

**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 RESEARCH CORPORATION**

(Name of Registrant as Specified in Its Charter)

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

Payment of filing fee (Check the appropriate box):

- No fee required.
- Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
  - (1) Title of each class of securities to which transaction applies:
  - (2) Aggregate number of securities to which transaction applies:
  - (3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (set forth the amount on which the filing fee is calculated and state how it was determined):
  - (4) Proposed maximum aggregate value of transaction:
  - (5) Total fee paid:
- 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 RESEARCH CORPORATION  
225 SOUTH LAKE AVENUE, SUITE 1050  
PASADENA, CALIFORNIA 91101**

**NOTICE OF ANNUAL MEETING OF STOCKHOLDERS  
TO BE HELD ON TUESDAY MARCH 8, 2016**

TO THE STOCKHOLDERS OF ARROWHEAD RESEARCH CORPORATION:

NOTICE IS HEREBY GIVEN that the 2016 Annual Meeting of Stockholders of Arrowhead Research Corporation, a Delaware corporation (the “**Company**”), will be held on Tuesday, March 8, 2016, 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, 2016;

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.

Only stockholders of record at the close of business on January 11, 2016 are entitled to notice of and to vote at the Annual Meeting.

All stockholders of record are cordially invited to attend the Annual Meeting in person. On January 22, 2016, we mailed our stockholders a Notice Regarding the Availability of Proxy Materials (the “Notice of Internet Availability”) containing instructions on how to access our 2016 Proxy Statement and 2015 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 22, 2016

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**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. 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 8, 2016**

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

Notice of the 2016 Annual Meeting of Stockholders;  
Company's 2016 Proxy Statement;  
Company's Annual Report on Form 10-K for the year ended September 30, 2015; and  
Form of Proxy Card

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**ARROWHEAD RESEARCH CORPORATION**  
**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 8, 2016**

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**GENERAL INFORMATION CONCERNING SOLICITATION AND VOTING**

The enclosed Proxy is solicited on behalf of Arrowhead Research Corporation (the “**Company**” or “**Arrowhead**”) for use at the 2016 Annual Meeting of Stockholders (the “**Annual Meeting**”) to be held on Tuesday, March 8, 2016 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 January 22, 2016 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 voting stock at the close of business on January 11, 2016 (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 (i) 59,627,499 shares of common stock (“**Common Stock**”) and (ii) 15,652 shares of Series C Convertible Preferred Stock (the “**Preferred Stock**”). Holders of the Preferred Stock are entitled to vote with the holders of Common Stock on an as-converted basis, subject to the applicable limitations on their rights to convert the Preferred Stock into Common Stock. As of the Record Date, and without regard to conversion limits that may serve to reduce the number of shares eligible to vote at the annual meeting, the Preferred Stock was entitled to vote up to 2,670,990 equivalent shares of Common Stock. The Common Stock and that portion of the Preferred Stock that is entitled to vote at the Annual Meeting is sometimes referred to herein as the “**Voting 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 Voting 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 Voting 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

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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.

The Company has engaged a proxy solicitor 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 Voting 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**”). 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 Voting 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 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 2017 Annual Meeting of Stockholders must ensure that the proposal is received by the Corporate Secretary at Arrowhead Research Corporation, 225 South Lake Avenue, Suite 1050, Pasadena, CA 91101, not later than September 21, 2016, in order to be considered for inclusion in our proxy materials for that meeting; provided, however, that if the Company’s 2017 Annual Meeting of Stockholders is held before February 6, 2017 or after April 7, 2017, you must provide specified information to us a reasonable time before we begin to print and send our proxy statement for our 2017 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 2016 Annual Meeting; *provided, however*, that if the 2017 Annual Meeting date is advanced by more than 30 days before or delayed by more than 60 days after the anniversary date of the 2016 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 2017 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 | 46         | Chief Executive Officer, President & Director |
| Mauro Ferrari*       | 56         | Director                                      |
| Edward W. Frykman*   | 79         | Director                                      |
| Douglass Given       | 63         | Director and Chairman of the Board            |
| Michael S. Perry*    | 56         | 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** was appointed to the Arrowhead Board of Directors in 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 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** joined Arrowhead's Board of Directors in December 2011. Dr. Perry is currently Chief Scientific Officer, Global Cell and Gene Therapy 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 Medical. He was Chief Development Officer at VIA Pharmaceuticals, Inc., a publicly held drug development company, from April 2005 until May 2009. Prior

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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.arrowheadresearch.com](http://www.arrowheadresearch.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 Research Corporation, 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 seven meetings during the fiscal year ended September 30, 2015. 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 2015. 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.arrowheadresearch.com](http://www.arrowheadresearch.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 2015. 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 four times during fiscal 2015. 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.arrowheadresearch.com](http://www.arrowheadresearch.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 2015. 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.arrowheadresearch.com](http://www.arrowheadresearch.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 2015, and (ii) the total number of meetings held by all committees of the Board during fiscal 2015 on which such person served.

In addition, a majority (four) of the directors attended the 2015 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 2015 and 2016.

| <u>Name &amp; Position</u>        | <u>2016 Annual<br/>Fee (1)</u><br><small>(effective<br/>1/1/16)</small> | <u>2016 Stock<br/>Award (2)</u> | <u>2015 Annual<br/>Fee (1)</u><br><small>(effective<br/>1/1/15)</small> | <u>2015 Stock<br/>Award (2)</u> |
|-----------------------------------|---|---------------------------------|---|---------------------------------|
| Douglass Given<br>Chairman        | \$ 75,000   | 35,000                          | \$ 75,000   | 35,000                          |
| Michael S. Perry<br>Lead Director | \$ 65,000   | 30,000                          | \$ 65,000   | 30,000                          |
| Edward Frykman<br>Director        | \$ 50,000   | 25,000                          | \$ 50,000   | 25,000                          |
| Mauro Ferrari (3)<br>Director     | N/A   | N/A                             | N/A   | N/A                             |
| Charles McKenney (4)<br>Director  | N/A   | N/A                             | \$ 50,000   | \$ 25,000                       |

(1) The Annual Fee for service as a Company director is \$50,000. An additional fee of \$25,000 is paid for the service of the Chairman and an additional \$15,000 for the service of the lead director.

