also solicited feedback from a prominent investor advisory firm in order to further understand proxy advisory firm policies and how they relate to the perspectives held by our stockholders. Only a small number of stockholders chose to provide customized feedback to us. The collected feedback included a desire to understand how executive compensation aligns with corporate performance. Based on this feedback and a review of current peer practices in executive compensation, and in response to concerns expressed through the 2016 say-on-pay vote, for 2016 equity grants, the Compensation Committee continued its practices first implemented in 2015 of granting a majority of equity awards to the Company's CEO that only vest, if at all, based on the achievement of pre-established performance criteria, requiring a minimum of three-year vesting for full value equity awards to our other named executive officers and requiring compliance with stock ownership guidelines for the CEO, COO, and CFO.

The Company's 2013 Incentive Plan provides for recovery of awards made under the plan in accordance with any applicable Company claw back or recoupment policy, including as required by law, regulation, or exchange rule. The Compensation Committee plans to institute a compensation recovery (claw back) policy when and to the extent required by final rules regarding such policies are adopted by Nasdaq as mandated by Section 954 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. These rules were not finalized as expected in 2016 and the Committee is expecting to adopt such a policy when the rules are finalized. It is anticipated that any such policy would require the Company to seek recovery of certain incentive compensation paid to executive officers in the event the Company was required to prepare an accounting restatement to correct a material error.

As equity compensation comprises the majority of our CEO's compensation, and is expected to comprise the majority of his compensation going forward, and instituting performance awards was the key measure taken to address the stockholder concerns expressed in our 2015 and 2016 Say on Pay Votes, we describe below in detail the equity awards made to the CEO in 2016 and 2015, as well as the rationale behind the grant of a time based award to the CEO in 2016.

#### Equity Awards to the CEO in 2017

At the time of filing, an equity award to the CEO in 2017 has not been finalized, however, the Compensation Committee expects that the award will be 100% performance based with vesting criteria dependent upon achieving rigorous milestones related to the Company's technical, clinical and corporate goals.

#### Equity Awards to the CEO in 2016

In January 2016, the CEO received a performance-based restricted stock award. The award vests only upon the achievement of rigorous performance milestones which align with the Company's primary business objective of developing and marketing RNAi-based drugs using our proprietary delivery platform and, which, if achieved, are designed to result in substantial value creation for shareholders. At the time of the grant, the Compensation Committee determined that, while these vesting milestones were achievable in the timeframes set forth, they additionally require robust leadership, substantial skill and sustained effort on the part of the CEO. The achievement of these milestones is dependent on a number of factors, primarily the continued successful technical and clinical development of the Company's drug products and/or follow-on candidates, successful business development, and the procurement of sufficient financial resources. The vesting of the award is split equally among each milestone set forth below and, to date, only one of the three milestones was met with the vesting of that portion certified by the Compensation Committee in December 2016:

#### Enter into a partnership to develop a novel therapeutic with a pharmaceutical or biotech company by January 1, 2019

Vested December 2016

The Company believes that our proprietary delivery platform has application beyond our current development capabilities. One way the Company envisions extending the platform is by partnering with third parties to co-develop new RNAi-based drugs against novel targets. The Committee believes that for biotech companies like Arrowhead, partnerships are an important validating indicator of the credibility of our platform technology and associated products as well as a potential source of revenue to further support our growth. As such, it is expected that the achievement of such a partnership would be a value creating event for stockholders.

The Company entered into a collaboration and license agreement with Amgen, Inc. to develop a novel therapeutic based on a target identified by Amgen.

The collaboration included a significant upfront cash payment, as well as milestones and royalties as development progresses.

#### Achieve a \$1 billion market capitalization and maintain that level over two quarters by January 1, 2019

Not vested

During 2015, the Company's market capitalization ranged between \$259 million and \$557 million and as of January 27, 2017 was \$133 million. In order for this tranche of equity to vest, the Company's market capitalization would need to

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more than triple from its 2015 levels. The Committee understands that an increase in market capitalization is the primary metric of interest to stockholders and the most direct indicator of increase in Company value.

File an IND or equivalent for an extra-hepatic target by January 1, 2019

Not vested

Except for ARO-HIF2, all of the Company's pipeline drugs are targeted to liver cells. A key strategic objective for the Company is to extend the utility of its RNAi delivery platforms to enable targeting diseases outside the liver. The Committee believes that expanding our delivery capability to a wider variety of tissues will enable the expansion of our pipeline, and will present new collaboration and licensing opportunities. It is expected that these events would result in value creation for stockholders.

The value of the RSU awards was calculated in accordance with ASC 718 which requires the Company to assess the likelihood of achieving the milestones within the specified time frames. The awards were valued at \$0 at the time of grant based on the significant business, technical, financial, and operational difficulty of their achievement. Had the grant value been calculated without taking the likelihood of achievement into account, the grant date value would have been approximately \$3.3 million, a reduction of 22% in grant date value (without taking likelihood of achievement into account) from Dr. Anzalone's equity grant in 2015.

The CEO also received a time-based grant of a stock option to purchase 80,000 shares of the Company's Common Stock valued at the time of grant at \$368,797. The Committee believes that along with performance-based equity grants, a smaller time-based grant is appropriate given its retention value and the uncertain nature of the drug development business. The Committee determined that the value of grants was consistent with grants to similarly placed executives at peer companies, except that the Company is a standout in awarding majority performance-based awards. The grants are consistent with the Company's executive compensation policies of employing performance based equity as a majority of the CEO's compensation with the intent to align the CEO's overall compensation to shareholder return.

#### Equity Awards to the CEO in 2015

In March 2015, the CEO received performance awards of restricted stock units and stock options. These awards included vesting only upon achievement of rigorous performance milestones that align with the Company's primary business objective of developing and marketing RNAi-based drug. If achieved, these awards were designed to result in substantial value creation for shareholders. The Compensation Committee determined that, while these milestones were achievable in the timeframes set forth, they additionally will require robust leadership, substantial skill and sustained effort on the part of the CEO. The achievement of these milestones is dependent on a number of factors; primarily the continued successful technical and clinical development of the Company's drug products and/or follow-on candidates, successful business development, and the procurement of sufficient financial resources. During 2016, all of the milestones were met.



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File two new IND applications by March 2018

Expanding and progressing the Company's pipeline of candidates is the primary business objective of the Company and the Compensation Committee believes that the submission of new IND applications provides a concrete indicator of that progress.

Enroll first patient in a phase 2 or later study (excluding ARC-520)

Expanding and progressing the Company's pipeline of candidates is the primary business objective of the Company and the Compensation Committee believes that the enrollment of patients in a phase 2 study for a second program provides a concrete indicator of that progress.

Achieve a significant corporate event (e.g. a significant M&A transaction) as determined by the Compensation Committee by March 2020

The Committee believes that for biotech companies like Arrowhead, collaboration and licensing deals for drugs in the Company's pipeline are important validating indicators of the credibility of platform technology and resulting products, as well as a potential source of revenue to support the growth of the Company. As such, it is expected that the achievement of such a partnership would be a value creating event for stockholders. Other types of significant events, such as an acquisition of a business or technology, may qualify, and could be an important driver of value creation in the future. The Compensation Committee has retained discretion to determine if an event is of sufficient significance (i.e. has the potential to result in substantial value creation for stockholders) to qualify to meet the milestone.

The vesting of the award was split equally among the milestones and can be adjusted up or down by 20% based on the performance of the Company's stock vs. the Nasdaq Biotech Index for the fiscal year in which it is achieved to insure that the vesting of a portion of the award is tied to the industry-adjusted performance of the Company's stock. Such adjustment is in the sole discretion of the Compensation Committee. Based on appreciation of the Company's stock in fiscal 2016, the Compensation Committee adjusted the number of shares of the vested tranches up by 20%.

Vested December 2016

The Company filed initial regulatory applications for two new drug candidates, ARC-AAT and ARC-521 and commenced phase 1 studies for each new candidate.

Vested December 2016

The Company opened its ARC-AAT phase 2 study for enrollment in September 2016. All the necessary hurdles for regulatory clearance, site initiation and patient screening were accomplished. The Company made a business decision in November 2016 to discontinue all of its intravenous clinical programs, including the phase 2 study for ARC-AAT, based on non-clinical toxicology results and regulatory feedback on those results, so no patients were dosed as a result of this decision. Given that the decision was taken for business reasons beyond the control of the CEO, the Committee determined that the intent of the vesting condition had been met.

Vested in December 2016

The Company entered into a collaboration and license agreement with Amgen, Inc. in which Amgen acquired rights to co-develop and commercialize ARO-LPA, Arrowhead's preclinical drug candidate for cardiovascular disease.

This partnership validates both Arrowhead's RNAi technology and capabilities as well as the Company's subcutaneous administration platform.

The collaboration included a significant upfront cash payment, as well as milestones and royalties as development progresses.

