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

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

ARROWHEAD PHARMACEUTICALS, INC.
(Name of Registrant as Specified in Its Charter)

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

Payment of filing fee (Check the appropriate box):
☒ No fee required.
☐ Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.

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

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

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

(4) Proposed maximum aggregate value of transaction:

(5) Total fee paid:

☐ Fee paid previously with preliminary materials.

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

(1) Amount Previously Paid:

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

(3) Filing party:

(4) Date filed:
Notice of Annual Meeting of Stockholders
To Be Held on Thursday, March 19, 2020

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 Thursday, March 19, 2020:

You may access the following proxy materials at www.virtualshareholdermeeting.com/ARWR2020

- Notice of the 2020 Annual Meeting of Stockholders;
- Company’s 2020 Proxy Statement;
- Company’s Annual Report on Form 10-K for the year ended September 30, 2019; and
- Form of Proxy Card

TO THE STOCKHOLDERS OF ARROWHEAD PHARMACEUTICALS, INC.:

NOTICE IS HEREBY GIVEN that the 2020 Annual Meeting of Stockholders of Arrowhead Pharmaceuticals, Inc., a Delaware corporation (the “Company”), will be held on Thursday, March 19, 2020, at 10:00 a.m., Pacific time (the “Annual Meeting”). This year’s meeting will be a completely “virtual” meeting of stockholders. You can attend the Annual Meeting online, vote your shares electronically, and submit your questions during the Annual Meeting by visiting www.virtualshareholdermeeting.com/ARWR2020. Prior to the Annual Meeting, you will be able to vote at www.proxyvote.com for the purpose of considering and voting upon the following proposals:

1. To elect the six 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 to approve executive compensation;
3. To approve an amendment to the Company’s Amended and Restated By-Laws to implement a majority vote standard in uncontested elections of directors; and
4. To ratify the selection of Rose, Snyder & Jacobs LLP as independent auditors of the Company for the fiscal year ending September 30, 2020;

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 six directors nominated by the Board of Directors and does not include any other matters relating to the election of directors, including, without limitation, the election of directors nominated by any stockholder of the Company.

All stockholders of record are cordially invited to attend the Annual Meeting by visiting www.virtualshareholdermeeting.com/ARWR2020. We anticipate that on or about January , 2020, we will mail our stockholders a Notice Regarding the Availability of Proxy Materials (the “Notice of Internet Availability”) containing instructions on how to access our 2020 Proxy Statement and 2019 Annual Report on Form 10-K and to vote online. You will need to have your 16-digit Control Number included on your Notice of Internet Availability or your proxy card (if you received a printed copy of the proxy materials) to join the Annual Meeting.

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 at the Annual Meeting even if such stockholder has previously returned a proxy. Each stockholder 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/ Patrick O’Brien
Patrick O’Brien
Secretary

Arrowhead Pharmaceuticals, Inc. • 177 E. Colorado Blvd., Suite 700 • Pasadena, California 91105
# Table of Contents

**General Information Concerning Solicitation and Voting**
- Record Date
- Revocability of Proxies
- Voting and Solicitation
- Quorum; Abstentions; Broker Non-Votes
- Deadline for Receipt of Stockholder Proposals

**Proposal One — Election of Directors**
- Board Composition and Nominating Process
- Corporate Governance Policies and Practices
- Stockholder Communications with Directors
- Board Meetings and Committees

**Director Compensation**

**Proposal Two — Advisory Vote to Approve Executive Compensation**

**Proposal Three — Amendment to Bylaws to Elect Directors by a Majority Vote**

**Executive Compensation**
- Compensation Discussion and Analysis
  - Our Company
  - Business Development
  - Platform
  - Pipeline
  - Executive Compensation Philosophy
  - Executive Compensation Program Design
  - Governance of Executive Compensation Program
  - Individual Compensation Elements
  - Employment Arrangements
  - Post-Employment Compensation Arrangements
  - Other Compensation Policies and Practices
  - Tax and Accounting Considerations
  - Compensation Risk Assessment

**Compensation Tables**

**Proposal Four — Ratification of Appointment of Independent Auditors**
- Audit Fees
- Report of the Audit Committee
- Voting Securities of Principal Stockholders and Management
- Equity Compensation Plan Information
- Review and Approval of Related-Party Transactions
- Certain Relationships and Related Transactions, and Director Independence
- Exhibit A — Amended and Restated Bylaws of Arrowhead Pharmaceuticals, Inc.
General Information Concerning Solicitation and Voting

The enclosed Proxy is solicited on behalf of Arrowhead Pharmaceuticals, Inc. (the “Company” or “Arrowhead”) for use at the 2020 Annual Meeting of Stockholders (the “Annual Meeting”) to be held on Thursday, March 19, 2020 at 10:00 a.m., Pacific 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”). This year’s meeting will be a completely “virtual” meeting of stockholders. You can attend the Annual Meeting online, vote your shares electronically, and submit your questions during the Annual Meeting, by visiting www.virtualshareholdermeeting.com/ARWR2020. You will need to have your 16-digit Control Number included on your Notice Regarding the Availability of Proxy Materials (the “Notice of Internet Availability”) or your proxy card (if you received a printed copy of the proxy materials) to join the Annual Meeting.

The Company anticipates that the Notice of Internet Availability in connection with these proxy solicitation materials will first be mailed on or about January , 2020 to all stockholders entitled to vote at the Annual Meeting and we will post our proxy materials on the website referenced in the Notice of Internet Availability. As more fully described in the Notice of Internet Availability, all stockholders may choose to access our proxy materials on the website referred to in the Notice of Internet Availability or may request to receive a printed set of our proxy materials.

Record Date

Only holders of record of our common stock at the close of business on January 22, 2020 (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 *** shares of common stock (“Common Stock”).

Revocability of Proxies

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

Voting and Solicitation

Each share of the Company’s Common Stock is entitled to one vote on all matters presented at the Annual Meeting. Each stockholder may appoint only one proxy holder or representative to attend the Annual Meeting on his or her behalf. Stockholders do not have the right to cumulate their votes in the election of directors. Shares of Common Stock represented by properly executed proxies will, unless such proxies have been previously revoked, be voted in accordance with the instructions indicated thereon. In the absence of specific instructions to the contrary, properly executed proxies will be voted FOR the Proposals 1, 2, 3 and 4 and submitted to a vote of stockholders at the Annual Meeting pursuant to this proxy statement. No business other than that set forth in the accompanying Notice of Annual Meeting of Stockholders is expected to come before the Annual Meeting. Should any other matter requiring a vote of stockholders properly arise, the persons named in the enclosed form of proxy will vote such proxy in accordance with the recommendation of the Board of Directors (the “Board”).

If you will not be able to attend the Annual Meeting to vote in person, you may vote your shares via the Internet or by telephone or by mail as set forth in the Notice.
2020 PROXY STATEMENT  General Information Concerning Solicitation and Voting

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

If your shares are held in street name, the voting instruction form sent to you by your broker, bank or other nominee should indicate whether the institution has a process for beneficial holders to provide voting instructions over the Internet or by telephone. 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; Abstenions; Broker Non-Votes

The required quorum for the transaction of business at the Annual Meeting is a majority of the votes eligible to be cast by holders of shares of Common Stock issued and outstanding on the Record Date. Shares that are voted "FOR," "AGAINST" or "ABSTAIN" on a matter are treated as being present at the meeting for purposes of establishing a quorum with respect to such matter. For certain proposals, brokers may not have discretionary authority to vote on a particular matter if they have not received specific instructions from the beneficial owner of the shares ("broker non-votes"). In accordance with the rules of Nasdaq, banks, brokerage firms and other nominees who hold Arrowhead shares in street name for their customers have authority to vote on "routine" proposals when they have not received instructions from beneficial owners. However, banks, brokerage firms and other nominees are precluded from exercising their voting discretion with respect to non-routine matters. 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 six directors, will be elected. Because Proposal Nos. 2, 3 and 4 must be approved by the affirmative vote of a majority of the shares of Common Stock voted on the proposals presented herein is discussed below.

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 2021 Annual Meeting of Stockholders must ensure that the proposal is received by the Corporate Secretary at Arrowhead Pharmaceuticals, Inc., 177 E. Colorado Blvd., Suite 700, Pasadena, CA 91105, not later than October 1, 2020, in order to be considered for inclusion in our proxy materials for that meeting; provided, however, that if the Company’s 2021 Annual Meeting of Stockholders is held before February 17, 2021 or after April 18, 2021, you must provide specified information to us a reasonable time before we begin to print and send our proxy statement for our 2021 Annual Meeting. Proposals received after the specified dates may be excluded from the Company’s proxy statement.

Additionally, our Amended and Restated Bylaws ("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 2020 Annual Meeting; provided, however, that if the 2021 Annual Meeting date is advanced by more than 30 days before or delayed by more than 60 days after the anniversary date of the 2020 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 six persons as directors to serve until the 2021 Annual Meeting or until their successors have been duly elected and qualified. 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 six nominees receiving the greatest numbers of votes at the Annual Meeting will be elected to the six director positions. Unless otherwise instructed, the proxy holders will vote the proxies received by them for the six 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, the nominee’s 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.

Douglass Given, MD
Chairman

Age: 67
Director since: 2010
Serves on:
• Science Committee

Experience and Expertise
Dr. Given is Chairman of the Board. He has been a director of the Company since 2010. Doug is Managing Partner at Health2047 Capital Partners LLC. He served as Health2047 Inc.’s Chief Executive from its founding in August 2015 until January 2018. Previously, Dr. Given spent more than a decade in venture capital as an Investment Partner and General Partner at life sciences investor Bay City Capital LLC participating in five sequential life sciences general funds and two sector-specific funds. He was associated with the partnership from 1999 to 2015. A physician and medical scientist by background, Dr. Given has been a global corporate and operating executive at Lilly, Monsanto, Schering Plough and Mallinckrodt and a serial entrepreneur, as well as a venture capitalist. In addition to a number of private companies, he led three public biotechnology and biopharmaceutical companies as CEO.

Dr. Given has served on more than 20 public and private boards. He is currently a director at Health2047 Inc., board chair at Akiri Inc., Managing Partner at G5 Partners LLC, and serves on the board at First Mile Care Inc. and Vivaldi Biosciences Inc. He serves on advisory boards at the University of Chicago Medicine, Johns Hopkins Bloomberg School of Public Health, Stanford Medicine, Stanford Institute for Economic Policy Research (SIEPR), and The Houston Methodist Research Institute.