- (2) Each non-employee director received a grant of 25,000 restricted stock units (“RSUs”). An additional grant of 10,000 RSUs is awarded for the service of the Chairman and an additional grant of 5,000 RSUs is awarded for the service of the lead director. RSU grants to non-employee directors vest on the one year anniversary of the date of grant.
- (3) Based on the policies of his employer, Dr. Ferrari has historically declined to accept cash or equity compensation for his service.
- (4) Mr. McKenney passed away in August 2015.

The following table sets forth the total compensation paid to our non-employee directors in fiscal 2015. Dr. Anzalone’s compensation is set forth in the discussion of Executive Compensation and in the Summary Compensation Table.

| Name                 | Fee Earned<br>or<br>Paid in Cash<br>(\$(1)) | Stock<br>Awards \$(<br>(2) (3)) | Total (\$) |
|----------------------|---|---------------------------------|------------|
| Douglass Given       | \$ 103,750                                  | \$262,850                       | \$366,600  |
| Edward Frykman       | \$ 48,750                                   | \$187,750                       | \$236,500  |
| Charles McKenney (4) | \$ 44,583                                   | \$187,750                       | \$232,333  |
| Michael S. Perry     | \$ 60,000                                   | \$225,300                       | \$285,300  |
| Mauro Ferrari        | \$ —  | \$ —                            | \$ —       |

- (1) Dr. Given earned \$30,000 in additional fees for his service on a short term special committee on Corporate Development which service ended in December 2014.
- (2) This column represents the total grant date fair value, computed in accordance with ASC 718, of restricted stock units granted during fiscal year 2015, based on the number of RSUs granted multiplied by the grant date fair value of \$7.51, which is equal to the closing price of our Common Stock on the grant date.
- (3) RSUs to non-employee directors vest one year from date of grant.
- (4) Represents pro rata payment of director fees to Mr. McKenney until the date of his death in August 2015.

Since their service on the Board began, the directors have been issued the following stock option and restricted stock unit grants in the aggregate: Douglass Given – 72,000 stock options and 55,000 restricted stock units, Edward Frykman – 82,500 stock options and 40,000 restricted stock units, Charles McKenney – 75,000 stock options and 40,000 restricted stock units, Michael S. Perry – 77,000 stock options and 45,000 restricted stock units, and Mauro Ferrari – 27,500 stock options and no restricted stock units.

#### **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.

#### **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 NEO’s is described below in the Compensation Discussion and Analysis on pages 10 through 24 of this proxy statement for the year ended September 30, 2015. 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.”

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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. Stockholder advisory votes on executive compensation are held annually, and the next such vote after the 2016 Annual Meeting will be held at the Company's 2017 Annual Meeting of Stockholders.

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 2017.

**Vote Required; Recommendation of the Board**

Proposal No. 2 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.**

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## 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 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":

- 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

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 2015. There is disclosure of changes for 2015, which are in response to feedback we received from stockholders and the stockholder advisory vote on our executive compensation program (the "Say-on-Pay Vote") conducted in March 2015, on our 2014 compensation.

#### **Summary**

##### Company Performance

In 2015, Arrowhead successfully achieved its primary objectives: the advancement of its clinical programs using RNAi-based therapeutics to treat hepatitis B and alpha 1 anti-trypsin deficiency (AATD), a rare genetic disease that causes serious liver and lung problems. During the year, the Company advanced its hepatitis B program to phase 2 clinical studies. Data from the Company's hepatitis B program showed that ARC-520, the Company's lead candidate for the treatment of chronic hepatitis B, achieved deep and consistent knockdown of target genes in humans in a phase 2a study. This data, along with studies in chimpanzees chronically infected with hepatitis B, broke new ground in the understanding of the disease and validated the ability of Company's DPC™ delivery platform to target and knockdown genes of interest.

The Company also initiated phase 1 studies for its AATD program. The study of ARC-AAT, the Company's lead candidate for the treatment of AATD, showed knockdown of the target gene in healthy volunteers and based on this result, the Company initiated studies in patients. In addition, the Company expanded its pipeline by adding three new development programs, made improvements to its delivery technology, and completed an acquisition of the RNAi business from Novartis Institutes for BioMedical Research, Inc. It is anticipated that this acquisition will provide expanded freedom to operate, proprietary technology that has the potential to enhance the activity of RNAi triggers, and license to additional RNAi targets.

In summary, 2015 was a year in which the Company demonstrated robust and steady progress in its lead programs, added three promising new programs and completed an acquisition that enhances the capabilities of its core business.

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## Executive Compensation Program and 2015 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 2015, base salary for each executive was increased by 4% to 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 2015, target awards ranged from 35-100%, which was consistent with prior years, and bonuses were paid out at or near target for each named executive 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 2015, all equity awards granted to the Company's CEO are eligible to vest based on the achievement of rigorous performance milestones, none of which were met in 2015. Amounts relating to equity awards to other NEOs granted in fiscal 2015, which appear in the Summary Compensation Table below, reflect awards made early in 2015 in recognition of 2014 performance.

The Compensation Committee believes that progress with respect to the Company's development programs, including both clinical and non-clinical activities, 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 of each program and new programs within our pipeline to monitor our success as a company over that development period and evaluates executive management primarily on that progress.

### ***Response to 2015 Say-on-Pay Vote Includes Changes to Compensation Practices, Including Performance-Based Equity Compensation***

We held an advisory stockholder vote on executive compensation at our annual stockholder meeting in March 2015. Our stockholders approved, on an advisory basis, our say-on-pay proposal, with approximately 58% of stockholders voting on such matter voting in favor of the proposal. This is in contrast with the 2014 vote, when stockholders approved that year's Say on Pay vote with 88% of those casting votes. While we received an overall positive vote in 2015, the Compensation Committee is committed to being responsive to stockholder concerns 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 increase our efforts to obtain feedback from stockholders. Our Compensation Committee's goal in soliciting feedback was to (1) better understand stockholders' views on

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executive compensation, (2) be responsive to stockholders' views evident in the 2015 say-on-pay vote, and (3) understand if changes to our compensation programs addressed concerns expressed by stockholders. We solicited feedback from institutional holders of approximately 15 million shares or 25% of our outstanding stock. The Company also engaged a prominent investor advisory firm in order to further understand proxy advisor firm policies and how they relate to the perspectives held by our stockholders. The collected feedback included a desire to see closer alignment of executive compensation with corporate performance. Based on this feedback and a review of current peer practices in executive compensation, the Compensation Committee instituted performance-based vesting for equity awards made to the Company's CEO in 2015, minimum three-year vesting requirements for other equity awards to our named executive officers and ownership guidelines for the CEO, COO, and CFO.