The value of the awards was calculated in accordance with ASC 718 which requires the Company to assess the likelihood of achieving the milestones within the specified time frames at the grant date. The awards were valued at \$1.2 million at the grant date. Had the grant been calculated without taking the likelihood of achievement into account, the grant date value would have been approximately \$4.2 million. The Committee determined that the grants were consistent with grants to similarly placed executives at peer companies, except that the Company is a standout in granting majority performance-based equity awards. The awards are consistent with the Company's executive compensation policies of employing performance-based equity as a majority of the CEO's compensation with the intent to align the CEO's overall compensation to shareholder return.

#### ***Elements of Compensation***

In 2016, our executive compensation program consisted of the following forms of compensation, each of which are described below in greater detail:

- Base Salary
- Annual Incentive Compensation
- Equity Compensation
- Employee Benefit Program
- Termination Benefits

The Company evaluates compensation on a calendar year basis. The tables and information presented in this Compensation Discussion and Analysis and the Executive Compensation tables presented herein generally refer to base salary compensation and equity awards paid during the fiscal year. Cash bonus awards and equity awards reflect performance during the calendar year and are paid shortly thereafter.

#### **Base Salary**

Our named executive officers, along with their base salaries and adjustments for the past three years, were as follows:

<u>Name</u>	<u>2017 Base Salary</u>	<u>Percent Increase</u>	<u>2016 Base Salary</u>	<u>Percent Increase</u>	<u>2015 Base Salary</u>
Christopher Anzalone Chief Executive Officer	\$622,050	4%	\$598,125	4%	\$575,120
Bruce Given Chief Operating Officer	\$436,477	4%	\$419,661	4%	\$403,520
Kenneth Myszkowski Chief Financial Officer	\$339,363	4%	\$326,310	6%	\$307,840
Patrick O'Brien General Counsel	\$394,784	4%	\$379,600	4%	\$365,000
David L. Lewis (1) Chief Scientific Officer	\$ N/A	N/A	\$264,576	6%	\$249,600

(1) Dr. Lewis' employment with the Company terminated on December 13, 2016.

The Compensation Committee contends it is important to provide reasonable, fixed compensation to our executive officers working in a highly volatile and competitive industry, while balancing the needs to retain and recruit talented executives, achieve corporate goals, and conserve cash and equity. In determining appropriate base salary levels for a given executive officer, the Compensation Committee considers the following factors (with no specific weighting applied to any individual factor):

- individual performance of the executive, as well as our overall Company performance, during the prior year;
- level of responsibility, including breadth, scope and complexity of the position;
- level of experience and expertise of the executive;

- internal review of the executive’s compensation relative to other executives to ensure internal equity;
- changes in job responsibilities or promotion; and
- executive officer compensation levels at other similar companies.

Salaries for executive officers are negotiated on an individual basis at the time of hire. Adjustments to base salary are considered annually. The Chief Executive Officer assists the Compensation Committee in its annual review of the base salaries of other executive officers and key employees based on the foregoing criteria.

Annual Incentive Compensation

The Company provides executive officers with performance-based cash incentive awards, which are designed to reward executives for overall corporate performance as well as individual performance. Executive officers are evaluated for eligibility generally on an annual basis. Through a collaborative planning process involving the Board of Directors and executive management, corporate goals are established each year and are evaluated regularly by the Board of Directors for their continued relevance to the Company’s status.

For 2016, the maximum Annual Incentive Award for the Chief Executive Officer was 200% of his target, and the minimum amount was zero. The Annual Incentive Awards for the other named executive officers were set by the Compensation Committee in collaboration with the Chief Executive Officer based on each executive’s accountability, scope of responsibilities and potential impact on the Company’s performance. Accordingly, based on higher levels of control and accountability for the Company’s overall performance, a higher percentage of each named executive officer’s total cash compensation is dependent on a performance-based Annual Incentive Awards.

*2016 Goals and Achievements*

In determining the amount of Annual Incentive Compensation for each named executive officer, the Compensation Committee evaluated the corporate goals that had been established at the beginning of the year (set forth below) as well as other corporate and individual achievements and performance throughout the year. For 2016, the Compensation Committee determined that the Company had achieved its primary business objectives, as detailed below. In determining the CEO’s cash bonus for 2016, the business development and financing goals were weighted most heavily, followed by progress on the Company’s clinical and preclinical pipeline and organizational development goals least heavily, in that order. In light of the discontinuation of the Company’s intravenous clinical programs, the Compensation Committee reduced the CEO’s bonus to 75% of target.

Goal	Achievement
<p><b>Business Development</b></p> <p><i>Establish collaboration for Company’s Monarch (phase 2 studies for HBV).</i></p> <p><i>Drive toward expansion of Company’s presence in the alpha 1 antitrypsin therapeutic market.</i></p> <p><i>Complete a deal for \$20 million or more.</i></p>	<p>Achieved</p> <ul style="list-style-type: none"> <li>• Entered into two collaboration and license agreements with Amgen for 2 preclinical cardiovascular targets.</li> <li>• Established a phase 2 collaboration with a partner (Springbank) for combination therapy with ARC-520</li> <li>• Engaged potential targets for acquisition and/or partnership for companion product for alpha 1 antitrypsin</li> </ul>
<p><b>Finance</b></p> <p><i>Raise \$50-100 million through financing and/or business development transactions.</i></p>	<p>Achieved</p> <ul style="list-style-type: none"> <li>• Completed an offering for \$45 million with institutional investors</li> <li>• Received \$56.5 million in upfront proceeds from the Amgen transactions.</li> </ul>

<p><b>Clinical Development</b></p> <p><i>Advance Company's clinical pipeline including completion of enrollment of certain phase 2 studies for ARC-520, initiation of phase 2 study for ARC-AAT, initiation of phase 1 study for ARC-521 and filing for regulatory clearance to begin studies for ARC-F12.</i></p>	<p>Partially achieved</p> <ul style="list-style-type: none"> <li>Completed enrollment in three phase 2 studies for ARC-520</li> <li>Initiated a multi-dose biopsy study for ARC-AAT</li> <li>Submitted data for publication from Phase 1 and Phase 2a clinical studies for HBV</li> <li>Achieved regulatory clearance for ARC-521 and completed dosing of healthy volunteers</li> <li>Opened multiple sites for ARC-521 and ARC-AAT clinical trials</li> </ul>
<p><b>Preclinical Development</b></p> <p><i>Advance preclinical pipeline including selection of candidates for oncology and cardiology, targeting of tissue outside the liver, developing subcutaneous administration, and new delivery vector.</i></p>	<p>Achieved</p> <ul style="list-style-type: none"> <li>Selected candidate for LPA</li> <li>Selected candidate for Hif2 alpha</li> <li>Submitted data from study of ARC-520 in chimpanzees for publication</li> <li>Advanced subcutaneous delivery for RNAi that enabled Amgen collaboration</li> <li>Targeted tissue outside the liver</li> <li>Developed new delivery vector</li> </ul>
<p><b>Organizational Development</b></p> <p><i>Build out discovery lab and add to chemistry, clinical operations and business development teams.</i></p>	<p>Achieved</p> <ul style="list-style-type: none"> <li>Reorganized targeting and RNAi chemistry/stabilization teams and made several key hires in this area. This effort drove progress in subcutaneous administration and targeting for extra-hepatic delivery.</li> <li>Completed hiring of clinical operations and regulatory affairs teams and refocused two key executives on clinical development and business development.</li> <li>Opened a larger facility in Madison, WI for our research and development team to accommodate growth.</li> </ul>

*2016 Annual Incentive Compensation Payment*

Based on these achievements, the Compensation Committee approved Annual Incentive payments for the named executive officers for 2016 as set forth below.

<u>Name</u>	<u>Target Award for 2016 (% of Base Salary)</u>	<u>Actual 2016 Award (% of Base Salary)</u>	<u>Amount of Bonus</u>
Christopher Anzalone Chief Executive Officer	100%	75%	\$448,594
Bruce Given Chief Operating Officer	60%	60%	\$251,796
Kenneth Myszkowski Chief Financial Officer	40%	40%	\$130,524
Patrick O'Brien General Counsel	40%	45%	\$170,820
David L. Lewis (1) Chief Scientific Officer	35%	N/A	\$ —

(1) David L. Lewis' employment with the Company terminated on 12/13/2016.

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## 2017 Goals

For 2017, the Compensation Committee set new goals. These goals address clinical milestones for the Company's lead products, research and development milestones for the Company's drug pipeline, business development objectives and infrastructure enhancement. These goals will be used by the Committee to evaluate the performance of the Company and the individual named executive officers and to determine Annual Incentive Awards for 2017. The Committee will also consider unanticipated achievements, opportunities vs. results and circumstances outside the control of the executives. Target awards for 2017 are the same as target awards for 2016.

## Equity Compensation

Named executive officers are eligible to receive equity compensation in the form of stock options and restricted stock units. Stock options generally vest and become exercisable over a period of four years with monthly vesting and restricted stock units vest over a period of three years with annual vesting. Our typical option awards to named executive officers have a term of 10 years.

### *Equity Awards to CEO in Fiscal 2017*

At the time of filing, an equity award to the CEO in 2017 has not been finalized, however, the Compensation Committee expects that the award will be 100% performance based with rigorous milestones related to the Company's technical, clinical and corporate goals.