Qualifications
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 has had significant leadership roles, including CEO of several biotech companies and Senior Vice President, at several large pharmaceutical companies.

arrowhead pharmaceuticals
Michael S. Perry, DVM
Independent Lead Director

Age: 60
Director since: 2011
Serves on:
• Audit Committee
• Compensation Committee (Chair)
• Nominating Committee (Chair)
• Science Committee

Other Public Company Boards:
• Avita Medical, Inc.
• AmpliPhi Bioscience Corp.
• Gamida Cell Ltd.

Experience and Expertise
Dr. Perry is currently the Chief Executive Officer and President of Avita Medical Ltd., a regenerative medicine company based in Valencia, CA (ASX: AVH and OTCQX: AVMY) and Managing Director of Bioscience Managers, a global Venture Capital firm. From 2014 to 2017, Dr. Perry served as Chief Scientific Officer of Novartis’ Cell and Gene Therapy Unit, and from 2012 to 2014 he served as Vice President and Global Head of Stem Cell Therapy for Novartis Pharmaceuticals Corp, a US affiliate of Switzerland-based Novartis AG, a global pharmaceutical company. Dr. Perry has previously served as the Global Head of R&D at Baxter Healthcare, President and CEO of Cell & Gene Therapy at Novartis affiliates Systemix Inc. and Genetic Therapy, Inc., VP Regulatory Affairs at Sandoz Pharmaceuticals Corp. and Syntex Corp, Director of Regulatory Affairs at Schering-Plough Corporation, and Chairman, CEO or CMO at several early stage biotech companies. He also previously served as a Venture Partner with Bay City Capital, LLC, based in San Francisco, California. Dr. Perry holds a Doctor of Veterinary Medicine, a PhD in Biomedical Pharmacology, and a B.Sc. in Physics from the University of Guelph, Ontario, Canada. He is a graduate of the International Advanced Management Program at Harvard Business School.

Qualifications
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 and directorships in several publicly held biotech companies.

Christopher Anzalone, PhD
Chief Executive Officer, President & Director

Age: 50
Director since: 2007

Experience & Expertise
Dr. Anzalone has been President, Chief Executive Officer and Director of the Company since December 1, 2007 and has led the Company’s business and technical development since then. Prior to joining Arrowhead, 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 PhD. in Biology from UCLA and a B.A. in Government from Lawrence University.

Qualifications
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 business development, biotechnology, drug development, company building and venture capital.
Marianne De Backer, PhD, MBA  
Independent Director  

**Age:** 51  
**Director since:** 2019  
**Serves on:**  
- Compensation Committee  
- Nominating Committee  
- Audit Committee

**Experience & Expertise**  
Dr. De Backer brings over 25 years of experience in healthcare, biotechnology, innovation, strategy, business and corporate development. She has served as member of the Executive Committee, Executive Vice President and Head of Strategy, Business Development and Licensing of Bayer AG (BAYRY) Pharmaceuticals division since 2019. She is also on the board of directors of Gladstone Foundation and Ecohealth Alliance, and on the advisory board of BIOCOM Bay Area and Stanford-Bayer for Digital. From 1991 through 2019 she was at Johnson & Johnson where she most recently held global Business and Corporate Development roles including the position of Vice President of M&A Operations and Divestitures globally for the Pharmaceuticals Group and head of Infectious Diseases & Vaccines Business Development. Prior to that she led a commercial business unit in Europe as well as drug discovery research in both Europe and the United States. Dr. De Backer holds an MBA from Erasmus University Rotterdam, a Master’s degree in Molecular Biology and Biotechnology from Vrije Universiteit Brussels, and a Master’s degree in Engineering and a PhD in Biotechnology from Ghent University.

**Qualifications:**  
Dr. De Backer’s qualifications to serve on the Board include her extensive background in the biopharmaceutical industry, her scientific, drug development, and pharmaceutical transaction experience, as well as her executive leadership experience.

Mauro Ferrari, PhD  
Independent Director  

**Age:** 60  
**Director since:** 2010  
**Serves on:**  
- Compensation Committee  
- Nominating Committee  
- Science Committee (Chair)

**Experience & Expertise**  
Dr. Ferrari currently serves as Affiliate professor of Pharmaceutics at the University of Washington in Seattle, WA. He also currently serves as President of the European Research Council. From 2010 to 2019, Dr. Ferrari was 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. Dr. Ferrari is an internationally recognized expert in nanomedicine and biomedical nanotechnology and Fellow, US National Academy of Inventors. 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 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.

**Qualifications:**  
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.
William Waddill  
Independent Director  

Age: 62  
Director since: 2018  
Serves on:  
• Audit Committee (Chair)  
• Compensation Committee  
• Nominating Committee  

Other Public Company Boards:  
• Protagonist Therapeutics, Inc.  

Experience & Expertise  
Mr. Waddill began his career 30 years ago in commercial banking and public accounting and has been in the biotechnology industry for over 25 years. Since 2016, he has served on the board of Protagonist Therapeutics, a Newark, CA clinical stage biopharmaceutical company and most recently was Senior Vice President and CFO of Calithera Bioscience, a clinical stage pharmaceutical company from 2014 to 2016. Prior to Calithera, Mr. Waddill was Senior Vice President and CFO at OncoMed Pharmaceuticals from 2007 to 2014. Mr. Waddill served as the Senior Vice President and CFO of Ilypsa, Inc., a biotechnology company that was acquired in 2007 by Amgen, Inc. Before joining Ilypsa, he served as the founder and principal at Square One Finance, a financial consulting business, and Mr. Waddill served as Senior Director of Finance and Administration at Exelixis, Inc., a biotechnology company. Mr. Waddill received a BS in accounting from the University of Illinois, Chicago, and certification as a public accountant (inactive) after working at PriceWaterhouseCoopers and Deloitte in Boston.

Qualifications  
Mr. Waddill’s qualifications to serve on the Board include his extensive background in the biopharma industry, his financial expertise, executive leadership roles and experience as a director of other public companies.
Board Composition and Nominating Process

The Nominating Committee of the Board annually considers the size, composition and needs of the Board and, as appropriate, recommends the nominees for directors to the Board for approval. The Nominating Committee considers and evaluates suggestions from many sources regarding possible candidates for directors. Below are general criteria for the evaluation of current and proposed directors:

- The highest ethical character and shared values with our Code of Corporate Conduct
- Reputation, both personal and professional, consistent with our image and reputation
- Accomplishment within candidate’s field, with superior credentials and recognition
- Relevant expertise and experience and the ability to offer advice and guidance to the Chief Executive Officer (CEO*), based on that expertise and experience
- Independence, without the appearance of any conflict in serving as a director, and independence of any particular constituency with the ability to represent all stockholders
- Ability to exercise sound business judgment; and
- Diversity, reflecting differences in skills, regional and industry experience, backgrounds, ages, and other unique characteristics, such as race, gender and ethnicity

Additionally, the Nominating Committee considers the mix of skills and experience among current and prospective directors with a goal of assembling a Board with complementary skills for the benefit of the Company. Listed below are the relevant skills and attributes present in each current Board member.

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<thead>
<tr>
<th>Expertise</th>
<th>Given</th>
<th>Perry</th>
<th>Anzalone</th>
<th>De Backer</th>
<th>Ferrari</th>
<th>Waddill</th>
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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 CEO are separated, which allows our CEO to focus on strategic planning and execution as well as our day-to-day business operations, 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 CEO 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 the Company’s employees, officers and directors are subject to the Company’s Code of Business Conduct and Ethics Policy, which is available on the Company’s website at www.arrowheadpharma.com. 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 Nominating 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.

Stockholder Communications with Directors
Stockholders who wish to communicate with the Board or any individual director can write to: Patrick O’Brien, Corporate Secretary, Arrowhead Pharmaceuticals, Inc., 177 E. Colorado, Suite 700, Pasadena, CA 91105. 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; 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 four meetings during the fiscal year ended September 30, 2019. The Board has three standing committees: Audit Committee, Compensation Committee, and Nominating 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 (“SEC”) and to review any related-party transactions. The Audit Committee met four times during fiscal 2019. The current members of the Audit Committee are William Waddill, Chairman, Marianne De Backer, and Michael S. Perry. The Board has determined that all members of the Audit Committee who served during 2019 were 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. Waddill is an “audit committee financial expert” in accordance with the applicable regulations, based on his experience as noted above. The Audit Committee Charter is available on the Company’s website at www.arrowheadpharma.com.

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, equity awards 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 and the compensation of the Chief Executive Officer at least annually; the Chief Executive Officer is not present during discussions or deliberations regarding his compensation. In fiscal 2019, the Compensation Committee engaged Compensia, Inc., a compensation consulting firm, to provide advice and guidance with regard to compensation for our named executive officers. The decision to engage the consultant was not made or recommended by management and the Compensation Committee has the sole discretion to engage or change the consultant. The Compensation Committee met
three times during fiscal 2019. The current members of the Compensation Committee are Michael S. Perry, Chairman, Mauro Ferrari, William Waddill and Marianne De Backer. The Board has determined that all members of the Compensation Committee are independent directors under the listing rules of Nasdaq Marketplace Rules. The Compensation Committee’s charter is available on the Company’s website at www.arrowheadpharma.com. The Compensation Committee has not delegated any of its responsibilities or authorities granted under its charter.

The Nominating 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 Nominating Committee met once during fiscal 2019. The current members of the Nominating Committee are Michael S. Perry, Chairman, Marianne De Backer, Mauro Ferrari and William Waddill. The Nominating Committee’s charter is available on the Company’s website at www.arrowheadpharma.com. The Nominating 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 Nominating Committee recommends to the Board whether those individuals should be re-nominated.

On at least an annual basis, the Nominating 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 Nominating 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 Nominating Committee (or its chairman) screens the available information about the potential candidate(s). Based on the results of the initial screening, interviews with candidates are scheduled with Nominating Committee members, other members of the Board and senior members of management. Upon completion of these interviews and other due diligence, the Nominating Committee may nominate a candidate to the Board for election.

Candidates for independent Board member positions are identified through recommendations from directors or others associated with the Company, as well as through a formal search process managed by an executive recruiter. Arrowhead stockholders may also recommend candidates by sending the candidate’s name and resume to the Nominating 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 Nominating Committee has no predefined minimum criteria for selecting Board nominees, although it believes that all directors should share qualities such as governance and 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 Nominating 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 Nominating Committee reserves the right to modify its stated search criteria for exceptional candidates.

As part of the Nominating Committee’s goal of building a diverse board, the Nominating Committee is committed to actively seeking out highly qualified diverse candidates (including women and minority candidates) to include in the pool from which Board nominees are chosen. The Nominating Committee assesses its effectiveness in achieving this goal as part of its annual assessment of the composition of the Board.

In 2018, the Board established an ad hoc Science Committee to review and advise on science topics of interest to the Company. The current members of the committee are Mauro Ferrari, Chairman, Douglass Given and Michael S. Perry.