More specifically, in 2015, the Compensation Committee implemented the following measures:

- Based vesting of 2015 equity awards to the CEO on rigorous performance milestones;
- Established a minimum vesting period of three years for all time-based RSU grants to named executive officers; and
- Established ownership guidelines of six times annual salary for the CEO and two times annual salary for the COO and CFO.

These policies continue in 2016. For 2016, the majority of the equity awards granted to the CEO included only performance-based vesting.

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 (clawback) 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. It is currently expected that these rules will be finalized in 2016 and that the Committee will therefore adopt such a policy in 2016. 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 a substantial part of the compensation for our CEO, and is expected to comprise a substantial part going forward, and instituting performance awards was a key measure taken to address the stockholder concerns expressed in our 2015 Say on Pay Vote, we highlight below the details of the equity awards made to the CEO in 2016, 2015 and 2014 as well as the rationale behind the grant of time based awards to the CEO in 2016 and 2014.

#### Equity Awards to the CEO in 2016

In January 2016, the CEO received a performance 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. The Compensation Committee has determined while these milestones are achievable in the timeframes set forth, they will require substantial leadership, skill and 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. To date, none of the milestones have been met. The vesting of the award is split equally between each of the following milestones:

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

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 using our DPC™ platform against novel targets. The Committee believes that for biotech companies like Arrowhead, partnerships are an

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important validating indicator of the credibility of 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.

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

During 2015, the Company's market capitalization ranged between \$259 million and \$557 million and as of January 11, 2016 was \$301 million. In order for this tranche of equity to vest, the Company's market capitalization would need to more than triple. 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

Except for ARC-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 the DPC™ platform 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, as well as opening up collaboration and licensing opportunities. It is expected that these events would result in value creation for stockholders.

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 \$368,797. The Committee believes that along with performance based equity grants, a minority time-based grant is appropriate given its retention value and the uncertain nature of the drug development business. The Committee determined that the grants were consistent with grants to similarly placed executives and consistent with the Company's executive compensation policies.

#### Equity Awards to the CEO in 2015

In March 2015, the CEO received performance awards of restricted stock units and stock options. These awards vest only upon achievement of rigorous performance milestones that align with the Company's primary business objective of developing and marketing RNAi-based drugs using our DPC™ delivery platform and, which, if achieved, are designed to result in substantial value creation for shareholders. The Compensation Committee has determined while these milestones are achievable in the timeframes set forth, they will require substantial leadership, skill and 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. To date, none of the milestones have been met.

- 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



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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 is split equally between 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 vests to insure that the vesting of a portion of the award is tied to the industry-adjusted performance of the Company's stock. The value of the awards is 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 are valued at \$1.2 million. The Committee determined that the grants were consistent with grants to similarly placed executives and consistent with the Company's executive compensation policies.

#### Equity Awards to the CEO in 2014

In February 2014, the Compensation Committee approved the grant of restricted stock units and stock options to our CEO. We believe that the calculated value of the award, coupled with a decline in the Company's stock price from the date the award was valued through the 2015 Annual Meeting, led to a lower approval rate on executive compensation at the 2015 Annual Meeting as compared to the 2014 Annual Meeting. The Company's stock price is volatile and ranged both higher and lower during the extended period from the grant date to the date of the annual meeting. As of the February 2014 grant date, the pay to our CEO was in alignment with the stock performance. The total one year shareholder return at the grant date was 669% and the three year TSR was over 15 fold.

These grants were intended to reward the CEO for what the board determined was extraordinary performance. Specifically, in 2011, the Company acquired the RNAi assets of Roche and through 2012 and 2013, developed ARC-520, a promising RNAi-based drug targeting hepatitis B and advanced the study of the drug to phase 2 clinical studies. Additionally, in 2013, the Company had completed financings of \$103.5 million which enabled the continued development of ARC-520 and enabled additional candidates to enter the pipeline.

The Compensation Committee believes that the acquisition of the Roche assets fundamentally changed the Company and its potential to provide for substantial shareholder return, a belief that was validated by the first time participation of several highly regarded biotech institutional investors in the Company's financings. The Compensation Committee believes that the purchase of the Roche assets was possible principally because of the vision and hard work of the CEO and his ability to articulate that vision to Roche, a sophisticated seller, who had other bidders from which to choose. The astuteness of the vision was subsequently validated by the successful and rapid preclinical and clinical progress of ARC-520 through 2012 and 2013 and ultimately, the validation of the candidate and the platform by industry savvy investors in October 2013.

Additionally, in connection with 2014's annual executive compensation review, the Compensation Committee noted that compared to peers, the CEO's equity ownership was significantly lower than comparable CEOs, even though he had significant tenure with the Company and had not divested any of his Company stock. In fact, he had participated in the Company's financings and had purchased stock on the open market, increasing his position beyond what had been awarded to him in connection with his employment. The determination of size of the February award took these facts into account. Although the board expects the CEO to perform at high levels going forward, it is expected, that unless this unusual fact pattern of transformative achievement and sub-par vs. peer equity compensation is repeated, that a time-based grant of comparable magnitude is unlikely to recur.

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

In 2015, 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:

| <b><u>Name</u></b>                              | <b><u>2016<br/>Base Salary</u></b> | <b><u>Percent<br/>Increase</u></b> | <b><u>2015<br/>Base Salary</u></b> | <b><u>Percent<br/>Increase</u></b> | <b><u>2014<br/>Base Salary</u></b> |
|---|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Christopher Anzalone<br>Chief Executive Officer | \$598,125                          | 4%                                 | \$575,120                          | 4%                                 | \$553,000                          |
| Bruce Given<br>Chief Operating Officer          | \$419,661                          | 4%                                 | \$403,520                          | 4%                                 | \$388,000                          |
| Kenneth Myszkowski<br>Chief Financial Officer   | \$326,310                          | 6%                                 | \$307,840                          | 4%                                 | \$296,000                          |
| Patrick O'Brien (1)<br>General Counsel          | \$379,600                          | 4%                                 | \$365,000                          | N/A                                | \$ N/A                             |
| David L. Lewis<br>Chief Scientific Officer      | \$264,576                          | 6%                                 | \$249,600                          | 4%                                 | \$240,000                          |

(1) Mr. O'Brien joined the Company on December 2, 2014.