### *Equity Awards to CEO in Fiscal 2016*

As described above, in January 2016, the CEO was granted performance awards. These awards vest according to performance milestones, which, if achieved, are designed to result in substantial value creation for shareholders.

The Compensation Committee has determined that the milestones are rigorous and will require substantial leadership, skill and effort on the part of the CEO to meet within the time frame allowed. One of the milestones has been met. See the summary beginning on page 12 for further discussion of the grants.

The CEO also received a time-based grant of an option to purchase 80,000 shares of the Company's Common Stock. The Committee believes that along with performance based equity grants, a smaller time-based grant is appropriate given its retention value and the uncertain nature of the drug development business.

### *Equity Awards to CEO in Fiscal 2015*

As described above, in March 2015, the CEO was granted performance awards valued at approximately \$1.2 million. These awards vest according to rigorous performance milestones which, if achieved, are designed to result in substantial value creation for shareholders. See page 13 for further discussion of the grants.

### *Equity Award Grants to other NEOs in Fiscal 2015, 2016 & 2017*

In consideration of the Company's overall performance and each executive officer's individual performance, the Compensation Committee awarded equity grants for the Company's executive officers in March 2015 for 2014 performance, January 2016 for 2015 performance and January 2017 for 2016 performance. The awards consisted of restricted stock units and stock option grants. The restricted stock unit awards made in fiscal 2015 and 2016 vest in three equal tranches on the first, second and third anniversary of the date of grant. The restricted stock unit awards made in 2017 vest in full on the second anniversary from the date of grant. In light of the discontinuation of the Company's intravenous clinical programs and with the goal of retention, for 2017, the Compensation Committee determined that a longer period until any vesting initiated was in the best interests of the Company, and a shorter total vesting period would encourage key employees to remain with the Company. Further, no stock options were granted to executive officers in 2017. The stock option awards granted in 2015 and 2016 vest and become exercisable monthly over a period of four years and have a term of 10 years. We believe that the combination of restricted stock units and stock options provide a mix of equity awards that will reward value creation over the near term and long term for our named executive officers. For additional details regarding the grants of equity awards in fiscal 2016, refer to the "Grants of Plan-Based Awards" table.

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## Employee Benefit Program

Executive officers are eligible to participate in all of our employee benefit plans, including medical, dental, vision, life, and disability insurance, in each case on the same basis as other employees, subject to applicable law. In addition, the Company provides additional life insurance for the Chief Executive Officer for the benefit of his heirs. We also provide vacation and other paid holidays to all employees, including executive officers, all of which we believe to be comparable to those provided at peer companies. These benefit programs are designed to enable us to attract and retain our workforce in a competitive marketplace. Health, welfare and vacation benefits are designed to ensure that we have a productive and focused workforce through reliable and competitive health and other benefits.

Our retirement savings plan (401(k) plan) is a tax-qualified retirement savings plan, pursuant to which qualified employees, including the named executive officers, are able to contribute certain amounts of their annual compensation, subject to limits prescribed by the Internal Revenue Service. We have historically made matching contributions of 100% of the first 3% of salary and of 50% of the next 2% of salary contributed to the plan. The value of these benefits for each of our named executive officers is reflected in the "All Other Compensation" column of the Summary Compensation Table.

## Termination Benefits

The Company has entered into severance arrangements with named executive officers as listed below. The payments would be made in each case if the Company terminates the officer's employment without cause (or in the case of Dr. Anzalone, he terminates with good reason). The Company's 2013 Incentive Plan also provides for the acceleration of unvested awards if there is a change of control, as defined in the plan, except as otherwise determined by the Board of Directors.

<u>Name and Title</u>	<u>Severance Payment</u>
Christopher Anzalone Chief Executive Officer	One month of base salary plus one month medical and dental insurance expense
Bruce Given Chief Operating Officer	N/A
Kenneth Myszkowski Chief Financial Officer	Three months of base salary plus three months of medical and dental expense reimbursement
Patrick O'Brien General Counsel	Six months of base salary (only upon a qualifying termination in connection with a change of control)
David L. Lewis Chief Scientific Officer	Six months of base salary

## *Comparative Analysis*

Since 2013, the Compensation Committee has engaged StreeterWyatt LLC, a compensation consultant, to conduct a comparative study and report on compensation levels and practices, including equity, relative to industry peers. The findings are presented to the Committee by StreeterWyatt in conjunction with the Committee's annual review of executive compensation and StreeterWyatt provides a competitive assessment of the Company's executive compensation program as compared to the market data for base salaries, target total cash compensation and equity compensation. As a general rule, the Compensation Committee considers NEO compensation relative to the peer group median, however, various other factors were taken into account in determining compensation and the Compensation Committee does not target compensation at any specific level relative to the peer group. Such factors include past performance and scope of the NEO's actual role relative to the normal scope associated with that particular job among the peer group companies.

Because the biotechnology industry is a dynamic industry, the comparator group used by the Compensation Committee to measure the competitive positioning of our compensation packages is updated annually to ensure that companies continue to meet the established criteria. The peer group was assembled based on following criteria: publicly-held pre-commercial U.S. biotechnology companies, and companies with 50 – 500 employees. In general, the Company also selected peer companies with market capitalization values between 50% and 200% of the Company's market capitalization at the time of the peer selection. The peer group was selected in such a manner that the Company's market capitalization was very near the median for all peer companies. Consideration was also given

to the frequency or infrequency with which a company was identified as a peer with other peer companies. Specifically, the selected comparable companies were as follows:

**Peer group members for 2016:**

Anthera Pharmaceuticals, Inc.  
Array BioPharma, Inc.  
BioCryst Pharmaceuticals, Inc.  
BioTime, Inc.  
ChemoCentryx, Inc.  
Corcept Therapeutics Inc.  
CTI BioPharma Corp.  
Curis, Inc.  
CytRx, Corporation

Dicerna Pharmaceuticals, Inc.  
Durect Corporation  
Geron Corporation  
Idera Pharmaceuticals, Inc.  
Immumedics, Inc.  
Infinity Pharmaceuticals Inc.  
Omeros Corporation  
Orexigen Therapeutics, Inc.  
Osiris Therapeutics, Inc.

Peregrine Pharmaceuticals, Inc.  
Progenics Pharmaceuticals, Inc.  
Regulus Therapeutics Inc.  
Rigel Pharmaceuticals, Inc.  
Sangamo BioSciences, Inc.  
Threshold Pharmaceuticals, Inc.  
Zogenix, Inc.

The compensation studies prepared by StreeterWyatt and presented in December 2015 and 2016 provided an assessment of the Company's compensation practices as compared to industry peers. Compensation levels for the Company's executives, in the aggregate, were determined to be within the range of compensation provided to similarly placed executives and consistent with the Company's compensation philosophy. Merit increases and market-based adjustments awarded to executives in 2016 and 2017 were consistent with the findings and recommendations of StreeterWyatt regarding market based increases observable from peer and survey data.

***Compensation Policies***

Policy Objectives

Our compensation policies for executive officers have two fundamental objectives: (1) to attract, motivate and retain a highly skilled team of executives and (2) to align our executives' interests with those of our stockholders by rewarding short-term and long-term performance and aligning compensation to increases in stockholder value. The Compensation Committee believes that executive compensation should be directly linked to the achievement of specific objectives that are expected to increase stockholder value. In furtherance of this goal, the Compensation Committee has established the following guidelines as a foundation for compensation decisions:

- provide a competitive total compensation package that enables the Company to attract, retain and motivate highly qualified executives with the skills and experience required for the achievement of business goals;
- promote the achievement of key strategic and financial performance measures by linking short-term and long-term compensation to the achievement of measurable goals;
- reward significant achievements outside of predetermined goals;
- recognize that pharmaceutical research, development and commercialization require sustained and focused effort over many years, and involve a high degree of risk and therefore balance incentives for annual and long-term compensation;
- employ outside compensation expertise and market data from industry peers to help assure that the Company's compensation practices are consistent with industry practice and meet the Company's goals for its compensation program;
- consider the Company's cash resources and cost of capital to balance cash and equity compensation; and
- align executives' incentives with the creation of stockholder value.

The executive compensation program consists of three key elements: base salary, annual incentive compensation and equity-based compensation. The Compensation Committee believes that cash compensation in the form of base salary and annual incentive payments provides our executives with short-term rewards for success in operations, and that long-term compensation through the award of stock options and restricted stock units aligns the objectives of management with those of our stockholders with respect to long-term performance and success.

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The Compensation Committee takes into account the Company's financial and working capital condition when making compensation decisions and approving performance objectives. Because the Company has sought to preserve cash and currently does not operate at a profit, overall compensation is weighted more heavily toward equity-based compensation. Thus, a significant portion of each executive's compensation is at risk, and dependent on the increase in the value of the company's stock. The Compensation Committee periodically reassesses the appropriate weighting of cash and equity compensation.

With respect to equity awards, these awards typically vest over a period of three to four years, meaning that long-term value creation, contrasted with short-term gain, presents the best opportunity for employees to profit from these awards.