No incumbent director attended fewer than 75% of the aggregate of (i) the total number of meetings of the Board held during fiscal 2019, and (ii) the total number of meetings held by all committees of the Board during fiscal 2019 on which such person served.

In addition, all of the directors attended the virtual 2019 Annual Meeting of Stockholders. It is the Company’s policy to encourage, but not require, that all directors attend our annual stockholder meetings.
Directors who are also employees of the Company receive no separate compensation from the Company for their service as members of the Board. For 2020, the Company maintained the structure of director compensation that was adopted in 2019 to provide a base retainer for each director with higher base retainers for service by the Chairman of the Board and the Lead Independent Director. The Company provides additional retainers for committee service with higher retainers for committee leadership. The Compensation Committee believes the structure aligns compensation according to specific leadership and committee service contributions by each director. Year over year, total director compensation increased modestly in 2020 to reflect the increased demands and complexity as the Company adds to and advances our pipeline.

The below table sets forth compensation levels for each of our outside directors for calendar 2019 and 2020.

<table>
<thead>
<tr>
<th>Name &amp; Position</th>
<th>2020 Annual Fee (1) (effective 1/1/20)</th>
<th>2020 Stock Award (2)</th>
<th>2020 Grant Date Value</th>
<th>2019 Annual Fee (3) (effective 1/1/19)</th>
<th>2019 Stock Award (2)</th>
<th>2019 Grant Date Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Douglass Given</td>
<td>$85,000</td>
<td>8,000</td>
<td>$507,440</td>
<td>$80,000</td>
<td>36,000</td>
<td>$447,120</td>
</tr>
<tr>
<td>Chairman</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michael S. Perry</td>
<td>$80,000</td>
<td>8,000</td>
<td>$507,440</td>
<td>$80,000</td>
<td>36,000</td>
<td>$447,120</td>
</tr>
<tr>
<td>Lead Director</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mauro Ferrari</td>
<td>$120,000</td>
<td>7,500</td>
<td>$475,725</td>
<td>$135,556</td>
<td>8,429</td>
<td>$194,738</td>
</tr>
<tr>
<td>Director (4)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>William Waddill</td>
<td>$75,000</td>
<td>7,500</td>
<td>$475,725</td>
<td>$70,000</td>
<td>30,000</td>
<td>$372,600</td>
</tr>
<tr>
<td>Director</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marianne De Backer</td>
<td>$70,000</td>
<td>7,500</td>
<td>$475,725</td>
<td>0</td>
<td>5,000</td>
<td>$336,600</td>
</tr>
<tr>
<td>Director (5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) The annual fee for 2020 service is summarized as follows:
   a. Dr. Given will receive $80,000 for his service as the Chairman of the Board and $5,000 for his service on the Science Committee.
   b. Dr. Perry will receive $50,000 for his service as the Lead Director, $15,000 for his service as the Compensation Committee Chairman, $5,000 for his service as the Nominating Committee Chairman, and a total of $10,000 for his service on the Audit and Science Committees.
   c. Dr. Ferrari will receive $45,000 for his service as a Company director, $15,000 for his service as the Science Committee Chairman, a total of $10,000 for his service on the Nominating and Compensation Committees, and $50,000 for his service on a special board project.
   d. Mr. Waddill will receive $45,000 for his service as a Company director, $20,000 for his service as the Audit Committee Chairman, and a total of $10,000 for his service on the Nominating and Compensation Committees.
   e. Dr. De Backer will receive $45,000 for her service as a Company director, a total of $15,000 for her service on the Audit, Compensation and Nominating Committees, and a $10,000 sign on bonus.

(2) For services in 2020, each non-employee director received a grant of 7,500 restricted stock units ("RSUs"). Additional grants of 500 RSUs were awarded for the service of the Chairman and the Lead Director. RSU grants to non-employee directors vest on the one-year anniversary of the date of grant. In 2019, the grant for each director was 30,000 RSUs with additional grants of 6,000 RSUs for the service of the Chairman and the Lead Director.

(3) The annual fee for 2019 service is summarized as follows:
   a. Dr. Given received $75,000 for his service as the Chairman of the Board, and $5,000 for his service on the Board’s Science Committee.
   b. Dr. Perry received $50,000 for his service as the Lead Director, $15,000 for his service as the Compensation Committee Chairman and a total of $15,000 for his service on the Nominating, Science and Audit Committees.
   c. Dr. Ferrari received $40,000 for his service as a Company director, $10,000 for his service as the Science Committee Chairman, $15,000 for his service on the Nominating, Audit and Compensation Committees and $70,556 for his service on a special board project that was initiated in April 2019.
   d. Mr. Waddill received $40,000 for his service as a Company director, $20,000 for his service as the Audit Committee Chairman, and a total of $10,000 for his service on the Nominating and Compensation Committees.

(4) In 2019, Dr. Ferrari’s stock awards were lower than the other directors because his compensation had historically been limited based on the policies of his employer.

(5) Dr. De Backer joined the board in December 2019, and as such, she did not receive an annual cash fee in 2019. Dr. De Backer was awarded a grant of 5,000 RSUs in December 2019 as a sign-on award.
The following table sets forth the total compensation paid to our non-employee directors in fiscal 2019. Dr. Anzalone’s compensation is set forth in the discussion of Executive Compensation and in the Summary Compensation Table.

<table>
<thead>
<tr>
<th>Name</th>
<th>Fee Earned or Paid in Cash ($)</th>
<th>Stock Awards ($)</th>
<th>Total ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Douglass Given</td>
<td>$78,438</td>
<td>$447,120</td>
<td>$525,558</td>
</tr>
<tr>
<td>Michael S. Perry</td>
<td>$75,813</td>
<td>$447,120</td>
<td>$522,933</td>
</tr>
<tr>
<td>Mauro Ferrari (3)</td>
<td>$107,431</td>
<td>$194,738</td>
<td>$302,169</td>
</tr>
<tr>
<td>William Waddill</td>
<td>$64,375</td>
<td>$372,600</td>
<td>$436,975</td>
</tr>
<tr>
<td>Marianne De Backer (4)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

(1) This column represents the total grant date fair value, computed in accordance with ASC 718, of restricted stock units granted during fiscal year 2019 for each director.

(2) The RSUs granted to non-employee directors vest one year from the date of grant. RSUs granted to Dr. Ferrari vested as discussed in footnote 3 below.

(3) Dr. Ferrari’s fees earned in cash include his annual fees of $61,875 and cash compensation relating to a special board project of $45,556. Dr. Ferrari’s stock awards include an award of 3,429 shares of common stock on 1/1/19, valued at $44,988. This award vested immediately because Dr. Ferrari’s compensation had historically been limited based on the policies of his employer. Additionally, Dr. Ferrari received an award of 5,000 RSUs in September 2019, valued at $149,750, that vested on January 1, 2020. This award was granted to Dr. Ferrari as additional compensation relating to the special board project previously discussed.

(4) Dr. De Backer joined the board in December 2019, and as such, fiscal year 2019 fees and stock awards were not applicable.

As of the last day of fiscal year 2019, the directors held the following outstanding stock option and restricted stock unit grants in the aggregate: Douglass Given — 36,000 restricted stock units; Michael S. Perry — 77,000 stock options and 36,000 restricted stock units; Mauro Ferrari — 20,000 stock options and 5,000 restricted stock units; and William Waddill — 30,000 restricted stock units.

**Vote Required; Recommendation of the Board**

The six nominees receiving the greatest numbers of votes at the meeting, assuming a quorum is present, will be elected to the six 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.
The compensation paid to our Named Executive Officers is described below in the Compensation Discussion and Analysis of this proxy statement for the year ended September 30, 2019. The Board is asking stockholders to cast a non-binding, advisory vote FOR the following resolution:

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

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

The Board has adopted a policy providing for annual advisory votes to approve executive compensation. Unless the Board modifies its policy on the frequency of holding advisory votes to approve executive compensation, the next such advisory vote will occur in 2021.

**Vote Required; Recommendation of the Board**

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

**THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” PROPOSAL TWO.**
Proposal Three — Amendment to Bylaws to Elect Directors by a Majority Vote

In Proposal 3, we are asking stockholders to approve an amendment and restatement of our current Bylaws to implement a majority voting standard for the election of directors in uncontested elections. Our current Bylaws provide for a plurality voting standing, pursuant to which the director nominees who receive a plurality of votes in an election for directors are elected whether or not they receive a majority of the votes cast. In response to suggestions by our stockholders in fiscal year 2019, the Board has determined it is in the best interests of the Company and stockholders and has adopted, subject to stockholder approval, an amendment and restatement of our Bylaws to provide that in an uncontested election of directors, each director must receive more “For” votes than “Withheld” votes to be elected. In any contested elections of directors, where there are two or more nominees for a board position, the election will continue to be decided by plurality vote.

Under existing Delaware law, a director not receiving a majority of votes in an uncontested election would continue to serve as a director as a “holdover director” until the director resigns or is replaced. The amendment and restatement also provides for a director resignation policy under which a director who is not reelected by a majority of the votes cast in an uncontested election will be required to tender his or her resignation to the Board, and the Board will then decide whether to accept or reject the resignation, or whether other action is required. Under the policy, a director who is proposed for reelection and who does not receive a majority of the votes cast will not automatically remain on the Board as a holdover director. Rather, his or her continued service as a director will be subject to review by the Board, taking into account the stockholders’ vote and any other relevant considerations.

The foregoing is a summary of the proposed amendment of our Bylaws, which is qualified in its entirety by reference to the full text of the Amended and Restated Bylaws as set forth in Exhibit A (with additions shown as underlined and deletions shown as struck through).

The Board is asking stockholders to cast a vote FOR the following resolution:

“RESOLVED, that the stockholders of the Company approve the Amended and Restated Bylaws in a form substantially as provided in Exhibit A to this Proxy Statement.”

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” PROPOSAL 3
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. Fiscal years are denoted as fiscal years, all other year references refer to calendar years.

This Compensation Discussion and Analysis describes the compensation program for our Named Executive Officers. During fiscal year 2019, these individuals were:

- Christopher Anzalone, our President and CEO;
- Bruce D. Given, our Chief Operating Officer (our "COO");
- Kenneth Myszkowski, our Chief Financial Officer (our "CFO");
- Patrick O’Brien, our General Counsel (our "GC"); and
- Zhen Li, our former Senior Vice President, Chemistry & Non-Clinical Development (our "SVP").

This Compensation Discussion and Analysis describes the material elements of our executive compensation program during 2019. It also provides an overview of our executive compensation philosophy and objectives and summarizes our executive compensation policies and practices. Finally, it analyzes how and why the Compensation Committee arrived at the specific compensation decisions for our executive officers, including our Named Executive Officers for 2019 including the key factors that the Compensation Committee considered in determining their compensation.