The Compensation Committee believes 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 2015, 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.

#### *2015 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 during the beginning of the year (set forth below) as well as other corporate and individual achievements and performance throughout the year. For 2015, the Compensation Committee determined that the Company had achieved or partially achieved the majority of the corporate goals, as detailed below. No specific weighting is assigned to the individual goals.

| <b>Goal</b>   | <b>Achievement</b>   |
|---|--|
| Completion of the phase 2a single dose study of ARC-520 and present findings from 3 and 4 mg/kg patient cohorts.  | Achieved: The Company completed all planned cohorts for the phase 2a single dose study of the Company's lead product, ARC-520, and presented this data, along with other data, at an analyst day in September 2015. The data validated the ability of the DPC™ platform to effectively and consistently knockdown target genes in humans, showed substantial knockdown of the drug's target gene, and indicated that the drug was well tolerated at the dose levels studied. |
| Completion of the initial cohort of the US Phase 2b study of ARC-520.   | Partially Achieved: The Company completed the application process with the US FDA and dosing of patients has commenced.  |
| Full enrollment of the initial 3-month portion of the Phase 2b studies of ARC-520 in Europe and Asia.   | Partially Achieved: The Company has opened several sites for the phase 2b multi-dose studies in the U.S., Asia and Europe and dosing of patients is ongoing.   |
| Begin long-term extension studies in the Phase 2b clinical trial of ARC-520. These trials are designed for dosing regimens of 9 months immediately following the 3-month lead in studies. | Achieved   |

|  |   |
|--|---|
| Begin exploratory combination studies with ARC-520.  | Achieved  |
| Begin exploratory studies with ARC-520 at different dosing schedules.  | Achieved  |
| Begin dosing the ARC-AAT Phase 1 study.  | Achieved  |
| Complete dosing of healthy volunteers and patients in the ARC-AAT Phase 1 study.   | Partially achieved: Dosing of healthy volunteers was completed in July 2015 and dosing of patients is ongoing. Expanded sites for dosing of patients in Europe, Australia and New Zealand.  |
| Launch a multiple dose Phase 2 study of ARC-AAT.   | Not achieved. Sufficient data from phase 1 must be collected and analyzed before a phase 2 study can commence.  |
| Present data from the ARC-AAT Phase 1 study.   | Not achieved: Data from the study is expected to be presented at a conference or a peer reviewed publication when the study is completed.   |
|  | In a press release, in connection with commencing dosing with ARC-AAT in patients, Arrowhead reported that, in healthy volunteers, it had achieved the predefined target knockdown of at least 30% reduction of serum AAT levels in 3 subjects or greater than 60% reduction in a single subject. |
| File an IND or equivalent for a 3 <sup>rd</sup> clinical candidate.  | Not achieved. Based on results of the Company's clinical program in HBV, as well as results of a long-term study in HBV-infected chimpanzees, the Company elected to shift resources to establish an additional HBV candidate, ARC-521, and rather than pursue this goal as a high priority.      |
|  | ARC-F12, ARC-521, ARC-HIF2 and ARC-LPA were nominated to the Company's pipeline.  |
| Nominate our first subcutaneous administration candidate or first extra hepatic candidate.                                     | Achieved: ARC-HIF2 was nominated as the Company's first extra-hepatic candidate. ARC-HIF2 uses a reformulated DPC™ delivery construct to target clear cell renal carcinoma.   |
| Expand our RNAi chemistry toolbox to broaden the ways we can achieve freedom to operate in additional indications and targets. | Achieved: The Company completed an acquisition of Novartis Biomedical Research Institutes' RNAi research and development portfolio and associated assets.   |

#### Additional Achievements in 2015

- Strengthened the management team and R&D staff with select key hires and expanded internal capabilities in manufacturing, RNA synthesis, toxicology, quality assurance, program management, and clinical and regulatory operations.
- Received Orphan Drug Designation for ARC-AAT from the US FDA.
- Released data from a chimpanzee study of ARC-520 that, along with the data from the phase 2a study in humans, expanded the understanding of the disease biology of hepatitis B.
- Expanded the Company's HBV portfolio by nominating an additional clinical candidate, ARC-521, that is complementary to ARC-520.

#### 2015 Annual Incentive Compensation Payment

Based on these achievements, the Compensation Committee approved Annual Incentive payments for the named executive officers for 2015 as set forth below.

| <u>Name</u>                                     | <u>Target Award for 2015 (% of Base Salary)</u> | <u>Actual 2015 Award (% of Base Salary)</u> | <u>Amount of Bonus</u> |
|---|---|---|------------------------|
| Christopher Anzalone<br>Chief Executive Officer | 100%  | 100%  | \$575,120              |
| Bruce Given<br>Chief Operating Officer          | 60%   | 70%   | \$282,464              |
| Kenneth Myszkowski<br>Chief Financial Officer   | 40%   | 40%   | \$123,136              |
| Patrick O'Brien<br>General Counsel              | 40%   | 40%   | \$146,000              |
| David L. Lewis<br>Chief Scientific Officer      | 35%   | 35%   | \$ 87,360              |

#### 2016 Goals

For 2016, 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 2016. The Committee will also consider unanticipated achievements, opportunities vs. results and circumstances outside the control of the executives.

#### 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.

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#### *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. To date, none of the milestones have been met and are not expected to be met in the near term. See the summary 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 minority 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 Awards to CEO in Fiscal 2014*

In February 2014, the Compensation Committee approved the grant of time-based equity awards with a value of approximately \$3.5 million. These grants were intended to reward the CEO for what the board determined was extraordinary performance. Specifically, in 2011, the Company acquired the RNAi assets of Roche and through 2012 and 2013, developed ARC-520, a promising RNAi-based drug targeting hepatitis B and advanced the study of the drug into phase 2 clinical studies. Additionally, in 2013, the Company had completed financings of \$103.5 million which enabled the continuation of the development of ARC-520 and feasibility of the addition of other programs to the pipeline. For a further discussion of the 2014 awards, see page 14.