The Compensation Committee reviews executive compensation annually. The Compensation Committee draws on a number of resources to assist in the evaluation of the various components of the Company's executive compensation program including, but not limited to advice of an independent compensation consultant, information provided in the public filings of industry peers and industry data compiled yearly by Radford in its Global Life Sciences Survey, which represents a nationally-based assessment of executive compensation widely used within the pharmaceutical and biotechnology industry sectors. While we do not position compensation levels based upon a specific or target level relative to a peer group or other companies, pay practices at other companies are an important factor that the Compensation Committee considers in assessing the reasonableness of compensation and ensuring that our compensation practices are competitive in the marketplace.

#### Risk Management

In reviewing the compensation structure, the Compensation Committee considers how the Company's compensation policies may affect the Company's risk profile and whether compensation policies and practices may encourage undue risk-taking by employees. More specifically, the Compensation Committee considers the general design philosophy of the Company's policies for employees whose conduct would be most affected by incentives established by compensation policies. In considering these issues, the Compensation Committee concluded that the use of performance-based annual incentive payments and long-term equity awards did not appear to create undue risks for the Company or encourage excessive risk-taking behavior on the part of named executive officers.

With respect to annual incentive awards for our executive officers, the amount of an individual's award depends principally on overall Company performance, as determined by the Compensation Committee, which reduces the ability and incentive for an individual to take undue risks at the expense of Company performance in an effort to increase the amount of his or her bonus award. The Company's performance goals are reviewed regularly by the Compensation Committee and the Board of Directors and are considered to be generally of the nature that promote the steady progression of the Company's development programs and would not encourage or reward excessive risk taking. Additionally, the Board has the ability to intervene in instances where actions by the executives vis-à-vis Company performance goal attainment would be considered unduly risky to prevent or penalize such actions.

#### Minimum Stock Ownership Requirements

The Compensation Committee has adopted guidelines for ownership of the Company's stock by the Company's CEO (6 times annual salary), COO (2 times annual salary), and CFO (2 times annual salary). The ownership levels are to be achieved within the next four years.

#### Trading Policy

The Company's Insider Trading Policy prohibits short-term trading, options trading, trading on margin, pledging Company stock as collateral, and hedging with respect to the Company's securities. The policy applies to all employees of the Company, including the NEOs and the Board of Directors.

#### Roles in Determining Compensation

The Board has delegated to the Compensation Committee the responsibility to ensure that total compensation paid to our executive officers, including named executive officers, is consistent with our compensation policy and objectives. The Compensation Committee oversees and approves all compensation arrangements and actions for our executive officers and other key employees, including the named executive officers. While the Compensation Committee draws on a number of resources, including input from the Chief Executive Officer and independent compensation consultants, to make decisions regarding the Company's executive compensation program, ultimate



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decision-making authority rests with the Compensation Committee. The Compensation Committee retains discretion over base salary, annual incentive bonus, equity compensation and other compensation considerations for our named executive officers. As part of the review process, the Chief Executive Officer makes recommendations to the Compensation Committee with respect to the compensation levels for individual executives other than himself based on the performance evaluation conducted by each executive's manager and his own evaluation of the executive's performance. The Compensation Committee reviews this information and adjusts or approves the recommendations. In addition, for each named executive officer, the Compensation Committee considers the Company's performance against annual and longer term objectives, market data regarding executive compensation at comparable companies and realized and realizable values under previous equity awards.

The Compensation Committee relies upon the judgment of its members in making compensation decisions. In addition, the Compensation Committee incorporates judgment in the assessment process to respond to and adjust for the evolving business environment. During 2016, Dr. Perry served as Chairman of the Compensation Committee, and Mr. Frykman, and Dr. Ferrari served as members. The Company's Board of Directors has determined that all of the Compensation Committee members are "independent" directors for all required legal purposes, including pursuant to Nasdaq's definition of independence. The members have extensive experience in executive management, as well as compensation practices and policies.

The Compensation Committee has retained the services of an external compensation consultant, StreeterWyatt LLC ("**StreeterWyatt**"). The mandate of StreeterWyatt is to assist the Compensation Committee in its review of executive and director compensation practices, including the competitiveness of pay levels, executive compensation design, comparison with the Company's peers in the industry and other technical considerations. The Compensation Committee has evaluated StreeterWyatt's performance, considered alternative compensation consultants and has the final authority to engage and terminate the StreeterWyatt's services. The decision to engage StreeterWyatt was not made or recommended by the Company's management. The Compensation Committee, after a review of the factors set forth in Section 10C-1 of the Securities Exchange Act of 1934, has determined that the work performed by StreeterWyatt in 2016 does not present any conflicts of interest.

#### Equity Awards

Under the terms of our 2013 Incentive Plan, pursuant to which new equity grants are made, the exercise price of any stock options awarded under these plans must be equal to at least 100% of the fair market value of our Common Stock (the closing sales price on the Nasdaq Global Market) on the date of grant. We do not have any program, plan or obligation that requires us to grant equity awards on specified dates, although historically we have made grants to existing officers and employees at least annually and to new hires on the commencement of their employment. We do not have any program, plan or practice to grant stock option to our executive officers in coordination with the release of material nonpublic information. Equity awards may occasionally be granted following a significant change in job responsibilities or to meet other special retention or performance objectives.

Authority to make equity grants to employees rests with the Compensation Committee, although the Compensation Committee has delegated authority to the Chief Executive Officer to make grants to non-executive employees within limits set by the Compensation Committee. With respect to executive officers, except for the Chief Executive Officer, recommendations for equity grants are made by the Chief Executive Officer and reviewed and approved by the Compensation Committee.

## Compensation Committee Report

The Compensation Committee of the Company has reviewed and discussed with management the Compensation Discussion and Analysis required by Item 402(b) of Regulation S-K. Based on this review and discussion, the Compensation Committee recommended to the Board that the foregoing Compensation Discussion and Analysis be included in this proxy statement.

Submitted by the Compensation  
Committee of the Board of Directors

Michael S. Perry, Chairman  
Mauro Ferrari  
Edward W. Frykman

### Summary Compensation Table

The following table summarizes compensation earned for services rendered during fiscal 2016, 2015, and 2014 by our Chief Executive Officer, our Chief Financial Officer, our Chief Operating Officer, our Chief Scientific Officer, and our General Counsel, collectively our “Named Executive Officers”:

### Summary Compensation Table

Name and Principal Position	Year	Salary (\$)	Bonus (1)(\$)	Stock Awards (2)(\$)	Option Awards (2) (\$)	Non-Equity Incentive Plan Compensation (3)(\$)	All Other Compensation (4)(\$)	Total
Christopher Anzalone President and Chief Executive Officer	2016	614,051	—	— (5)	368,797	448,594	1,889	1,433,331
	2015	564,911	—	751,000(6)	426,840(6)	575,120	1,889	2,319,760
	2014	543,615	—	3,053,400	553,680	664,000	1,444	4,816,139
Kenneth Myszkowski Chief Financial Officer	2016	333,178	—	307,500	184,383	130,524	12,431	968,016
	2015	302,375	—	375,500	260,123	123,136	12,967	1,074,101
	2014	293,412	—	1,017,800	461,400	119,000	11,596	1,903,208
Bruce D. Given Chief Operating Officer	2016	430,835	—	922,500	276,575	251,796	11,399	1,893,105
	2015	396,357	—	1,126,500	312,147	282,464	11,399	2,128,867
	2014	384,159	—	1,817,500	461,400	233,000	14,894	2,910,953
David L. Lewis (7) Chief Scientific Officer	2016	270,144	—	—	391,815	—	11,294	673,253
	2015	245,169	—	—	520,245	87,360	10,665	863,439
	2014	226,358	—	—	1,107,360	84,000	9,199	1,426,917
Patrick O’Brien (8) General Counsel	2016	389,708	—	—	276,575	170,820	11,399	848,502
	2015	286,385	125,000	156,600	314,970	146,000	11,961	1,040,916
	2014	—	—	—	—	—	—	—

- (1) This bonus amount represents a signing bonus and relocation allowance for Patrick O’Brien, who was hired on December 2, 2014.
- (2) These columns represent the total grant date fair value, computed in accordance with ASC 718, of stock options and restricted stock units granted during fiscal year 2016, 2015 and 2014. The assumptions used to calculate the value of the stock underlying the option and restricted stock unit awards are set forth in Note 8 of the Notes to the Consolidated Financial Statements included with the Company’s Annual Report on 10-K, provided there was no assumed rate of forfeiture applied in valuing these awards.
- (3) These bonus amounts represent the amounts earned for performance under the Company’s Annual Bonus Incentive Plan during calendar year 2016, 2015 and 2014 and paid in fiscal year 2017, 2016 and 2015, respectively. The Annual Bonuses are described in more detail in the “Bonus Incentive” section.