Our Company

We develop medicines that treat intractable diseases by silencing the genes that cause them. Using a broad portfolio of RNA chemistries and efficient modes of delivery, our therapies trigger the RNA interference mechanism to induce rapid, deep and durable knockdown of target genes. RNA interference, or RNAi, is a mechanism present in living cells that inhibits the expression of a specific gene, thereby affecting the production of a specific protein. Arrowhead’s RNAi-based therapeutics leverage this natural pathway of gene silencing.

Arrowhead is focused on developing innovative drugs for diseases with a genetic basis, typically characterized by the overproduction of one or more proteins. The depth and versatility of our RNAi technologies enable us to potentially address conditions in virtually any therapeutic area and pursue disease targets that are not otherwise addressable by small molecules and biologics.

2019 Business Highlights

- Began dosing in a Phase 1 single and multiple dose study of ARO-ANG3, a subcutaneously administered RNAi therapeutic targeting angiopoietin like protein 3, being developed as a potential treatment for patients with dyslipidemias and metabolic diseases;
- Began dosing in a Phase 1 single and multiple dose study of ARO-APOC3, a subcutaneously administered RNAi therapeutic targeting apolipoprotein C-III, being developed as a potential treatment for patients with hypertriglyceridemia;
- Expanded the AROHBV1001 Phase 1/2 study to include a new triple combination cohort (cohort 12) that includes NJ-3989 and additional undisclosed agents selected by Arrowhead’s partner, Janssen Pharmaceuticals, Inc.;
- Began dosing patients in an adaptive design Phase 2/3 trial, called SEQUOIA, with the potential to serve as a pivotal registrational study of ARO-AAT, Arrowhead’s second generation subcutaneously administered RNAi therapeutic being developed as a treatment for a rare genetic liver disease associated with alpha-1 antitrypsin deficiency;
- Presented new clinical data on our two cardiometabolic candidates, ARO-APOC3 and ARO-ANG3, in two late-breaking oral presentations at the American Heart Association Scientific Sessions 2019;
• In April 2019, the Company earned a $25 million milestone payment from Janssen following the initiation of dosing in the triple combination cohort (cohort 12) in the Company’s ongoing Phase 1 / 2 study of JNJ-3989 (ARO-HBV). In August 2019, the Company earned an additional $25 million milestone payment from Janssen following the initiation of dosing in its phase 2b study of JNJ-3989 (ARO-HBV);

• In December 2019, the Company closed an underwritten public offering and received gross proceeds of $266.8 million, before deducting underwriting discounts, commissions and other offering expenses;

• Ended calendar 2019 with $528 million in cash and investments; and

• Achieved 47% total stockholder return ("TSR") in fiscal 2019.

**Business Development**

**Janssen Pharmaceuticals, Inc.**

In October 2018, we entered into a license agreement with Janssen Pharmaceuticals, Inc., part of the Janssen Pharmaceutical Companies of Johnson & Johnson, to develop and commercialize ARO-HBV. In addition, we entered into a research collaboration and option agreement with Janssen to potentially collaborate for up to three additional RNAi therapeutics against new targets to be selected by Janssen.

Under the terms of the license agreement, we received $175 million as an upfront payment. Separately, Johnson & Johnson Innovation — JJDC, Inc. (JJDC) made a $75 million equity investment in Arrowhead at a price of $23.00 per share of Arrowhead common stock. As discussed above, in April 2019, the Company earned a $25 million milestone payment from Janssen following the initiation of dosing in the triple combination cohort (cohort 12) in the Company’s ongoing Phase 1 / 2 study of JNJ-3989 (ARO-HBV) and an additional $25 million milestone payment from Janssen following the initiation of dosing in its phase 2b study of JNJ-3989 (ARO-HBV).

In addition, Arrowhead is eligible to receive up to approximately $1.6 billion in milestone payments under the license agreement. Arrowhead is also eligible to receive approximately $1.9 billion in option and milestone payments under the collaboration and option agreement related to up to three additional targets. Arrowhead is further eligible to receive tiered royalties up to mid teens under the license agreement and up to low teens under the collaboration and option agreement on product sales.

In fiscal 2019, Janssen selected its first of potentially three RNAi therapeutics under our 2018 collaboration agreement, ARO-JNJ1, against an undisclosed target.

**Platform**

In 2019, we continued to develop and deploy our Targeted RNAi Molecule platform, or TRiM™, to identify and develop new therapeutics, including ARO-HIF2, ARO-HSD, and ARO-ENaC. TRiM™ utilizes ligand-mediated delivery and is designed to enable tissue-specific targeting, while being structurally simple. The TRiM™ platform is designed to offer several potential competitive advantages including:

• A more sophisticated RNAi trigger selection and screening process that identifies potent sequences rapidly in locations that RNAi competitors may miss;

• Multiple routes of administration including subcutaneous, intravenous, and inhaled;

• Faster time to clinical candidates;

• Optimal pharmacologic activity and long duration-of-effect;

• Potentially wide safety margins;

• Simplified manufacturing at reduced cost;

• And, the promise of taking RNAi to tissues beyond the liver.

**Pipeline**

We are focused on developing innovative drugs for diseases with a genetic basis, typically characterized by the overproduction of one or more proteins. The depth and versatility of our RNAi technologies enable us to address conditions in virtually any therapeutic area and pursue disease targets that are not otherwise addressable by small molecules and biologics.

*The timing of our planned and already filed clinical trial applications (CTA) discussed below are based on calendar years, not fiscal years.*
Clinical Stage Candidates

ARO-AAT is a clinical-stage RNAi therapeutic candidate for the treatment of liver disease associated with alpha-1 antitrypsin deficiency. ARO-AAT is designed to knock down the Alpha-1 antitrypsin (AAT) gene transcript and reduce the hepatic production of the mutant AAT protein. ARO-AAT is a next-generation subcutaneously administered compound that follows a previous generation AAT compound ARC-AAT.

- **2017**: ARO-AAT nominated; CTA filed
- **2018**: Clinical trial commenced. Initial results from AROAAT1001 were presented in November 2018 at The Liver Meeting®, the Annual Meeting of the American Association for the Study of Liver Disease (AASLD). Key data include:
  - Three monthly doses of 300 mg ARO-AAT led to reductions in serum alpha-1 antitrypsin to below the level of quantitation in 100% of subjects.
  - Reductions were sustained for greater than 14 weeks indicating that quarterly or less frequent dosing appears feasible.
  - Single and multiple doses of ARO-AAT appeared to be well-tolerated at all doses tested.
- **2019**: One phase 2/3 and one Phase 2 trial were initiated (enrolling concurrently):
  - SEQUOIA, a potentially pivotal multi-center, multi-dose, placebo-controlled, adaptive Phase 2/3 study to evaluate the safety, efficacy and tolerability of ARO-AAT, administered subcutaneously to patients with alpha-1 antitrypsin deficiency
  - AROAAT2002, a pilot open-label, multi-dose, Phase 2 study to assess changes in a novel histological activity scale in response to ARO-AAT over time in patients with alpha-1 antitrypsin deficiency associated liver disease.

ARO-ANG3 is designed to reduce production of angiopoietin-like protein 3 (ANGPTL3), a liver synthesized inhibitor of lipoprotein lipase and endothelial lipase. ANGPTL3 inhibition has been shown to lower serum LDL, serum and liver triglyceride and has genetic validation as a novel target for cardiovascular disease.

- **2017**: Target identified
- **2018**: Filed for regulatory clearance to begin a Phase 1 study.
- **2019**: Clinical trial commenced. Initial results from AROANG1001 presented at the 2019 Global Summit on Cardiology and Heart Diseases and the November 2019 American Heart Association meeting. Key data include:
  - Dose dependent reductions in serum ANGPTL3 (mean maximum reduction ranging from 55% in the 35 mg cohort to 83% in the 300 mg cohort), which were maintained through the end of the study.
  - Dose dependent reduction in triglycerides and VLDL-C (mean maximum triglyceride reduction ranging from 31% in the 35 mg cohort and 66% in the 200 mg cohort and mean maximum VLDL-C ranging from 30% in the 35 mg cohort to 65% in the 200 mg cohort). Reductions in triglycerides and VLDL-C in the 200 mg and 300 mg cohorts were maintained through end of study.

ARO-APOC3 is designed to reduce production of Apolipoprotein C-III (apoC-III), a component of triglyceride rich lipoproteins (TRLs) including VLDL and chylomicrons and a key regulator of triglyceride metabolism. The company believes that knocking down the hepatic production of apoC-III may result in reduced VLDL synthesis and assembly, enhanced breakdown of TRLs, and better clearance of VLDL and chylomicron remnants.

- **2017**: Target identified
- **2019**: Clinical trial commenced. Initial results from AROAPOC31001 presented at the 2019 Global Summit on Cardiology and Heart Diseases and the November 2019 American Heart Association meeting. Key data include:
  - Dose dependent reductions in serum APOC3 (mean maximum reduction ranging from 72% in the 10 mg cohort to 94% in the 100 mg cohort), which were maintained through the end of the study.
  - Dose dependent reduction in triglycerides and VLDL-C (mean maximum triglyceride reduction ranging from 53% in the 10 mg cohort and 64% in the 100 mg cohort and mean maximum VLDL-C ranging from 53% in the 10 mg cohort to 68% in the 50 mg cohort). These reductions were maintained through the end of study.

ARO-HIF2 is being developed as a treatment for patients with clear cell renal cell carcinoma (ccRCC). ccRCC is one of the most common forms of kidney cancer. Most patients with ccRCC have a mutation in the Von Hippel-Lindau gene, rendering them unable to degrade HIF-2a, which leads to accumulation during tumor hypoxia and promotes tumor growth.

- **2019**: Investigational New Drug application (IND) filed.
ARO-HSD is being developed as a treatment for patients with alcohol related and nonalcohol related liver diseases such as nonalcoholic steatohepatitis (NASH). ARO-HSD is designed to reduce the production of HSD17B13, a member of the hydroxysteroid dehydrogenase family involved in the metabolism of hormones, fatty acids, and bile acids. Published genetic data indicate a loss of function mutation in HSD17B13 provides strong protection against alcoholic hepatitis, cirrhosis, and NASH. This genetic validation gives us confidence about the target gene.

2019: Clinical trial application filed.

Partnered Programs

JNJ-3989 (formerly ARO-HBV) is an RNAi therapeutic candidate for the treatment of chronic hepatitis B infection with the goal of achieving a functional cure. JNJ-3989 (ARO-HBV) is a next-generation subcutaneously administered compound that follows previous generation HBV compounds ARC-520 and ARC-521.

2017: JNJ-3989 (ARO-HBV) nominated; CTA filed.