#### *Equity Award Grants to other NEOs in Fiscal 2014, 2015 & 2016*

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 February 2014 for 2013 performance, March 2015 for 2014 performance, and January 2016 for 2015 performance. The awards consisted of restricted stock units and stock option grants. The restricted stock unit awards made in fiscal 2014 vested over a period of two years, while 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 stock option awards 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 2015, refer to the "Grants of Plan-Based Awards" table.

#### 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.

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

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### **Comparative Analysis**

Since 2013, the Compensation Committee 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 2015:**

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

Dicema Pharmaceuticals, Inc.  
Durect Corporation  
Geron Corporation  
Idera Pharmaceuticals, Inc.  
Immunomedics, 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.  
XenoPort, Inc.  
Zogenix, Inc.

The compensation studies prepared by StreeterWyatt and presented in December 2014 and 2015 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 2015 and 2016 were consistent with the findings and recommendations of StreeterWyatt regarding market based increases observable from peer and survey data.



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## **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.

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.

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## 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 five 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 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 2015, Dr. Perry served as Chairman of the Compensation Committee, and Mr. Frykman, and Dr. Ferrari served as members. Mr. McKenney served on the Committee for part of the year until his death in August 2015. 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.

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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 2015 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 Frykman

### Summary Compensation Table

The following table summarizes compensation earned for services rendered during fiscal 2015, 2014, and 2013 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”:

| Name and Principal Position                                      | Year | Salary<br>(1) (\$) | Bonus<br>(2) (\$) | Stock<br>Awards<br>(3) (\$) | Option<br>Awards<br>(4) (\$) | Non-Equity<br>Incentive Plan<br>Compensation<br>(5) (\$) | All Other<br>Compensation<br>(6) (\$) | Total     |
|--|------|--------------------|-------------------|-----------------------------|------------------------------|--|---------------------------------------|-----------|
| Christopher Anzalone<br>President and Chief<br>Executive Officer | 2015 | 564,911            | —                 | 751,000(5)                  | 426,840(5)                   | 575,120  | 1,889                                 | 2,319,750 |
|  | 2014 | 543,615            | —                 | 3,053,400                   | 553,680                      | 664,000  | 1,444                                 | 4,816,139 |
|  | 2013 | 504,808            | —                 | —                           | 463,393                      | 486,000  | 1,444                                 | 1,455,645 |
| Kenneth Myszkowski<br>Chief Financial Officer                    | 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 |
|  | 2013 | 277,644            | —                 | —                           | 173,740                      | 113,000  | 9,587                                 | 573,971   |
| Bruce D. Given<br>Chief Operating Officer                        | 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 |
|  | 2013 | 363,462            | —                 | —                           | 334,900                      | 221,000  | 10,356                                | 929,718   |
| David L. Lewis<br>Chief Scientific Officer                       | 2015 | 245,169            | —                 | —                           | 520,245                      | 87,360   | 10,665                                | 863,439   |
|  | 2014 | 226,358            | —                 | —                           | 1,107,360                    | 84,000   | 9,199                                 | 1,426,917 |
|  | 2013 | 199,628            | 43,211            | —                           | 216,818                      | 86,000   | 8,475                                 | 554,132   |
| Patrick O’Brien (6)<br>General Counsel                           | 2015 | 286,385            | 125,000           | 156,600                     | 314,970                      | 146,000  | 11,961                                | 1,040,916 |
|  | 2014 | —                  | —                 | —                           | —                            | —  | —                                     | —         |
|  | 2013 | —                  | —                 | —                           | —                            | —  | —                                     | —         |

- (1) These bonus amounts represent a signing and relocation bonus for Patrick O’Brien, who was hired on December 2, 2014, and retention bonuses paid to David Lewis in connection with the Company’s October 2011 acquisition of Roche Madison Inc. where David Lewis was formerly employed. The bonus payment was a condition of the acquisition of Roche Madison, Inc. and was reimbursed by Roche to the Company.
- (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 2015, 2014 and 2013. 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 2015, 2014 and 2013 and paid in fiscal year 2016, 2015 and 2014, respectively. The Annual Bonuses are described in more detail in the “Bonus Incentive” section.
- (4) Amounts consist of 401(k) matching contribution, as well as life insurance premiums for the benefit of each executive officer.
- (5) 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.
- (6) Patrick O’Brien was hired on December 2, 2014 and thus compensation reflected in 2015 is for a partial year of approximately ten months.

### Grant of Plan-Based Awards

The following table sets forth cash bonus and equity grants made to the named executive officers in fiscal 2015:

| 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 |
|-----------------------------|------------|---|-------------|---|---------|---------|--|--|----------------------------|-----------------------|
|                             |            | Target  | Maximum     | Threshold   | Target  | Maximum |  |  |                            |                       |
| <b>Christopher Anzalone</b> |            |   |             |   |         |         |  |  |                            |                       |
| Cash Bonus                  |            | \$575,120   | \$1,150,240 | —   | —       | —       | —  | —  | —                          | —                     |
| Stock Options (4)           | 3/6/2015   | —   | —           | 66,667  | 83,333  | 100,000 | —  | —  | \$ 7.75                    | —                     |
| Stock Options (4)           | 3/6/2015   | —   | —           | 66,667  | 83,333  | 100,000 | —  | —  | \$ 7.75                    | —                     |
| Stock Options               | 3/6/2015   | —   | —           | 66,667  | 83,333  | 100,000 | —  | —  | \$ 7.75                    | \$ 426,840            |
| RSUs (4)                    | 3/4/2015   | —   | —           | 80,000  | 100,000 | 120,000 | —  | —  | —                          | —                     |
| RSUs (4)                    | 3/4/2015   | —   | —           | 80,000  | 100,000 | 120,000 | —  | —  | —                          | —                     |
| RSUs                        | 3/4/2015   | —   | —           | 80,000  | 100,000 | 120,000 | —  | —  | —                          | \$ 751,000            |
| <b>Kenneth Myszkowski</b>   |            |   |             |   |         |         |  |  |                            |                       |
| Cash Bonus                  |            | \$123,136   | N/A         | —   | —       | —       | —  | —  | —                          | —                     |
| Stock Options               | 3/6/2015   | —   | —           | —   | —       | —       | —  | 50,000   | \$ 7.75                    | \$ 260,123            |
| RSUs                        | 3/4/2015   | —   | —           | —   | —       | —       | 50,000   | —  | —                          | \$ 375,500            |
| <b>Bruce D. Given</b>       |            |   |             |   |         |         |  |  |                            |                       |
| Cash Bonus                  |            | \$242,112   | N/A         | —   | —       | —       | —  | —  | —                          | —                     |
| Stock Options               | 3/6/2015   | —   | —           | —   | —       | —       | —  | 60,000   | \$ 7.75                    | \$ 312,147            |
| RSUs                        | 3/4/2015   | —   | —           | —   | —       | —       | 150,000  | —  | —                          | \$1,126,500           |
| <b>David L. Lewis</b>       |            |   |             |   |         |         |  |  |                            |                       |
| Cash Bonus                  |            | \$ 87,360   | N/A         | —   | —       | —       | —  | —  | —                          | —                     |
| Stock Options               | 3/6/2015   | —   | —           | —   | —       | —       | —  | 100,000  | \$ 7.75                    | \$ 520,245            |
| <b>Patrick O'Brien</b>      |            |   |             |   |         |         |  |  |                            |                       |
| Cash Bonus                  |            | \$146,000   | N/A         | —   | —       | —       | —  | —  | —                          | —                     |
| Stock Options               | 12/2/2014  | —   | —           | —   | —       | —       | —  | 90,000   | \$ 5.22                    | \$ 314,970            |
| RSUs                        | 12/2/2014  | —   | —           | —   | —       | —       | 30,000   | —  | —                          | \$ 156,600            |

- (1) Amounts listed represent cash awards granted to our named executive officers in connection with performance targets in 2015 and paid in fiscal 2016.
- (2) The number of shares shown in the threshold, target and maximum columns reflect the minimum, target and maximum potential future payout range for restricted stock units and stock options granted with performance and market-based vesting conditions. These 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 were granted on March 4, 2015 and vest in three equal annual installments beginning on the first anniversary of the grant date. Patrick O'Brien received a restricted stock unit grant on December 2, 2014, his first day of employment. The grant vests 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 and stock option awards would be achieved and assigned a grant date fair value of \$0 based on this evaluation.

## Outstanding Equity Awards

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, 2015.

| 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 (\$) (4) |
| 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 | 14,687  | 313   | —   | 4.60                       | 10/21/2021             | —   | —  | —   | —  |
|                      | 2/16/2012  | 152,291   | 17,709  | —   | 5.19                       | 2/16/2022              | —   | —  | —   | —  |
|                      | 9/28/2012  | 37,499  | 12,501  | —   | 2.62                       | 9/28/2022              | —   | —  | —   | —  |
|                      | 5/6/2013   | 116,666   | 83,334  | —   | 2.01                       | 5/6/2023               | —   | —  | —   | —  |
|                      | 9/21/2013  | 34,995  | 34,996  | —   | 4.75                       | 9/21/2023              | —   | —  | —   | —  |
|                      | 2/6/2014   | 23,749  | 36,251  | —   | 14.54                      | 2/6/2024               | —   | —  | —   | —  |
|                      | 3/6/2015   | —   | —   | 300,000   | 7.75                       | 3/6/2025               | —   | —  | —   | —  |
|                      | 2/6/2014   | —   | —   | —   | —                          | —                      | 105,000   | 604,800  | —   | —  |
|                      | 3/6/2015   | —   | —   | —   | —                          | —                      | —   | —  | 360,000   | 2,073,600  |
| 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 | 14,687  | 313   | —   | 4.60                       | 10/21/2021             | —   | —  | —   | —  |
|                      | 2/16/2012  | 59,354  | 8,646   | —   | 5.19                       | 2/16/2022              | —   | —  | —   | —  |
|                      | 9/28/2012  | 18,750  | 6,250   | —   | 2.62                       | 9/28/2022              | —   | —  | —   | —  |
|                      | 5/6/2013   | 36,500  | 37,500  | —   | 2.01                       | 5/6/2023               | —   | —  | —   | —  |
|                      | 9/21/2013  | 10,000  | 10,000  | —   | 4.75                       | 9/21/2023              | —   | —  | —   | —  |
|                      | 2/6/2014   | 19,791  | 30,209  | —   | 14.54                      | 2/6/2024               | —   | —  | —   | —  |
|                      | 3/6/2015   | 6,250   | 43,750  | —   | 7.75                       | 3/6/2025               | —   | —  | —   | —  |
|                      | 2/6/2014   | —   | —   | —   | —                          | —                      | 35,000  | 201,600  | —   | —  |
| 3/6/2015             | —          | —   | —   | —   | —                          | 50,000                 | 288,000   | —  | —   |  |
| Bruce D. Given       | 9/28/2009  | 1,000   | —   | —   | 6.20                       | 9/28/2019              | —   | —  | —   | —  |
|                      | 10/26/2011 | 29,375  | 625   | —   | 5.20                       | 10/26/2021             | —   | —  | —   | —  |
|                      | 2/16/2012  | 98,541  | 11,459  | —   | 5.19                       | 2/16/2022              | —   | —  | —   | —  |
|                      | 9/28/2012  | 26,251  | 8,749   | —   | 2.62                       | 9/28/2022              | —   | —  | —   | —  |
|                      | 5/6/2013   | 99,167  | 70,833  | —   | 2.01                       | 5/6/2023               | —   | —  | —   | —  |
|                      | 9/21/2013  | 20,000  | 20,000  | —   | 4.75                       | 9/21/2023              | —   | —  | —   | —  |
|                      | 2/6/2014   | 19,791  | 30,209  | —   | 14.54                      | 2/6/2024               | —   | —  | —   | —  |
|                      | 3/6/2015   | 7,500   | 52,500  | —   | 7.75                       | 3/6/2025               | —   | —  | —   | —  |
|                      | 2/6/2014   | —   | —   | —   | —                          | —                      | 62,500  | 360,000  | —   | —  |
| 3/6/2015             | —          | —   | —   | —   | —                          | 150,000                | 864,000   | —  | —   |  |
| David L. Lewis       | 10/21/2011 | 16,928  | 572   | —   | 4.60                       | 10/21/2021             | —   | —  | —   | —  |
|                      | 2/16/2012  | 21,687  | 2,813   | —   | 5.19                       | 2/16/2022              | —   | —  | —   | —  |
|                      | 9/28/2012  | 16,251  | 6,249   | —   | 2.62                       | 9/28/2022              | —   | —  | —   | —  |
|                      | 5/6/2013   | 31,251  | 43,749  | —   | 2.01                       | 5/6/2023               | —   | —  | —   | —  |
|                      | 9/21/2013  | 14,000  | 14,000  | —   | 4.75                       | 9/21/2023              | —   | —  | —   | —  |
|                      | 2/6/2014   | 47,499  | 72,501  | —   | 14.54                      | 2/6/2024               | —   | —  | —   | —  |
| 3/6/2015             | 12,500     | 87,500  | —   | 7.75  | 3/6/2025                   | —                      | —   | —  | —   |  |
| Patrick O'Brien      | 12/2/2014  | 16,875  | 73,125  | —   | 5.22                       | 12/2/2024              | —   | —  | —   | —  |
|                      | 12/2/2014  | —   | —   | —   | —                          | —                      | 30,000  | 172,800  | —   | —  |