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- (4) Amounts consist of 401(k) matching contribution, as well as life insurance premiums for the benefit of each executive officer.
  - (5) The amount reported for Christopher Anzalone in the Stock Awards column reflects the grant date fair value of a January 2016 restricted stock unit award that is subject to vesting upon the achievement of specific performance-based conditions, as described above in the Compensation Discussion and Analysis. We determined the performance conditions were not probable of being achieved as of the grant date, as defined under applicable accounting guidance, and assigned a grant date fair value of \$0 based on this evaluation. If we had determined that as of the date of the grant it was probable that 100% of the performance-based conditions would be achieved, we would have assigned a grant date fair value of \$3,321,000 for the restricted stock units. The amount reported in the Summary Compensation Table for this award may not represent the amount that Christopher Anzalone will actually realize from the award. Whether, and to what extent, a named executive officer realizes value will depend on our actual operating performance, stock price fluctuations and the named executive officer's continued employment.
  - (6) The amounts reported for Christopher Anzalone in the Stock Awards and Option Awards column reflect the grant date fair value of a March 2015 restricted stock unit and stock option award that is subject to vesting upon the achievement of specific performance and market-based conditions, as described above in the Compensation Discussion and Analysis. We determined the performance conditions that were probable and not probable of being achieved as of the grant date, as defined under applicable accounting guidance, and assigned a grant date fair value based on this evaluation. If we had determined that as of the date of the grant it was probable that 100% of the performance and market-based conditions would be achieved, we would have assigned a grant date fair value of \$2,703,600 for the restricted stock units and \$1,536,624 for the stock options. The amounts reported in the Summary Compensation Table for these awards may not represent the amounts that Christopher Anzalone will actually realize from the awards. Whether, and to what extent, a named executive officer realizes value will depend on our actual operating performance, stock price fluctuations and the named executive officer's continued employment.
  - (7) Dave Lewis' employment was terminated effective December 13, 2016, and no bonus was paid.
  - (8) Patrick O'Brien was hired on December 2, 2014 and thus compensation reflected in 2015 is for a partial year of approximately ten months.

## Grants of Plan-Based Awards

The following table sets forth cash bonus and equity grants made to the named executive officers in fiscal 2016:

**Grants of Plan Based Awards Table**

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards (1)		Estimated Future Payouts Under Equity Incentive Plan Awards (2)		All Other Stock Awards: Number of Shares of Stock or Units (#) (3)	All Other Option Awards: Number of Securities Underlying Options (#) (3)	Option Exercise Price (\$)	Grant Date Fair Value
		Minimum	Target	Maximum	Target				
Christopher Anzalone		—	\$ 598,125	\$ 1,196,250	—	—	—	—	—
Cash Bonus									
Options	1/1/2016	—	—	—	—	—	80,000	\$ 6.15	\$368,797
RSUs (4)	1/1/2016	—	—	—	180,000	—	—	—	—
RSUs (4)	1/1/2016	—	—	—	180,000	—	—	—	—
RSUs (4)	1/1/2016	—	—	—	180,000	—	—	—	—
Kenneth Myszkowski		N/A	\$ 130,524	N/A	—	—	—	—	—
Cash Bonus									
Stock Options	1/1/2016	—	—	—	—	—	40,000	\$ 6.15	\$184,383
RSUs	1/1/2016	—	—	—	—	50,000	—	—	\$307,500
Bruce D. Given		N/A	\$ 251,796	N/A	—	—	—	—	—
Cash Bonus									
Stock Options	1/1/2016	—	—	—	—	—	60,000	\$ 6.15	\$276,575
RSUs	1/1/2016	—	—	—	—	150,000	—	—	\$922,500
David L. Lewis		N/A	\$ 92,602	N/A	—	—	—	—	—
Cash Bonus									
Stock Options	1/1/2016	—	—	—	—	—	85,000	\$ 6.15	\$391,815
Patrick O'Brien		N/A	\$ 151,840	N/A	—	—	—	—	—
Cash Bonus									
Stock Options	1/1/2016	—	—	—	—	—	60,000	\$ 6.15	\$276,575

- (1) Amounts listed represent cash awards granted to our named executive officers in 2016 and paid in fiscal 2017.
- (2) These restricted stock unit awards are described above in the “Compensation Discussion and Analysis” under the heading “Equity Compensation”.
- (3) Options are priced at the market closing price on the date of grant. Options have various vesting parameters, but generally vest within 48 months or less after the award is granted. Restricted stock units vest in three equal annual installments beginning on the first anniversary of the grant date.
- (4) We determined that as of the date of the grant it was not probable as defined under applicable accounting guidance that any of the performance vesting conditions for these restricted stock unit awards would be achieved and assigned a grant date fair value of \$0 based on this evaluation.

## Outstanding Equity Awards at Fiscal Year-End

The following table provides information, with respect to the Named Executive Officers, concerning the Outstanding Equity Awards of the Company's stock as of September 30, 2016.

### Outstanding Equity Awards Table

Name	Grant Date	Option Awards					Stock Awards			
		Number of Securities Underlying Unexercised Options (# Exercisable) (1)	Number of Securities Underlying Unexercised Options (# Unexercisable)	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Options (# Unexercisable) (2)	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#) (3)	Market Value of Shares or Units of Stock That Have Not Vested (\$) (4)	Equity Incentive Plan Awards: Number of Shares or Units of Stock That Have Not Vested (#) (2)	Equity Incentive Plan Awards: Market Value of Shares or Units of Stock That Have Not Vested (\$)
Christopher Anzalone	6/11/2008	2,500	—	—	21.30	6/11/2018	—	—	—	—
	10/8/2009	112,650	—	—	5.10	10/8/2019	—	—	—	—
	3/4/2010	56,325	—	—	5.20	3/4/2020	—	—	—	—
	8/16/2010	50,000	—	—	9.90	8/16/2020	—	—	—	—
	10/21/2011	15,000	—	—	4.60	10/21/2021	—	—	—	—
	2/16/2012	170,000	—	—	5.19	2/16/2022	—	—	—	—
	9/28/2012	50,000	—	—	2.62	9/28/2022	—	—	—	—
	5/6/2013	166,666	33,334	—	2.01	5/6/2023	—	—	—	—
	9/21/2013	52,493	17,498	—	4.75	9/21/2023	—	—	—	—
	2/6/2014	38,749	21,251	—	14.54	2/6/2024	—	—	—	—
	3/6/2015	—	—	300,000	7.75	3/6/2025	—	—	—	—
	3/6/2015	—	—	—	—	—	—	—	360,000	2,646,000
	1/1/2016	13,333	66,667	—	6.15	1/1/2026	—	—	—	—
	1/1/2016	—	—	—	—	—	—	—	540,000	3,969,000
	Kenneth Myszkowski	3/4/2010	8,000	—	—	5.20	3/4/2020	—	—	—
8/16/2010		12,000	—	—	9.90	8/16/2020	—	—	—	—
10/21/2011		15,000	—	—	4.60	10/21/2021	—	—	—	—
2/16/2012		68,000	—	—	5.19	2/16/2022	—	—	—	—
9/28/2012		25,000	—	—	2.62	9/28/2022	—	—	—	—
5/6/2013		39,000	15,000	—	2.01	5/6/2023	—	—	—	—
9/21/2013		15,000	5,000	—	4.75	9/21/2023	—	—	—	—
2/6/2014		32,291	17,709	—	14.54	2/6/2024	—	—	—	—
3/6/2015		18,750	31,250	—	7.75	3/6/2025	—	—	—	—
3/6/2015		—	—	—	—	—	33,333	244,998	—	—
1/1/2016	6,666	33,334	—	6.15	4/6/2023	—	—	—	—	
1/1/2016	—	—	—	—	—	50,000	367,500	—	—	
Bruce D. Given	9/28/2009	1,000	—	—	6.20	9/28/2019	—	—	—	—
	10/26/2011	30,000	—	—	5.20	10/26/2021	—	—	—	—
	2/16/2012	110,000	—	—	5.19	2/16/2022	—	—	—	—
	9/28/2012	35,000	—	—	2.62	9/28/2022	—	—	—	—
	5/6/2013	141,667	28,333	—	2.01	5/6/2023	—	—	—	—
	9/21/2013	30,000	10,000	—	4.75	9/21/2023	—	—	—	—
	2/6/2014	32,291	17,709	—	14.54	2/6/2024	—	—	—	—
	3/6/2015	22,500	37,500	—	7.75	3/6/2025	—	—	—	—
	3/6/2015	—	—	—	—	—	100,000	735,000	—	—
	1/1/2016	10,000	50,000	—	6.15	1/1/2026	—	—	—	—
1/1/2016	—	—	—	—	—	150,000	1,102,500	—	—	
David L. Lewis	10/21/2011	17,500	—	—	4.60	10/21/2021	—	—	—	—
	2/16/2012	24,500	—	—	5.19	2/16/2022	—	—	—	—
	9/28/2012	22,500	—	—	2.62	9/28/2022	—	—	—	—
	5/6/2013	57,501	17,499	—	2.01	5/6/2023	—	—	—	—
	9/21/2013	21,000	7,000	—	4.75	9/21/2023	—	—	—	—
	2/6/2014	77,498	42,502	—	14.54	2/6/2024	—	—	—	—
	3/6/2015	37,500	62,500	—	7.75	3/6/2025	—	—	—	—
1/1/2016	14,166	70,834	—	6.15	1/1/2026	—	—	—	—	
Patrick O'Brien	12/2/2014	39,375	50,625	—	5.22	12/2/2024	—	—	—	—
	12/2/2014	—	—	—	—	—	20,000	147,000	—	—
	1/1/2016	10,000	50,000	—	6.15	1/1/2026	—	—	—	—

- (1) Options are priced at the market closing price on the date of grant. Options have various vesting parameters, but generally vest within 48 months after the award is granted except for the grants made on 10/8/2009 and 3/4/2010 which vested over 24 months.
- (2) The amounts reported for Christopher Anzalone in these columns reflect the March 2015 awards that contain performance and market-based vesting conditions and the January 2016 awards that contain performance-based vesting conditions. These awards and their vesting conditions are described above in the "Compensation Discussion and Analysis" under the heading "Equity Compensation".
- (3) Restricted stock units have various vesting parameters but generally vest in three equal annual installments beginning on the first anniversary of the grant date.
- (4) Value is based on the Company's Common Stock closing price of \$7.35 on September 30, 2016.