2018: Clinical trial commenced. Clinical data presented at the World Gastroenterologists Summit and at the AASLD Liver Meeting® 2018 demonstrating:

- Mean HBsAg reduction of -1.9 Log10 (-98.7%) with a range of -1.3 Log10 (-95.0%) to -3.8 Log10 (-99.98%).
- JNJ-3989 (ARO-HBV) appeared to be well-tolerated at monthly doses up to 400 mg.

2018: Signed a license agreement with Janssen Pharmaceuticals, Inc., part of the Janssen Pharmaceuticals Companies of Johnson & Johnson, for JNJ-3989 (ARO-HBV) and a collaboration agreement for up to three RNAi therapeutic candidates that use our proprietary TRiM™ platform against new targets to be selected by Janssen.

- The total potential deal value is approximately $3.7 billion plus royalties on commercial sales.
- Received $175 million as an upfront payment and received $75 million in the form of an equity investment by Johnson & Johnson Innovation — JJDC, Inc., at a premium price of $23.00 per share of Arrowhead common stock.

2019: Arrowhead initiated dosing in the triple combination cohort (cohort 12) in the Company’s ongoing Phase 1 / 2 study of JNJ-3989 (ARO-HBV) earning a $25 million milestone payment. The Company earned an additional $25 million milestone payment following the initiation of dosing in its phase 2b study of JNJ-3989 (ARO-HBV).

2019: Janssen selected one of its three potential targets under the 2018 collaboration agreement and the Company is developing a drug ARO-JNJ1, under the collaboration.

AMG 890 (formerly ARO-LPA) is designed to reduce production of apolipoprotein A, a key component of lipoprotein(a), which has been genetically linked with increased risk of cardiovascular diseases, independent of cholesterol and LDL levels.

2016: Amgen, Inc. acquired a worldwide, exclusive license to develop and commercialize AMG 890 (ARO-LPA).

2018: Amgen administers the first dose of AMG 890 (ARO-LPA) in a Phase 1 clinical study, which earned Arrowhead a $10 million milestone payment.

ARO-AMG1 was being developed against an undisclosed genetically-validated cardiovascular target under a license and collaboration agreement with Amgen. We completed the Arrowhead Deliverable, as defined in our collaboration agreement with Amgen, during 2018. The option period expired on August 7, 2019, and Amgen advised the Company it did not intend to exercise its option.

Candidates in Development

ARO-ENaC is designed to reduce production of the epithelial sodium channel alpha subunit (ENaC) in the airways of the lung. In cystic fibrosis patients, increased ENaC activity contributes to airway dehydration and reduced mucociliary transport. A CTA is planned for the first half of 2020.

Financial Results

- Revenue — Generated revenue of $168.8 million in fiscal 2019, compared to revenues of $16.1 million in fiscal 2018 and $31.4 million in fiscal 2017;
- Net Income — Recorded net income of $68.0 million in fiscal 2019, compared to net losses of $54.5 million in fiscal 2018 and $34.4 million in fiscal 2017;
Executive Compensation Highlights

Based on our overall operating environment and these results, the Compensation Committee took the following key actions and maintained key policies with respect to the compensation of our Named Executive Officers for 2019:

- **Base Salary** — Approved base salary increases of 4-10% for our current Named Executive Officers, including a 5% increase for our CEO.
- **Annual Incentive Compensation** — Approved annual cash bonuses for 2019 ranging from 130% to 243% of target annual incentive compensation opportunities, including an annual cash bonus for our CEO in the amount of $1,540,000, equal to 226% of his target annual incentive compensation opportunity.
- **Equity Compensation** — Granted our CEO a long-term incentive compensation opportunity in the form of a performance-based restricted stock unit ("PRSU") award with a grant date value of $7,452,000. This CEO PRSU award will vest upon the achievement of three equally weighted, pre-established and rigorous performance milestones. The Compensation Committee also granted our other Named Executive Officers long-term incentive compensation opportunities in the form of time-based restricted stock unit ("RSU") awards that may be settled for shares of our common stock with grant date values ranging from $869,400 to $2,608,200. A minimum three-year vesting is required for time-based equity awards granted to our other executive officers.
- **Clawback Policy** — Maintained a clawback policy allowing the Company to recover compensation from any executive officer should the Board determine that a material misstatement of the Company’s financial statements was due to fraud, negligence, or intentional misconduct by any executive officer of the Company.
- **Ownership Guidelines** — Maintained the achievement of stock ownership guidelines of six times his annual base salary for our CEO and twice their annual base salary for our COO and CFO.
- **“Double Trigger” Feature for Acceleration of Equity Awards** — Maintained the agreements for outstanding equity awards granted to our CEO pursuant to our 2004 Equity Incentive Plan and 2013 Incentive Plan to provide that, upon a change in control of the Company, the vesting of such awards will accelerate only in the event of a subsequent involuntary termination of employment (a “double-trigger” arrangement).

Advisory Vote to Approve Named Executive Officer Compensation

At our 2019 Annual Meeting of Stockholders in March 2019, we conducted an non-binding stockholder advisory vote to approve the compensation of our Named Executive Officers (commonly known as a “Say-on-Pay” vote). Our stockholders approved the Say-on-Pay proposal with approximately 97% of the votes cast in favor of the proposal. Based on the vote and feedback from our stockholders, we attribute the high approval percentage primarily to the following factors:

- Continued our practice of granting 100% performance-based equity awards for our CEO which is preferred by stockholders and unusual in our peer group;
- Maintained our commitment to good corporate governance by continuing the following compensation practices: minimum vesting requirements; compensation recovery (“clawback”) policy, double-trigger acceleration of equity awards for our CEO; and stock ownership guidelines for our CEO, CFO and COO;
- Achievement of aggressive corporate goals in 2018 and 2019; and
- Substantial increases in market capitalization and TSR in 2018 and 2019.

In 2019, we continued our stockholder engagement program, reaching out to our top 20 institutional stockholders beneficially owning over 50% of our outstanding common stock to solicit their views and concerns and reviewed the feedback and policies of ISS. Based on this review, as well as our commitment to good corporate governance, as noted above, the Compensation Committee continued the above mentioned practices for the executive compensation review in 2019.

During our 2019 annual meeting in March 2019, we asked our stockholders to recommend the frequency of future stockholder advisory votes on the compensation of the Company’s named executive officers. Stockholders recommended an annual non-binding vote, and we are following that recommendation.
We value the opinions of our stockholders and will continue to consider the outcome of future Say-on-Pay votes, as well as feedback received throughout the year, when making compensation decisions for our executive officers. The Compensation Committee is committed to being responsive to stockholder feedback regarding our executive compensation program, policies, and practices, including concerns expressed through the Say-on-Pay vote.

Pay-for-Performance Analysis

We believe our executive compensation program is reasonable, competitive, and appropriately balances the goals of attracting, motivating, rewarding, and retaining our executive officers with the goal of aligning their interests with those of our stockholders. To ensure this alignment and to motivate and reward individual initiative and effort, a significant portion of our executive officers’ target annual total direct compensation opportunity is both performance-based and “at-risk.”

We emphasize performance-based compensation that appropriately rewards our executive officers, including our Named Executive Officers, through two separate compensation elements:

- First, we provide the opportunity to participate in our annual incentive compensation plan which provides cash payments if they produce short-term financial, operational, and strategic results that meet or exceed the objectives set forth each year in our annual operating plan.
- In addition, we grant equity awards as long-term incentive compensation. For our CEO in fiscal 2019, this award is to be earned based entirely on the achievement of pre-established corporate performance objectives which are both challenging and designed to drive our financial and operational performance and long-term growth, and, in the case of our other executive officers, are either dependent on the future appreciation in value of our common stock or are subject to the risk of fluctuations in the value of our common stock and, therefore, are “at risk.”

The pay mix for our CEO for each of the last three fiscal years illustrates the ongoing emphasis on our performance-based compensation philosophy.

We believe that, ultimately, the creation of sustainable long-term stockholder value will depend on our ability to successfully bring to market the products we develop or partner with strategic collaborators to bring them to market. Consequently, the Compensation Committee strives to incent our executive officers to create that value through a robust and attractive pipeline of drug candidates. As a result, our executive compensation program is designed to provide incentives that facilitate these efforts. Particularly for our CEO, the Compensation Committee has awarded performance milestone-based equity awards directly linked to goals that promote the development of our pipeline and other related business and market-based objectives. The Compensation Committee closely tracks the progress against these objectives to monitor our success over each product’s development period and evaluates our executive officers primarily on that progress.

To ensure that we remain faithful to our compensation philosophy, the Compensation Committee regularly evaluates the relationship between the reported values of the equity awards granted to our executive officers, the amount of compensation realizable (and, ultimately, realized) from such awards in subsequent years and our total stockholder return over this period.
Executive Compensation Policies and Practices

We endeavor to maintain sound governance standards consistent with our executive compensation policies and practices. The Compensation Committee evaluates our executive compensation program on a regular basis to ensure that it is consistent with our short-term and long-term goals given the dynamic nature of our business and the market in which we compete for executive talent. The following summarizes our executive compensation and related policies and practices:

### WHAT WE DO

- **Maintain an Independent Compensation Committee.** The Compensation Committee consists solely of independent directors.
- **Retain an Independent Compensation Advisor.** The Compensation Committee engaged its own compensation advisor to provide information and analysis with its 2019 compensation review, and other advice on executive compensation independent of management. This consultant performed no consulting or other services for us in 2019.
- **Annual Executive Compensation Review.** The Compensation Committee conducts an annual review and approval of our compensation strategy, including a review and determination of our compensation peer group used for comparative purposes and a review of our compensation-related risk profile to ensure that our compensation programs do not encourage excessive or inappropriate risk-taking and that the level of risk that they do encourage is not reasonably likely to have a material adverse effect on us.
- **Compensation At-Risk.** Our executive compensation program is designed so that a significant portion of compensation is “at risk” based on our performance, as well as short-term cash and long-term equity incentives to align the interests of our executive officers and stockholders.
- **Stock Ownership Policy.** We maintain a stock ownership policy that requires our CEO, COO, and CFO to maintain a minimum ownership level of our common stock.
- **Compensation Recovery (“Clawback”) Policy.** We have established a clawback policy allowing the Company to recover compensation should the Board determine that a material misstatement of the Company’s financial statements was due to fraud, negligence, or intentional misconduct by any executive officer of the Company.
- **Conduct an Annual Stockholder Advisory Vote on Named Executive Officer Compensation.** We conduct an annual stockholder advisory vote on the compensation of our Named Executive Officers.
- **Use a Pay-for-Performance Philosophy.** The majority of our CEO’s compensation is directly linked to corporate performance; we also structure target total direct compensation opportunities with a significant long-term equity component, thereby making a substantial portion of the CEO’s and each additional executive officer’s target total direct compensation dependent upon our stock price and/or total stockholder return.
- **“Double Trigger” Feature for Acceleration of CEO Equity Awards — The outstanding equity awards granted to our CEO pursuant to our 2004 Equity Incentive Plan and 2013 Incentive Plan provide that, upon a change in control of the Company, the vesting of such awards will accelerate only in the event of a subsequent involuntary termination of employment (a “double-trigger” arrangement).**