- (1) Options are priced at the market closing price on the day of the award. 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. 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 either two or 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 \$5.76 on September 30, 2015.

## 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 2015.

| 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                              | \$ 643,650                    |
| Kenneth Myszkowski   | —                                     | —                              | 35,000                               | 214,550                       |
| Bruce D. Given       | —                                     | —                              | 62,500                               | 399,375                       |
| David L. Lewis       | 15,000                                | \$ 89,953                      | —                                    | —                             |
| Patrick O'Brien      | —                                     | —                              | —                                    | —                             |

- (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 from 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.

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, 2015:

#### Termination Payments

| Triggering Event   | Salary<br>(\$) | Benefits<br>(\$) | Stock<br>Awards<br>(1) (\$) | Option<br>Awards<br>(1) (\$) | Total     |
|--|----------------|------------------|-----------------------------|------------------------------|-----------|
| <b>Termination by Employer without Cause</b>                               |                |                  |                             |                              |           |
| Christopher Anzalone (2)   | 47,927         | 1,744            | —                           | —                            | 49,671    |
| Kenneth Myszkowski   | 76,960         | 6,375            | —                           | —                            | 83,335    |
| Bruce D. Given   | —              | —                | —                           | —                            | —         |
| David L. Lewis   | 124,800        | —                | —                           | —                            | 124,800   |
| Patrick O'Brien  | —              | —                | —                           | —                            | —         |
| <b>Termination by Employer without Cause following a Change in Control</b> |                |                  |                             |                              |           |
| Christopher Anzalone (2)   | 47,927         | 1,744            | 2,678,400                   | 397,559                      | 3,125,630 |
| Kenneth Myszkowski   | 76,960         | 6,375            | 489,600                     | 175,641                      | 748,576   |
| Bruce D. Given   | —              | —                | 1,224,000                   | 320,177                      | 1,544,177 |
| David L. Lewis   | 124,800        | —                | —                           | 200,088                      | 324,888   |
| Patrick O'Brien  | 182,500        | —                | 172,800                     | 39,488                       | 394,788   |

- (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, 2015 of \$5.76. 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, 2015 of \$5.76 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, 2016, 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.



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### Vote Required; Recommendation of the Board

In order to be ratified, Proposal No. 3 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, while broker non-votes will have no effect on the outcome of the vote.

### 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 2015 and 2014 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, 2015, and September 30, 2014:

|                        | Year Ended September 30, |                  |
|------------------------|--------------------------|------------------|
|                        | 2015                     | 2014             |
| Audit fees (1)         | \$185,000                | \$184,500        |
| Audit-related fees (2) | 3,750                    | 74,950           |
| Total                  | <u>\$188,750</u>         | <u>\$259,450</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.

#### 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 2015, which include the consolidated balance sheets of the Company as of September 30, 2015 and September 30, 2014, and the related consolidated statements of operations, stockholders’ equity and cash flows for the fiscal years ended September 30, 2015, September 30, 2014 and September 30, 2013, 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 11, 2015, 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

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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, 2015, 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 11, 2016, 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 Research Corporation, 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>   |  |            |
| Baker Bros. Advisors LLC (2)<br>667 Madison Ave<br>21st Floor<br>New York, NY 10065                        | 3,680,499  | 5.9%       |
| Oppenheimer Funds, Inc. (3)<br>Two World Financial Center<br>225 Liberty Street<br>New York, NY 10281-1008 | 3,000,000  | 5.0%       |
| <b><u>Executive Officers and Directors</u></b>   |  |            |
| Christopher Anzalone (4)   | 887,449  | 1.5%       |
| Kenneth Myszkowski (5)   | 287,375  | *          |
| Bruce D. Given (6)   | 598,084  | *          |
| David L. Lewis (7)   | 214,293  | *          |
| Patrick O'Brien (8)  | 40,675   | *          |
| Douglass Given (9)   | 120,000  | *          |
| Edward Frykman (10)  | 125,352  | *          |
| Michael S. Perry (11)  | 122,000  | *          |
| Mauro Ferrari (12)   | 29,096   | *          |
| All Executive Officers and Directors as a group (9 persons) (13)   | 2,424,324  | 3.9%       |

\* Less than 1%

- (1) Based on 59,627,499 shares of Common Stock issued and outstanding as of January 11, 2016. Shares not outstanding but deemed beneficially owned by virtue of the right of a person to acquire them as of January 11, 2016, or within sixty days of such date (including upon conversion of the Preferred Stock), 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 Schedule 13F-HR filed November 16, 2015 on behalf of Baker Bros. Advisors LLC. In addition to the 1,009,509 common shares shown on the Schedule 13F-HR, this total also includes 2,670,990 common shares that would be issuable upon the conversion of Preferred Stock.
- (3) Based on a Schedule 13F-HR filed November 6, 2015 on behalf of Oppenheimer Funds, Inc.
- (4) Includes 15,772 shares issuable upon the exercise of common stock purchase warrants, 670,216 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016 and 105,000 restricted stock units that vest within 60 days of January 11, 2016.
- (5) Includes 235,708 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016 and 51,667 restricted stock units that vest within 60 days of January 11, 2016.