## Options Exercised and Stock Vested

The following table provides information, with respect to the Named Executive Officers, concerning options exercised or restricted stock units vested during fiscal 2016.

Name	Option Awards		Stock Awards	
	Number of Shares Acquired on Exercise	Value Realized on Exercise (1)	Number of Shares Acquired on Vesting	Value Realized on Vesting (2)
Christopher Anzalone	—	—	105,000	\$ 363,000
Kenneth Myszkowski	20,000	\$ 119,800	51,667	193,268
Bruce D. Given	—	—	112,500	432,750
David L. Lewis	—	—	—	—
Patrick O'Brien	—	—	10,000	59,600

- (1) Value is calculated as the price of the Company's Common Stock upon exercise, less the exercise price, multiplied by the number of shares exercised.  
(2) Value is calculated as the price of the Company's Common Stock upon vesting, multiplied by the number of shares vested.

### *Termination Benefits - Potential Payments Upon Termination or Change in Control*

The Company has the following severance or change of control arrangements with its Named Executive Officers:

Dr. Anzalone's employment agreement with the Company provides that if the Company terminates Dr. Anzalone's employment without Cause or if Dr. Anzalone terminates his employment for Good Reason, on his date of termination, Dr. Anzalone will receive a one-time lump sum payment equal to the sum of: (i) one month of base salary and (ii) premiums for thirty (30) days' of medical and dental benefits. To receive such payments Dr. Anzalone is required to execute a general release in favor of the Company.

For purposes of Dr. Anzalone's employment agreement:

**"Cause"** means (i) the conviction (by trial or upon a plea of nolo contendere) of a felony or other crime involving moral turpitude or the commission of any other material act or omission involving dishonesty, disloyalty or fraud with respect to the Company or any of its subsidiaries or any of their customers or suppliers, (ii) reporting to work under the influence of alcohol or illegal drugs, the use of illegal drugs (whether or not at the workplace) or other repeated conduct causing the Company or any of its subsidiaries substantial public disgrace or disrepute or economic harm, (iii) the engaging of gross misconduct and the failure to cease such conduct and rectify any harm to the Company resulting therefrom within 30 days after written demand therefor by the Company identifying with reasonable particularity such conduct and harm, or (iv) any other material breach of the employment agreement by Executive and the failure to cease such breach and rectify any harm to the Company within 30 days after written demand by the Company identifying with reasonable particularity such breach and harm; and

**"Good Reason"** means (i) Executive's duties, responsibilities, titles or offices are diminished as compared to those described in the employment agreement without Executive's written consent, and the Company fails to reinstate such duties, responsibilities, titles or offices within 30 days after written demand by Executive identifying with reasonable particularity the diminishment, (ii) the relocation of Executive's base office to an office that is more than thirty (30) highway miles from Pasadena, CA, (iii) the failure of the Company to obtain a satisfactory agreement from any successor to assume and agree to perform the obligations under this the employment agreement and (iv) any other material breach of this employment agreement by the Company and the failure to cease such breach and rectify any harm to Executive resulting within 30 days after written demand by Executive identifying with reasonable particularity the breach and harm.

Pursuant to his offer of employment by the Company, Mr. Myszkowski is entitled to severance pay equal to three months' base salary plus an amount equal to the premiums on his medical and dental benefits for the same period upon termination of his employment without cause.

Pursuant to his offer of employment by the Company, Dr. Lewis is entitled to severance pay equal to six months' base salary upon termination of his employment without cause. Dr. Lewis' employment was terminated effective December 13, 2016 and the Company made a severance payment in exchange for a standard release of claims.

Pursuant to his offer of employment by the Company, Mr. O'Brien is entitled to severance pay equal to six months' base salary upon termination of his employment without cause only upon change of control as defined in the Company's 2013 Incentive Plan.

The Company has not entered into a severance arrangement with Dr. Given.

Additionally, pursuant to the 2004 Equity Incentive Plan and the 2013 Incentive Plan, any unvested awards held by plan participants, including the Named Executive Officers, become fully vested upon a change of control, except as otherwise determined by the Board.

The following tables set forth information regarding potential termination and change of control arrangements with our executive officers had their employment been terminated on September 30, 2016:

#### Termination Payments

Triggering Event	Salary (\$)	Benefits (\$)	Stock Awards (1) (\$)	Option Awards (1) (\$)	Total
<b>Termination by Employer without Cause</b>					
Christopher Anzalone (2)	49,844	1,562	—	—	51,406
Kenneth Myszkowski	81,578	5,710	—	—	87,288
Bruce D. Given	—	—	—	—	—
David L. Lewis	132,288	9,931	—	—	142,219
Patrick O'Brien	—	—	—	—	—
<b>Termination by Employer without Cause following a Change in Control</b>					
Christopher Anzalone	49,844	1,562	6,615,000	303,499	6,969,905
Kenneth Myszkowski	81,578	5,710	612,498	133,101	832,887
Bruce D. Given	—	—	1,837,500	237,298	2,074,798
David L. Lewis	132,288	9,931	—	196,645	338,864
Patrick O'Brien	\$189,800	—	147,000	167,831	504,631

- (1) For stock awards the value is calculated as the number of unvested shares multiplied by the Company's closing stock price at September 30, 2016 of \$7.35. For option awards the value is calculated as the number of shares issuable upon unvested options multiplied by difference between the Company's closing stock price at September 30, 2016 of \$7.35 less the applicable exercise price.
- (2) Dr. Anzalone's employment contract also provides for payment of the values set forth above upon his resignation for "good reason" as defined in his employment agreement.

**PROPOSAL THREE**  
**RATIFICATION OF APPOINTMENT OF INDEPENDENT AUDITORS**

Our Audit Committee, with the ratification of our Board, selected the accounting firm of Rose, Snyder & Jacobs, LLP (“**RS&J**”) as the Company’s independent auditors for the fiscal year ending September 30, 2017, and that selection is now being submitted to the stockholders.

A representative of RS&J will be available at the Annual Meeting to respond to appropriate questions or make any other statements such representative deems appropriate.

Stockholders are not required to ratify the appointment of RS&J as our independent auditor. However, we are submitting the appointment for ratification as a matter of good corporate practice. If stockholders fail to ratify the appointment, the Audit Committee will consider whether or not to retain RS&J. Even if the appointment is ratified, the Audit Committee may direct the appointment of a different independent auditor at any time during the year if it determines that such a change would be in the best interests of the Company and our stockholders.

**Vote Required; Recommendation of the Board**

In order to be ratified, Proposal Three must be approved by a majority of Required Vote, assuming a quorum is present. For this purpose, abstentions will be counted as a vote against the proposal.

**THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” PROPOSAL THREE.**

**AUDIT FEES**

The Audit Committee regularly reviews and determines whether specific projects or expenditures with our independent auditors, Rose, Snyder & Jacobs, LLP may potentially affect their independence. The Audit Committee’s policy is to pre-approve all audit and permissible non-audit services provided by RS&J. Pre-approval is generally provided by the Audit Committee for up to one year, detailed to the particular service or category of services to be rendered and is generally subject to a specific budget. The Audit Committee may also pre-approve additional services of specific engagements on a case-by-case basis. All engagements of our independent registered public accounting firm in 2016 and 2015 were pre-approved by the audit committee.

The following table sets forth the aggregate fees invoiced by RS&J for the fiscal years ended September 30, 2016 and September 30, 2015:

	<u>Year Ended September 30,</u>	
	<u>2016</u>	<u>2015</u>
Audit fees (1)	\$185,500	\$185,000
Audit-related fees (2)	8,500	3,750
Total	<u>\$194,000</u>	<u>\$188,750</u>

(1) Fees invoiced by RS&J include year-end audit and periodic reviews of Forms 10-Q and 10-K.

(2) Fees invoiced by RS&J related to Comfort Letters and Consents for financings and registration statements, and other agreed-upon procedures.