### WHAT WE DON’T DO

- **No Executive Retirement Plans.** We do not offer pension arrangements or retirement plans or arrangements to our executive officers that are different from or in addition to those offered to our other employees.
- **No Perquisites.** Currently, we do not provide perquisites or other personal benefits to our executive officers.
- **No Special Welfare or Health Benefits.** Our executive officers participate in broad-based Company-sponsored health and welfare benefits programs on the same basis as our other full-time, salaried employees, except for a premium for life insurance for our CEO.
- **No Post-Employment Tax Payment Reimbursement.** We do not provide any tax reimbursement payments (including “gross-ups”) on any severance or change-in-control payments or benefits.
- **No Hedging and Limit on Pledging of Our Equity Securities.** We prohibit our executive officers and the non-employee members of our Board from hedging our equity securities. Executive officers may pledge up to 50% of owned and vested shares with the approval of the Board.
- **No Dividends or Dividend Equivalents Payable on Unvested Equity Awards.** We do not pay dividends or dividend equivalents on unvested RSU awards or PRSU awards.
- **No Stock Option Re-pricing.** Our employee stock plan does not permit options to purchase shares of our common stock to be repriced to a lower exercise or strike price without the approval of our stockholders.
Executive Compensation Philosophy

Our executive compensation philosophy reflects our two fundamental objectives:

- to attract, motivate, and retain a highly skilled team of executives; and
- to align our executive officers’ interests with those of our stockholders by rewarding short-term and long-term performance and aligning compensation to increases in stockholder value.

We believe that the compensation of our executive officers 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 us 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 pre-established 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 short-term and long-term compensation;
- employ outside compensation expertise and market data from industry peers to help assure that our compensation policies and practices are consistent with industry practice and meet our goals for our compensation program;
- consider our cash resources and cost of capital to balance cash and equity compensation; and
- align our executive officers’ incentives with the creation of stockholder value.

Executive Compensation Program Design

Our practice is to combine a mixture of compensation elements that balance achievement of our short-term goals with our longer-term performance. Currently, our executive compensation program consists of three principal elements:

- base salary;
- an annual incentive compensation opportunity; and
- long-term incentive compensation in the form of equity awards.

We believe that cash compensation in the form of base salary and an annual incentive compensation opportunity provides our executive officers with short-term rewards for success in operations, and that long-term incentive compensation in the form of RSU and PRSU awards that may be settled for shares of our common stock, and options to purchase shares of our common stock, align the objectives of our executive officers with those of our stockholders with respect to long-term performance and success.

The Compensation Committee takes into consideration, among other things, our financial and working capital condition when approving performance objectives and making compensation decisions for our executive officers. Since we seek to preserve cash and do not have marketed products, overall target total direct compensation opportunities are weighted more heavily toward long-term incentive compensation in the form of equity awards. Thus, a significant portion of each executive officer’s target total direct compensation is “at risk,” and dependent on the increase in the value of our common stock. The Compensation Committee periodically reassesses the appropriate weighting of cash and equity compensation.

In the case of long-term incentive compensation, typically the Compensation Committee designs these awards to vest, or be earned, over a multi-year period, meaning that long-term value creation, contrasted with short-term gain, presents the best opportunity for our executive officers to benefit from their awards.

We do not maintain a specific policy on the percentage allocation between short-term and long-term incentive compensation elements.
Governance of Executive Compensation Program

Role of the Compensation Committee

The Compensation Committee discharges many of the responsibilities of our Board relating to the compensation of our executive officers, including our Named Executive Officers, and the non-employee members of our Board. The Compensation Committee has overall responsibility for overseeing our compensation and benefits philosophy and policies generally, overseeing and evaluating the compensation plans, policies, and practices applicable to our CEO and our other executive officers, and ensuring that the target total direct compensation opportunities of our executive officers, including our Named Executive Officers, are consistent with our compensation philosophy, policies, and objectives.

The members of the 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). Currently, the members of the Compensation Committee are Michael S. Perry (Chairman), Mauro Ferrari, and William Waddill.

The Compensation Committee reviews our executive compensation program annually on a calendar year basis, generally in December. The Compensation Committee draws on a number of resources to assist in the evaluation of the various components of our executive compensation program including, but not limited to, input from our CEO, the advice of an external compensation consultant (as identified below) retained by the Compensation Committee, 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.

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. The members of the Compensation Committee have extensive experience in executive management, as well as compensation practices and policies.

Compensation-Setting Process

The Compensation Committee develops recommendations for the target total direct compensation opportunities for our executive officers, including our Named Executive Officers. The Compensation Committee does not use a single method or measure in making its compensation decisions, nor does it position compensation levels based upon a specific or target level relative to a peer group or other companies. Nonetheless, the 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.

Generally, the Compensation Committee evaluates the compensation of our executive officers relative to the median of the competitive market. However, as discussed hereafter, various other factors are taken into consideration in determining our executive officers’ compensation and the Compensation Committee does not target compensation at any specific level relative to the competitive market. When reviewing our current executive compensation arrangements and approving each compensation element and the target total direct compensation opportunity for our executive officers, the Compensation Committee considers the following factors:

• Our performance against the financial and operational objectives established by the Compensation Committee and our Board;
• Each individual executive officer’s skills, experience, and qualifications relative to other similarly-situated executives at the companies in our compensation peer group;
• The scope of each executive officer’s role compared to other similarly-situated executives at the companies in our compensation peer group;
• The performance of each individual executive officer, based on a subjective assessment of his or her contributions to our overall performance, ability to lead his or her business unit or function and work as part of a team, all of which reflect our core values;
• The compensation practices of our compensation peer group and the positioning of each executive officer’s compensation in a ranking of peer company compensation levels; and
• The recommendations provided by our CEO with respect to the compensation of our other executive officers.
These factors provide the framework for compensation decision-making and final decisions regarding the compensation opportunity for each executive officer. No single factor is determinative in setting pay levels, nor was the impact of any factor on the determination of pay levels quantifiable.

**Role of Chief Executive Officer**

In discharging its responsibilities, the Compensation Committee works with members of our management, including our CEO. Our management assists the Compensation Committee by providing information on corporate and individual performance, market compensation data, and management’s perspective on compensation matters. The Compensation Committee solicits and reviews our CEO’s recommendations with respect to the compensation levels for individual executive officers other than himself based on the performance evaluation of each executive officer’s manager and his own evaluation of the executive officer’s performance.

The Compensation Committee reviews and discusses these recommendations and proposals with our CEO and considers them as one factor in formulating the recommendations for the compensation for our executive officers, including our other Named Executive Officers. Our CEO recuses himself from all discussions and recommendations regarding his own compensation.

**Role of Compensation Consultant**

The Compensation Committee engages an external compensation consultant to assist it by providing information, analysis, and other advice relating to our executive compensation program and the decisions resulting from its annual executive compensation review. The Compensation Committee has the final authority to engage and terminate the engagement of any compensation consultant that it retains.

For the period from October 2018 through present, the Compensation Committee engaged Compensia, Inc. (“Compensia”), a national compensation consulting firm, as its external compensation consultant. Compensia assisted the Compensation Committee in its review of executive and non-employee director compensation practices for 2019, including the competitiveness of compensation levels, executive compensation design, comparisons with our industry peers, and other technical considerations, such as:

- Review and update of our compensation peer group;
- Review and analysis of the compensation arrangements for our executive officers, including our Named Executive Officers;
- Review and analysis of the compensation arrangements for the non-employee members of our Board;
- Review and update of the Compensation Discussion and Analysis section of our proxy statement for our 2020 Annual Meeting of Stockholders; and
- Support on other ad hoc matters.

The terms of Compensia’s engagement include reporting directly to the Compensation Committee and to the Compensation Committee chair.

In 2019, Compensia did not provide any other services to us. The Compensation Committee has evaluated Compensia’s independence pursuant to the listing standards of the Nasdaq and the relevant SEC rules and has determined that no conflict of interest has arisen as a result of the work performed by Compensia.

**Competitive Positioning**

For each of the past six years, the Compensation Committee has directed its external compensation consultant to conduct a comparative study and report on compensation levels and practices relative to industry peers, including a competitive assessment of our executive compensation program as compared to the market data for base salaries, target total cash compensation, long-term incentive compensation, and target total direct compensation. Typically, the findings of this study are presented to the Compensation Committee by the compensation consultant in conjunction with the Compensation Committee’s annual review of our executive compensation program.
Because the biotechnology sector is dynamic, the comparator group used by the Compensation Committee to assess the competitive positioning of the compensation of our executive officers is updated annually to ensure that peer companies continue to meet the established criteria. For purposes of its review of our executive compensation program in fiscal 2019, the Compensation Committee directed Compensia to update its compensation peer group reflecting the competitive market for executive talent based on the following criteria:

- Publicly-held, pre-commercial U.S. biotechnology companies;
- Companies with market capitalizations between 0.5x to 2.0x our market capitalization at the time of the peer selection; and
- Companies with between 50 to 500 employees.

The compensation peer group was selected in such a manner that our 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. The increase in the Company’s market capitalization indicated significant redesign of the peer group for 2019.

For 2019, the compensation peer group consisted of the following companies:

- Acceleron Pharma
- Assembly Biosciences
- Allogene Therapeutics
- Atara Biotherapeutics
- BioCryst Pharmaceuticals
- Blueprint Medicines
- ChemoCentryx
- Dicerna Pharmaceuticals
- Geron
- Global Blood Therapeutics
- Immunomedics
- Mirati Therapeutics
- MyoKardia
- Progenics Pharmaceutical
- RGel Pharmaceuticals
- Sangamo Therapeutics
- Xencor
- Zogenix

The compensation study prepared by Compensia and presented in December 2019 provided an assessment of our compensation practices as compared to industry peers. Compensation levels for our executive officers, in the aggregate, were determined to be within the range of compensation provided to similarly placed executives and consistent with our compensation philosophy.

**Individual Compensation Elements**

In 2019, the principal elements of our executive compensation program were as follows:

- base salary;
- an annual incentive compensation opportunity;
- long-term incentive compensation in the form of equity awards;
- welfare and health benefits; and
- post-employment compensation arrangements.