- (6) Includes 360,584 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016 and 175,000 restricted stock units that vest within 60 days of January 11, 2016.
- (7) Includes 214,293 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016.
- (8) Includes 30,675 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016.
- (9) Includes 65,000 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016 and 35,000 restricted stock units that vest within 60 days of January 11, 2016.
- (10) Includes 76,500 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016 and 25,000 restricted stock units that vest within 60 days of January 11, 2016.
- (11) Includes 77,000 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016 and 30,000 restricted stock units that vest within 60 days of January 11, 2016.
- (12) Includes 24,845 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016.
- (13) Includes 15,772 shares issuable upon the exercise of common stock purchase warrants, 1,827,841 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 11, 2016 and 421,667 restricted stock units that vest within 60 days of January 11, 2016.

#### EQUITY COMPENSATION PLAN INFORMATION

The following table provides information as of September 30, 2015 with respect to shares of our Common Stock that may be issued under our equity compensation plans.

|  | Equity Compensation Plan Information  |   |   |
|--|---|---|---|
|  | Number of<br>Shares to be Issued<br>upon exercise of<br>outstanding options,<br>warrants and rights | Weighted<br>average<br>exercise price<br>of outstanding<br>options,<br>warrants and<br>rights | Number of<br>securities<br>remaining<br>available for<br>future issuance<br>under equity<br>compensation<br>plans (excluding<br>securities<br>reflected in<br>column (a)) (3) |
| Equity compensation plans approved by security holders (1)     | 5,768,518   | \$ 6.67   | 1,589,970   |
| Equity compensation plans not approved by security holders (2) | 601,289   | \$ 7.10   | —   |
| <b>Total</b>   | <b>6,369,807</b>  | <b>\$ 6.71</b>  | <b>1,589,970</b>  |

- (1) Includes options outstanding representing 2,354,000 shares subject to the 2013 Incentive Plan and 2,537,018. Also includes 877,500 restricted stock units subject to the 2013 Incentive Plan.
- (2) Includes 544,622 inducement option grants and 56,667 inducement restricted stock unit grants issued to newly hired employees.

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## Current Executive Officers of the Registrant

The names, ages and positions of our current executive officers serving as of January 11, 2016 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  | 46         | Chief Executive Officer & President and Director |
| Kenneth A. Myszkowski | 49         | Chief Financial Officer                          |
| Bruce Given           | 61         | Chief Operating Officer                          |
| David L. Lewis        | 52         | Chief Scientific Officer                         |
| Peter Leone           | 59         | Vice President, Strategy & Program Management    |
| Patrick O'Brien       | 52         | 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.

**Dr. David Lewis**, Chief Scientific Officer, has served in this role since in September 2013. From October 2011 until September 2013, he served as the Company's Vice President, Biology. Dr. Lewis has served as Site Head for the Company's Research and Development facility in Madison, Wisconsin since 2011 and prior to that as Site Head for the facility under Roche ownership from 2008 until 2011. Dr. Lewis is a pioneer in the use of RNAi and was the first to show that siRNAs could be used to inhibit gene expression in multiple tissues of adult mammals. He is a co-inventor of the Company's DPC™ technology for targeted delivery of siRNA. Dr. Lewis was the Program Director for RNAi at Mirus Bio Corporation, prior to its acquisition by Roche in October 2008.

Dr. Lewis received his B.S. degree in Biochemistry and Molecular Biology from the University of Wisconsin-Madison, and his Ph.D. degree in Biochemistry from Michigan State University. He went on to the Howard Hughes Medical Institute at the University of Wisconsin-Madison to perform post-doctoral studies where he developed viral and non-viral methods to modulate gene expression in animals, and discovered novel gene regulatory mechanisms involved in body patterning. Dr. Lewis has authored 25 scientific papers and book chapters, has 19 patents, and has been awarded government-sponsored research grants totaling more than \$5 million. He has given numerous invited speaking presentations at both scientific conferences and research institutions. He has served on several NIH review panels and is a lecturer in the Masters in Biotechnology Program at the University of Wisconsin-Madison.

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**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 PharmD 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, 2015, all of its officers, directors and significant stockholders complied with all applicable filing requirements under Section 16(a).

#### **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.

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## CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

As of September 30, 2015, 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 \$197,820 during fiscal 2015 and \$86,667 thus far in fiscal 2016. His current base salary is \$183,062. Since the beginning of fiscal 2015, Vincent Anzalone was awarded options to purchase 40,000 shares of the Company's Common Stock at an exercise price of \$5.45 for performance in 2014 and options to purchase 40,000 shares of the Company's Common Stock at \$6.15 for performance in 2015, each vesting over four years from the date of grant. Each exercise price is equal to the fair market value of the shares on the date of grant. The grant date fair value of the options is \$146,440 and \$184,383, respectively.

### 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, 2015 including the financial statements, schedules and a list of exhibits. Requests should be sent to Arrowhead Research Corporation, 225 S. Lake Avenue, Suite 1050 Pasadena, CA 91101, Attn: Corporate Secretary, Phone (626) 304-3400.

### 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 Research Corporation  
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

Jane Davidson,  
Secretary

Pasadena, California  
January 22, 2016





**Important notice regarding the Internet availability of  
proxy materials for the Annual Meeting of shareholders.  
The Notice of the 2016 Annual Meeting of Stockholders; Company's 2016  
Proxy Statement; Company's Annual Report on Form 10-K for the year ended  
September 30, 2015; 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 RESEARCH CORPORATION**

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**THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS  
ANNUAL MEETING OF STOCKHOLDERS  
TUESDAY, MARCH 8, 2016**

The undersigned stockholder of ARROWHEAD RESEARCH CORPORATION, a Delaware corporation, hereby acknowledges receipt of the Notice of Annual Meeting of Stockholders and Proxy Statement, each dated January 22, 2016, 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 Research Corporation to be held on Tuesday, March 8, 2016 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, IN FAVOR of 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."