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## REPORT OF THE AUDIT COMMITTEE

The following is the report of the Audit Committee with respect to the Company's audited financial statements for fiscal 2016, which include the consolidated balance sheets of the Company as of September 30, 2016 and September 30, 2015, and the related consolidated statements of operations, stockholders' equity and cash flows for the fiscal years ended September 30, 2016, September 30, 2015 and September 30, 2014, and the notes thereto.

**Composition.** The Audit Committee of the Board is comprised of three directors and operates under a written charter adopted by the Board. The members of the Audit Committee are Edward W. Frykman, Michael S. Perry and Mauro Ferrari. All members of the Audit Committee are "independent," as defined in Rule 10A-3 under the Exchange Act and Rule 5605(c) of the Nasdaq Marketplace Rules, and are financially literate.

**Responsibilities.** The responsibilities of the Audit Committee include engaging an accounting firm as the Company's independent registered public accounting firm. Management has primary responsibility for the Company's internal controls and financial reporting process. The independent registered public accounting firm is responsible for performing an independent audit of the Company's consolidated financial statements in accordance with generally accepted auditing standards and for issuing a report thereon. The Audit Committee's responsibility is to oversee these processes.

**Review with Management and independent registered public accounting firm.** On December 2, 2016, the Audit Committee consisted of Edward W. Frykman, Michael S. Perry and Mauro Ferrari. On that date, the Audit Committee met separately to review the Company's consolidated audited financial statements and held discussions with management and RS&J. Management represented to the Audit Committee that the Company's consolidated financial statements were prepared in accordance with generally accepted accounting principles. The members of the Audit Committee discussed with RS&J matters required to be discussed under the applicable standards of the Public Company Accounting Oversight Board. The Company's independent registered public accounting firm also provided to the Audit Committee the written disclosures and the letter required by the Public Company Accounting Oversight Board regarding the independent registered public accounting firm's communications with the Audit Committee concerning independence and the Audit Committee discussed the firm's independence with RS&J.

**Conclusion.** Based upon the Audit Committee's review of the financial statements and discussions with management and RS&J, the Audit Committee's review of the representations of management and the report of RS&J to the Audit Committee, the Audit Committee recommended that the Board include the audited consolidated financial statements in the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2016, as filed with the SEC.

This report is submitted by the Audit Committee of the Board.

Edward W. Frykman, Chairman  
Mauro Ferrari  
Michael S. Perry

## VOTING SECURITIES OF PRINCIPAL STOCKHOLDERS AND MANAGEMENT

The following table sets forth the beneficial ownership of the Company's Common Stock as of January 19, 2017, by (i) each of the named executive officers named in the table under "Executive Compensation and Related Information," (ii) each director, (iii) all current directors and executive officers as a group, and (iv) the holders of greater than 5% of our total shares outstanding known to us. Unless otherwise specified in the footnotes to the table below, the persons and entities named in the table have sole voting and investment power with respect to all shares beneficially owned, subject to community property laws, where applicable, and the address of each stockholder is c/o Arrowhead Pharmaceuticals, Inc., 225 South Lake Avenue, Suite 1050, Pasadena, California 91101 unless otherwise indicated.

	Number and Percentage of Shares Beneficially Owned (1)	
	Shares	Percentage
<b><u>5% Beneficial Owners</u></b>		
Silence Therapeutics plc (2) 72 Hammersmith Road London, UK W14 8TH	6,831,359	9.16%
BlackRock, Inc. (3) 55 East 52nd Street New York, NY 10055	5,093,721	6.83%
<b><u>Executive Officers and Directors</u></b>		
Christopher Anzalone (4)	1,570,337	2.07%
Kenneth Myszkowski (5)	360,395	*
Bruce D. Given (6)	736,646	*
David L. Lewis (7)	297,665	*
Patrick O'Brien (8)	83,125	*
Douglass Given (9)	135,000	*
Edward Frykman (10)	150,352	*
Michael S. Perry (11)	152,000	*
Mauro Ferrari (12)	37,613	*
All Executive Officers and Directors as a group (9 persons) (13)	3,523,133	4.57%

\* Less than 1%

- (1) Based on 74,569,706 shares of Common Stock issued and outstanding as of January 19, 2017. Shares not outstanding but deemed beneficially owned by virtue of the right of a person to acquire them as of January 19, 2017, or within sixty days of such date are treated as outstanding only when determining the percentage owned by such individual and when determining the percentage owned by a group.
- (2) Based on a Form 13D filed by Silence Therapeutics plc on January 13, 2017.
- (3) Based on an amendment to Form 13G filed by BlackRock, Inc. on January 19, 2017. According to the Form 13G/A, BlackRock has sole voting power with respect to 4,954,660 of the Arrowhead shares and sole dispositive power with respect to all of the Arrowhead shares it beneficially holds.
- (4) Includes 1,113,548 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017.
- (5) Includes 294,706 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017 and 16,666 restricted stock units that vest within 60 days of January 19, 2017.
- (6) Includes 493,290 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017 and 50,000 restricted stock units that vest within 60 days of January 19, 2017.

- (7) Includes 297,665 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017.
- (8) Includes 63,125 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017.
- (9) Includes 65,000 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017.
- (10) Includes 76,500 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017.
- (11) Includes 77,000 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017.
- (12) Includes 24,845 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017.
- (13) Includes 2,505,679 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 19, 2017 and 66,666 restricted stock units that vest within 60 days of January 19, 2017.

### EQUITY COMPENSATION PLAN INFORMATION

The following table provides information as of September 30, 2016 with respect to shares of our Common Stock that may be issued under our equity compensation plans.

	Equity Compensation Plan Information		
	Number of Shares to be Issued upon exercise of outstanding options, warrants and rights	Weighted average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (3)
Equity compensation plans approved by security holders (1)	7,469,912	\$ 6.51	648,760
Equity compensation plans not approved by security holders (2)	577,955	\$ 7.10	—
<b>Total</b>	<b>8,047,867</b>	<b>\$ 6.56</b>	<b>648,760</b>

- (1) Includes options outstanding representing 2,514,518 and 3,632,060 shares of Common Stock under the 2004 Equity Incentive Plan and the 2013 Incentive Plan, respectively. Also includes 1,323,334 restricted stock units subject to the 2013 Incentive Plan.
- (2) Includes 544,622 inducement option grants and 33,333 inducement restricted stock unit grants issued to newly hired employees.

### Current Executive Officers of the Registrant

The names, ages and positions of our current executive officers serving as of January 19, 2017 are provided below. Biographical information regarding these officers is set forth under the following table, except for Dr. Anzalone, whose biography is set forth above with our other directors.

<u>Name</u>	<u>Age</u>	<u>Position with Arrowhead</u>
Christopher Anzalone	47	Chief Executive Officer & President and Director
Kenneth A. Myszkowski	50	Chief Financial Officer
Bruce Given	62	Chief Operating Officer
Patrick O'Brien	53	General Counsel

**Kenneth A. Myszkowski**, Chief Financial Officer, joined Arrowhead in 2009. Prior to joining Arrowhead, Mr. Myszkowski served as the corporate controller for Broadwind Energy, a public energy company which provides products and services to the wind energy industry. Previous to his position at Broadwind, Mr. Myszkowski was controller for Epcor USA, the U.S. headquarters for Epcor Utilities, Inc., a public energy company. Prior to Epcor, Mr. Myszkowski was controller for two start-up ventures: NanoInk, specializing in Dip Pen Nanolithography, a nanofabrication technology, and Delphion, which provided on-line tools for intellectual property research. Mr. Myszkowski also held several corporate roles at FMC Corporation and Premark International, both Fortune 500 conglomerates. He began his career in the audit practice of Arthur Andersen & Co. in Chicago, Illinois. Mr. Myszkowski received his undergraduate degree from the University of Illinois, and his MBA from the University of Chicago Booth School of Business. He is a certified public accountant.

**Dr. Bruce Given**, Chief Operating Officer, joined Arrowhead in 2011. Dr. Given was a member of the Board of Directors for ICON, plc. from 2004 until his retirement in 2013 and Chairman of its Board of Directors from 2010 to 2013. Dr. Given served as the President and Chief Executive Officer, and as a member of the Board of Directors of Encysive Pharmaceuticals, an R&D-based commercial pharmaceutical company, roles he held from 2002 through 2007. Subsequent to his tenure at Encysive until 2011, Dr. Given was President of Bruce Given Consulting, a firm that provides consulting services to biotech companies. Since October 1, 2009, Dr. Given has been a director of Calando Pharmaceuticals, Inc., and from February 2010 until its dissolution in October 2014, Dr. Given was the Chief Executive Officer of Leonardo Biosystems, Inc., in which Arrowhead held a minority equity interest. Prior to his tenure at Encysive, Dr. Given held several senior executive roles at Johnson and Johnson, Sandoz Pharmaceuticals and Schering-Plough. Dr. Given obtained his bachelor of sciences degree from Colorado State University, graduating Phi Beta Kappa. He received his M.D. degree with honors from the University of Chicago, Pritzker School of Medicine and completed his medical training at the University of Chicago and at Brigham and Women's Hospital in Boston, where he was a Clinical Fellow at Harvard Medical School. He is board certified in internal medicine and endocrinology and metabolism and has authored 33 scientific publications. Dr. Bruce Given is a brother of Dr. Douglass Given, a director of the company.