**Base Salary**

Base salary represents the fixed portion of the compensation of our executive officers, including our Named Executive Officers, and is an important element of compensation intended to attract and retain highly-talented individuals.

The initial base salaries for our executive officers were negotiated on an individual basis at the time of hire. Thereafter, using the competitive market data provided by its compensation consultant, the Compensation Committee reviews and determines adjustments to the base salaries for each of our executive officers, including our Named Executive Officers, as part of its annual executive compensation review. In addition, the base salaries of our executive officers may be adjusted by the Compensation Committee in the event of a promotion or significant change in responsibilities. Generally, the Compensation Committee sets base salaries with reference to the competitive range of the market median of our compensation peer group and applicable executive compensation survey data, as well as its assessment of the factors described in “Governance of Executive Compensation Program — Compensation-Setting Process” above.
The base salaries of our Named Executive Officers for 2018 and 2019 were as follows:

<table>
<thead>
<tr>
<th>Named Executive Officer</th>
<th>2019 Base Salary</th>
<th>2018 Base Salary</th>
<th>Percentage Adjustment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Anzalone</td>
<td>$682,500</td>
<td>$650,000</td>
<td>5%</td>
</tr>
<tr>
<td>President &amp; CEO</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bruce Given</td>
<td>$500,000</td>
<td>$455,000</td>
<td>10%</td>
</tr>
<tr>
<td>Chief Operating Officer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenneth Myszkowski</td>
<td>$430,000</td>
<td>$400,000</td>
<td>8%</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patrick O'Brien</td>
<td>$426,400</td>
<td>$410,000</td>
<td>4%</td>
</tr>
<tr>
<td>General Counsel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zhen Li (1)</td>
<td>$390,000</td>
<td>$300,000</td>
<td>30%</td>
</tr>
<tr>
<td>Senior Vice President Chemistry &amp; Non-Clinical Development</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Dr. Li’s employment with the Company terminated in February 2019.

The actual base salaries paid to our Named Executive Officers in fiscal 2019 are set forth in the “Fiscal 2019 Summary Compensation Table” below.

### Annual Incentive Compensation

We provide our executive officers, including our Named Executive Officers, with the opportunity to earn performance-based annual incentive awards, payable in cash, which are designed to reward them for our overall corporate performance as well as their individual performance. Generally, our executive officers are evaluated each year for eligibility to receive an annual incentive compensation opportunity. Through a collaborative planning process involving our Board and management, corporate performance objectives are established at the beginning of each year and evaluated regularly by our Board for their continued relevance to our status.

### Target Annual Cash Bonus Opportunities

For purposes of the 2019 performance-based incentive awards, each of our Named Executive Officers was assigned a target annual incentive award opportunity based upon a percentage of his or her base salary. The target annual incentive award opportunities for our executive officers, including our Named Executive Officers, were recommended by our CEO (except with respect to his own target annual incentive award opportunity) based on each executive officer’s accountability, scope of responsibilities, and potential impact on our performance, and approved by the Compensation Committee. The determination of target annual incentive award opportunities was based on the factors described in “Governance of Executive Compensation Program — Compensation-Setting Process” above. Based on higher levels of control and accountability for our overall performance, a higher percentage of each executive officer’s total target cash compensation was dependent on his or her performance-based annual incentive awards.

The target annual incentive award opportunities for our Named Executive Officers were as follows:

<table>
<thead>
<tr>
<th>Named Executive Officer</th>
<th>2019 Target Annual Incentive Award Opportunity (as a percentage of base salary)</th>
<th>2018 Target Annual Incentive Award Opportunity (as a percentage of base salary)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Anzalone</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Dr. Given</td>
<td>70%</td>
<td>70%</td>
</tr>
<tr>
<td>Mr. Myszkowski</td>
<td>45%</td>
<td>45%</td>
</tr>
<tr>
<td>Mr. O’Brien</td>
<td>45%</td>
<td>45%</td>
</tr>
<tr>
<td>Dr. Li (1)</td>
<td>40%</td>
<td>40%</td>
</tr>
</tbody>
</table>

(1) Dr. Li’s employment with the Company terminated in February 2019.
Performance Objectives

In determining the amount of the annual incentive award for each of our executive officers, including each of our Named Executive Officers, the Compensation Committee evaluated the corporate performance objectives that had been established at the beginning of the calendar year (as set forth below) as well as other corporate and individual achievements and performance throughout the year. These performance objectives addressed milestones for our lead products, research and development milestones for our drug pipeline and business development objectives. In December 2019, the Compensation Committee determined that we had largely achieved or exceeded our primary business objectives set for calendar 2019, as described below.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Weight</th>
<th>Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corporate Development</strong></td>
<td>22%</td>
<td>Met and Exceeded</td>
</tr>
<tr>
<td>Meet certain goals related to capital formation, market capitalization; board interface with scientific leaders</td>
<td></td>
<td>Ended year with a market capitalization of $6.3 billion.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ended year with $533M cash.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Developed strategic indication and regulatory plans for ARO-APOC3 and ARO-ANG3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Completed a financing in December 2019 that generated gross proceeds of $266.8 million</td>
</tr>
<tr>
<td><strong>New Business Development</strong></td>
<td>15%</td>
<td>Met</td>
</tr>
<tr>
<td>Meet certain goals with regard to new pharma collaborations</td>
<td></td>
<td>Initiated JNJ-1 program under collaboration agreement with Janssen.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Triggered milestone payments under Janssen licensing agreement relating to JNJ-3989 (ARO-HBV).</td>
</tr>
<tr>
<td><strong>Manufacturing</strong></td>
<td>10%</td>
<td>Met</td>
</tr>
<tr>
<td>Meet certain requirements pursuant to GMP manufacturing capabilities</td>
<td></td>
<td>GMP facility construction complete.</td>
</tr>
<tr>
<td><strong>Clinical Development</strong></td>
<td>25%</td>
<td>Met and Exceeded</td>
</tr>
<tr>
<td>Meet certain goals with regard to progress on the Company’s clinical programs</td>
<td></td>
<td>Filed IND for ARO-HIF2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Filed CTA for ARO-HSD (NASH target).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Completed enrollment and presented data for ARO-ANG3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Completed enrollment and presented data for ARO-APOC3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Initiated potentially pivotal study for ARO-AAT</td>
</tr>
<tr>
<td><strong>Pre-Clinical Development</strong></td>
<td>14%</td>
<td>Met, except certain stretch goals</td>
</tr>
<tr>
<td>Meet certain goals for Company’s new capabilities</td>
<td></td>
<td>Good progress on Company’s discovery and new target projects</td>
</tr>
<tr>
<td><strong>Next Generation</strong></td>
<td>14%</td>
<td>Met and exceeded</td>
</tr>
<tr>
<td>Meet certain goals for Company’s new capabilities</td>
<td></td>
<td>Developed muscle- and pulmonary-targeting capability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Advanced other significant new capabilities</td>
</tr>
</tbody>
</table>
Annual Incentive Award Payments

The actual annual incentive award payments earned by our Named Executive Officers ranged from 130% to 243% of their target annual incentive award opportunities. Except for the award for our CEO, these awards were recommended by our CEO and approved by the Compensation Committee based on the overall achievement of the Company’s goals, their contributions to the goals, and the overall performance of each officer during the year. The following table sets forth the target annual incentive award opportunities, the actual award payment as a percentage of each Named Executive Officer’s base salary, and the actual award payment made in cash to each of our Named Executive Officers based on their performance in 2019:

<table>
<thead>
<tr>
<th>Named Executive Officer</th>
<th>Target Annual Incentive Award Opportunity (as a percentage of base salary)</th>
<th>Actual Annual Incentive Award (as a percentage of base salary)</th>
<th>Actual Annual Incentive Award ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Anzalone</td>
<td>100%</td>
<td>226%</td>
<td>$1,540,000</td>
</tr>
<tr>
<td>Dr. Given</td>
<td>70%</td>
<td>170%</td>
<td>$850,000</td>
</tr>
<tr>
<td>Mr. Myszkowski</td>
<td>45%</td>
<td>59%</td>
<td>$251,550</td>
</tr>
<tr>
<td>Mr. O’Brien</td>
<td>45%</td>
<td>59%</td>
<td>$249,444</td>
</tr>
<tr>
<td>Dr. Li (1)</td>
<td>40%</td>
<td>0%</td>
<td>$0</td>
</tr>
</tbody>
</table>

(1) Dr. Li’s employment with the Company terminated in February 2019.

The annual incentive award payments made to our Named Executive Officers for fiscal 2019 are set forth in the “Fiscal 2019 Summary Compensation Table” below.

Long-Term Incentive Compensation

We view long-term incentive compensation in the form of equity awards as a critical element of our executive compensation program. The realizable value of these equity awards over time bears a direct relationship to our stock price, and, therefore, these awards are an incentive for our executive officers, including our Named Executive Officers, to create value for our stockholders. Equity awards also help us retain qualified executive officers in a competitive market.

Long-term incentive compensation opportunities in the form of equity awards are granted to our executive officers by the Compensation Committee. The amount and forms of such equity awards are determined by the Compensation Committee after considering the factors described in “Governance of Executive Compensation Program — Compensation-Setting Process” above.

2019 Long-Term Incentive Awards

Performance-Based RSU Award for Chief Executive Officer

Annual equity awards granted to our executive officers are solely in the form of RSU awards that may be settled for shares of our common stock. In the case of our CEO, the award is entirely performance-based. On January 1, 2019, Dr. Anzalone was granted a performance-based RSU (“PRSU”) of 600,000 shares to be vested in three equal installments on the achievement of the following milestones:

- Achieve market capitalization of $2 billion and hold for 6 six months;
- File a clinical trial application or IND for lung- or muscle-targeted candidate; and
- Maintain 8 TRiM™-enabled candidates in the clinic at the same time. Candidates can either be wholly owned or partnered.

The milestones must be achieved by January 1, 2021 or the grant will expire.
Results from PRSU Awards Previously Granted

The Compensation Committee has certified achievement of the performance milestones and the vesting of the following PRSUs granted to our CEO.