**Patrick C. O'Brien**, General Counsel, joined the Company in December 2014. Mr. O'Brien has practiced in the healthcare legal field for over 20 years. Before joining the Company, from 2012 to 2014, Mr. O'Brien was with Shire, where he was Group Vice President, Law. Immediately prior to working with Shire he was a partner with the international law firm of Holland & Knight LLP in its Washington, DC office. In 2010, Mr. O'Brien co-founded the law firm O'Brien Gould PLLC which joined Holland & Knight in 2011. From 2009 – 2010, Mr. O'Brien was a partner in Burke O'Neil LLC. From 2001—2009 Mr. O'Brien served in several legal roles with Johnson & Johnson, including serving as Vice President of Law for J&J's Centocor Ortho-Biotech unit. Mr. O'Brien previously served as Regulatory Counsel with the United States Food & Drug Administration. Mr. O'Brien was awarded a BS in Pharmacy and a PhamD from the University of Arizona before completing a residency in Clinical Pharmacy with the University of Illinois at Chicago Hospital. He was also awarded his JD from the University of Arizona.

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

Under Section 16(a) of the Securities Exchange Act of 1934, the Company's directors and officers and its significant stockholders (defined by statute as stockholders beneficially owning more than ten percent (10%) of the Common Stock) are required to file with the SEC and the Company reports of ownership, and changes in ownership, of Common Stock. Based solely on a review of the reports received by it, the Company believes that, during the fiscal year ended September 30, 2016, all of its officers, directors and significant stockholders complied with all applicable filing requirements under Section 16(a).

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## REVIEW AND APPROVAL OF RELATED-PARTY TRANSACTIONS

Our Board has adopted policies and procedures for the review and approval of related-party transactions and has delegated to the Audit Committee the authority to review and approve the material terms of any proposed related-party transactions. To the extent that a proposed related-party transaction may involve a non-employee director or nominee for election as a director and may be material to a consideration of that person's independence, the matter may also be considered by the other disinterested directors.

Pursuant to our Code of Business Conduct and Ethics and our Corporate Governance Committee Charter, each of our officers, directors and employees must disclose related-party transactions to our Board of Directors. In order to avoid conflicts of interest, our executive officers and directors may not acquire any ownership interest in any supplier, customer or competitor (other than nominal amounts of stock in publicly traded companies), enter into any consulting or employment relationship with any customer, supplier or competitor, or engage in any outside business activity that is competitive with any of our businesses, without first disclosing the proposed transaction. After the proposed transaction has been disclosed, a determination will be made by our Board or Audit Committee as to what course to follow, depending on the nature or extent of the conflict. Furthermore, our executive officers and directors may not serve on any board of directors of any customer, supplier or competitor unless such board service has been disclosed to us and approved by our Board.

In determining whether to approve or ratify a related-party transaction, the Board and/or Committee may consider, among other factors it deems appropriate, the potential benefits to us, the impact on a director's or nominee's independence or an executive officer's relationship with or service to us, whether the related-party transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related party's interest in the transaction. In deciding to approve a transaction, the Board or Audit Committee may, in its sole discretion, impose such conditions as it deems appropriate on us or the related party in connection with its approval of any transaction. Any transactions involving the compensation of executive officers, however, are reviewed and approved by the Compensation Committee. If a related-party transaction will be ongoing, the Audit Committee may establish guidelines to be followed in our ongoing dealings with the related party. Thereafter, the Audit Committee reviews and assesses the ongoing relationship with each related party to see that it is in compliance with the committee's guidelines and that the related-party transaction remains appropriate.

## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

As of September 30, 2016, a majority of the members of the Board are independent directors, as defined by the Nasdaq Marketplace Rules. The Board has determined that all of the Company's directors are independent, except Dr. Anzalone, the Company's Chief Executive Officer, and Dr. Douglass Given, the brother of the Company's Chief Operating Officer. Non-employee directors do not receive consulting, legal or other fees from the Company, other than Board compensation.

Vincent Anzalone is the Company's Vice President, Investor Relations and the brother of Christopher Anzalone, the Company's Chief Executive Officer. Vincent Anzalone earned base salary and bonus of \$218,266 during fiscal 2016 and \$85,898 thus far in fiscal 2017. His current base salary is \$190,384. In January 2016, Mr. Anzalone was awarded options to purchase 40,000 shares of the Company's Common Stock at \$6.15 for performance in 2015 which vest over four years from the date of grant. The exercise price is equal to the fair market value of the shares on the date of grant. The grant date fair value of the option is \$184,383. In January 2017, Mr. Anzalone was awarded 65,000 restricted stock units for performance in 2016, and this award vests two years from the anniversary date of the grant. The grant date fair value of this award is \$100,750.

### Annual report on Form 10-K

The Company will mail, without charge to any stockholder upon written request, a copy of the Company's Annual Report on Form 10-K for the year ended September 30, 2016 including the financial statements, schedules and a list of exhibits. Requests should be sent to Arrowhead Pharmaceuticals, Inc., 225 S. Lake Avenue, Suite 1050, Pasadena, CA 91101, Attn: Corporate Secretary, Phone (626) 304-3400.

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**Stockholders Sharing the Same Address**

We may satisfy SEC rules regarding delivery of proxy statements including the proxy statement, annual report and Notice, by delivering a single Notice and, if applicable, a single set of proxy materials to an address shared by two or more of our stockholders. This delivery method can result in meaningful cost savings for us. To take advantage of this opportunity, we may deliver only one Notice, and if applicable, a single set of proxy materials to multiple stockholders who share an address, unless contrary instructions are received prior to the mailing date. Similarly, if you share an address with another stockholder and have received multiple copies of our Notice and/or other proxy materials, you may write or call us at the address and phone number below to request delivery of a single copy of these materials in the future. We undertake to deliver promptly upon written or oral request a separate copy of the Notice and/or other proxy materials to a stockholder at a shared address to which a single copy of these documents was delivered. If you hold stock as a record stockholder and prefer to receive separate copies of a Notice, and if applicable, other proxy materials either now or in the future, please contact us at the address provided below. If your stock is held through a brokerage firm or bank and you prefer to receive separate copies of a Notice and, if applicable, other proxy materials either now or in the future, please contact your brokerage firm or bank.

Arrowhead Pharmaceuticals, Inc.  
225 S. Lake Avenue, Suite 1050  
Pasadena CA 91101  
Attn: Corporate Secretary  
Phone (626) 304-3400

**Other Matters**

The Company knows of no other matters to be submitted at the Annual Meeting. If any other matters properly come before the meeting, it is the intention of the persons named in the proxy card to vote the shares they represent as the Board may recommend.

BY ORDER OF THE BOARD OF DIRECTORS

/s/ Jane Davidson

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Jane Davidson,  
Secretary

Pasadena, California  
January 31, 2017



Important notice regarding the Internet availability of proxy materials for the Annual Meeting of shareholders. The Notice of the 2017 Annual Meeting of Stockholders; Company's 2017 Proxy Statement; Company's Annual Report on Form 10-K for the year ended September 30, 2016; and Form of Proxy Card are available at: [www.edocumentview.com/ARWR](http://www.edocumentview.com/ARWR)

▼ IF YOU HAVE NOT VOTED VIA THE INTERNET OR TELEPHONE, FOLD ALONG THE PERFORATION, DETACH AND RETURN THE BOTTOM PORTION IN THE ENCLOSED ENVELOPE. ▼



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**Proxy — ARROWHEAD PHARMACEUTICALS, INC.**

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**THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS  
ANNUAL MEETING OF STOCKHOLDERS  
TUESDAY, MARCH 21, 2017**

The undersigned stockholder of ARROWHEAD PHARMACEUTICALS, INC., a Delaware corporation, hereby acknowledges receipt of the Notice of Annual Meeting of Stockholders and Proxy Statement, each dated January 31, 2017, and hereby appoints Christopher Anzalone and Jane Davidson, or any of them, proxies and attorneys-in-fact with full power to each of substitution, on behalf and in the name of the undersigned, to represent the undersigned at the Annual Meeting of Stockholders of Arrowhead Pharmaceuticals, Inc. to be held on Tuesday, March 21, 2017 at 10:00 a.m., local time, at the Sheraton Pasadena, 303 E. Cordova Street, Pasadena, California 91101 and at any adjournment or adjournments thereof, and to vote all shares of capital stock that the undersigned would be entitled to vote if then and there personally present, on the matters set forth on the reverse side.

This Proxy, when properly executed, will be voted in the manner directed herein by the undersigned stockholder. If no direction is made, this proxy will be voted FOR the election of each director, and FOR Proposals 2 and 3 and as the proxy holders deem advisable on such other matters as may properly come before the meeting. This Proxy is revocable with respect to any Proposal in the manner set forth in the Proxy Statement under the heading "Revocability of Proxies."