<table>
<thead>
<tr>
<th>Performance Goal</th>
<th>Achievement</th>
<th>No. of Shares Certified as Vested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achieve market capitalization of $2 billion and hold for six months</td>
<td>Certified on 12/6/2019</td>
<td>200,000 shares pursuant to a PRSU award</td>
</tr>
<tr>
<td>Initiate a study that could be pivotal or meet criteria that big pharma would consider to be proof-of-concept</td>
<td>Certified on 12/6/2019</td>
<td>166,666 shares pursuant to a PRSU award</td>
</tr>
<tr>
<td>Execute a business development transaction for a target outside hepatocytes</td>
<td>The compensation committee deemed this performance goal to be met on 12/22/2019 as the intent of the performance goal was substantially met.</td>
<td>166,667 shares pursuant to a PRSU award</td>
</tr>
<tr>
<td>Achieve $1 billion market capitalization and hold for 2 quarters</td>
<td>Achieved on 12/18/2018</td>
<td>180,000 shares pursuant to a PRSU award</td>
</tr>
<tr>
<td>File an IND or equivalent for an extra-hepatic target</td>
<td>The Compensation Committee deemed this completed on 12/11/2018, given that the Company could have filed an IND for an extra-hepatic target, but chose to delay this filing for strategic purposes</td>
<td>180,000 shares pursuant to a PRSU award</td>
</tr>
<tr>
<td>Execute a significant business development transaction by 12/31/2019</td>
<td>Janssen collaboration</td>
<td>163,000 shares pursuant to a PRSU award</td>
</tr>
</tbody>
</table>

Equity Awards for Other Named Executive Officers

The Compensation Committee approved the following aggregate equity awards for our Named Executive Officers for 2019:

<table>
<thead>
<tr>
<th>Named Executive Officer</th>
<th>Restricted Stock Unit Awards (number of shares)</th>
<th>Restricted Stock Unit Grant Date Fair Values ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Given</td>
<td>210,000</td>
<td>$2,608,200</td>
</tr>
<tr>
<td>Mr. Myszkowski</td>
<td>85,000</td>
<td>$1,055,700</td>
</tr>
<tr>
<td>Mr. O’Brien</td>
<td>70,000</td>
<td>$ 869,400</td>
</tr>
<tr>
<td>Dr. Li (1)</td>
<td>75,000</td>
<td>$ 931,500</td>
</tr>
</tbody>
</table>

(1) Dr. Li’s employment with the Company terminated in February 2019.
The awards vest over 4 years in 4 equal installments.

The equity awards granted to our Named Executive Officers in fiscal 2019 are set forth in the “Fiscal 2019 Summary Compensation Table” and the “Fiscal 2019 Grants of Plan-Based Awards Table” below.

Welfare and Health Benefits

Our executive officers, including our Named 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 our other employees, subject to applicable law. In addition, we provide additional life insurance for our CEO for the benefit of his heirs. We also provide vacation and other paid holidays to all our employees, including our 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. Our 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 our Named Executive Officers, are able to contribute certain amounts of their annual compensation, subject to limits prescribed by the Internal Revenue Service. Historically, we have made matching contributions of 100% of the first 3% of base salary and of 50% of the next 2% of base 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” below.

Perquisites and Other Personal Benefits

Currently, we do not view perquisites or other personal benefits as a significant component of our executive compensation program. Accordingly, we do not provide significant perquisites or other personal benefits to our executive officers, including our Named Executive Officers, except as generally made available to our employees, or in situations where we believe it is appropriate to assist an individual in the performance of his or her duties, to make our executive officers more efficient and effective and for recruitment and retention purposes.

In the future, we may provide perquisites or other personal benefits in limited circumstances, such as those described in the preceding paragraph. All future practices with respect to perquisites or other personal benefits will be approved and subject to periodic review by the Compensation Committee.

Employment Arrangements

We have entered into a written employment agreement with our CEO and have written employment offer letters with our other executive officers. In filling each of our executive positions, we recognized the need to develop competitive compensation packages to attract qualified candidates in a dynamic labor market. At the same time, in formulating these compensation packages, we were sensitive to the need to integrate new executive officers into the executive compensation structure that we were seeking to develop, balancing both competitive and internal equity considerations. Each of these arrangements provides for “at will” employment.

For detailed descriptions of the employment arrangements we maintained with our Named Executive Officers for 2019, see “Termination Benefits — Potential Payments Upon Termination or Change in Control” below.

Post-Employment Compensation Arrangements

We have entered into an employment agreement with our CEO, and we also have agreements with our CFO and General Counsel that provide for certain payments and benefits in the event of certain involuntary terminations of employment. We believe that having in place reasonable and competitive post-employment compensation arrangements are essential to attracting and retaining highly-qualified executive officers. These agreements are designed to provide reasonable compensation to executive officers who leave our employ under certain circumstances to facilitate their transition to new employment. Further, in some instances we seek to mitigate any potential employer liability and avoid future disputes or litigation by requiring a departing executive officer to sign a separation and release agreement acceptable to us as a condition to receiving post-employment compensation payments or benefits.

The Compensation Committee does not consider the specific amounts payable under these agreements when establishing annual compensation. We do believe, however, that these arrangements are necessary to offer compensation packages that are competitive.
In addition, our 2013 Incentive Plan provides for the acceleration of vesting of outstanding and unvested equity awards in the event of a change in control of the Company, as defined in the plan, except as otherwise determined by our Board. The Company has amended the agreements for outstanding equity awards granted to our CEO pursuant to our 2004 Equity Incentive Plan and 2013 Incentive Plan to provide that, upon a change in control of the Company, the vesting of such awards will accelerate only in the event of a subsequent involuntary termination of employment (a “double-trigger” arrangement).

For detailed descriptions of the post-employment compensation arrangements we maintained with our Named Executive Officers for 2019, as well as an estimate of the potential payments and benefits payable under these arrangements, see “Termination Benefits — Potential Payments Upon Termination or Change in Control” below.

Other Compensation Policies and Practices

Equity Awards Grant Policy

We do not have any program, plan, or obligation that requires us to grant equity awards on specified dates, although historically we have granted such awards to our existing executive officers and employees at least annually and to newly-hired employees on the commencement of their employment. We do not have any program, plan, or practice to grant options to purchase shares of our common stock 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 grant equity awards to our employees rests with the Compensation Committee, although the Compensation Committee has delegated authority to our CEO to grant equity awards to non-executive employees within prescribed limits set by the Compensation Committee. With respect to our executive officers, except for our CEO, recommendations for equity awards are made by our CEO and reviewed and approved by the Compensation Committee.

Under the terms of our 2013 Incentive Plan, pursuant to which new equity awards are granted, the exercise price of any option to purchase shares of our common stock awarded under the plan must be equal to at least 100% of the fair market value of our common stock (which is determined based on the closing sales price of our common stock on the Nasdaq Global Market) on the date of grant.

Stock Ownership Policy

We maintain a stock ownership policy for our CEO, COO, and CFO to further align their respective interests with the interests of our stockholders, and to further promote our commitment to sound corporate governance. This policy requires our CEO to own a minimum number of shares of our common stock equal to a value of six times his annualized base salary and our COO and CFO to own a minimum number of shares of our common stock equal to a value of twice their annualized base salary. Each of these executive officers has achieved the required ownership.

Compensation Recovery ("Clawback") Policy

In December 2017, our Board adopted a compensation recovery ("clawback") policy as follows:

“If Arrowhead Pharmaceuticals, Inc. (the “Company”) is required to materially restate any of its financial statements, the Board of Directors (the “Board”) shall assess the degree to which any fraud, negligence, or intentional misconduct by any executive officer of the Company was responsible for such restatement. If the Board determines that any executive officer was responsible for causing such restatement, the Board shall, in addition to any other lawful remedies the Board or the Company may take, seek recovery of all or a portion of the incentive compensation awarded to the executive officer for the performance period covered by the restated financial statement, provided that such recovery shall not extend to payments made more than three years prior to the date the financial record was restated. In addition, the Board may, in its absolute discretion, revoke any of the responsible executive officer’s unpaid or unvested incentive compensation outstanding as of the date of the Board’s determination of the executive officer’s responsibility for the financial restatement.”

In addition, our 2013 Incentive Plan provides for the recovery of awards made under the plan in accordance with any applicable compensation recovery or recoupment policy, including as required by law, regulation, or national securities exchange rule.
Policy Prohibiting Hedging and Limiting Pledging

Our Insider Trading Policy prohibits our employees, including our executive officers, and thenon-employee members of our Board from short-term trading, options trading, trading on margin, pledging our common stock as collateral, and all hedging transactions with respect to our securities, except for pledging up to 50% owned and vested stock as collateral for a loan subject to the approval of the Board.

Tax and Accounting Considerations

Deductibility of Executive Compensation

Prior to the US Tax Cuts and Jobs Act enacted in December of 2017 (the US Tax Act), compensation that satisfied conditions set forth under Section 162(m) of the Internal Revenue Code to qualify as “performance-based compensation” was not subject to a $1 million limit on deductibility, and the limit did not apply to compensation paid to the Chief Financial Officer. The US Tax Act eliminates the performance-based compensation exception and applies the limit to the Chief Financial Officer and certain former executive officers. However, it provides a transition rule with respect to remuneration provided under a written contract which was in effect on November 2, 2017 and which was not materially modified after that date. With eliminating the exemption for performance-based compensation, we expect that we will be unable to deduct all compensation in excess of $1 million paid to our Chief Executive Officer, Chief Financial Officer and our other Named Executive Officers covered by the new tax law, other than previously granted awards that comply with the transition rules. We monitor the application of Section 162(m) and the associated Treasury regulations on an ongoing basis and the advisability of qualifying executive compensation for deductibility. Notwithstanding the repeal of the exemption for “performance-based compensation,” the Compensation Committee intends to maintain its commitment to structuring the Company’s executive compensation programs in a manner designed to align pay with performance.

Accounting for Stock-Based Compensation

We follow the Financial Accounting Standard Board’s Accounting Standards Codification Topic 718 (FASB ASC Topic 718) for our stock-based compensation awards. FASB ASC Topic 718 requires us to measure the compensation expense for all share-based payment awards made to our employees and non-employee members of our Board, including options to purchase shares of our common stock and other stock awards, based on the grant date “fair value” of these awards. This calculation is performed for accounting purposes and reported in the executive compensation tables required by the federal securities laws, even though the recipient of the awards may never realize any value from their awards.
Compensation Risk Assessment

In reviewing our various compensation programs, the Compensation Committee considers how our compensation policies and practices may affect our risk profile and whether such policies and practices may encourage undue risk-taking by our employees. More specifically, the Compensation Committee considers the general design philosophy of our policies and practices for our employees whose conduct would be most affected by incentives established pursuant to these compensation policies. In considering these issues, the Compensation Committee concluded that the use of a performance-based annual incentive compensation plan and long-term incentive compensation opportunities in the form of equity awards did not appear to create undue risks for us or encourage excessive risk-taking behavior on the part of our Named Executive Officers.

With respect to the 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 our performance in an effort to increase the amount of his or her annual incentive award. Our performance objectives are reviewed regularly by the Compensation Committee and our Board and are considered to be generally of the nature that promote the steady progression of our development programs and would not encourage or reward excessive risk-taking. In addition, our Board has the ability to intervene in instances where actions by our executive officers vis-à-vis Company performance objective attainment would be considered unduly risky to prevent or penalize such actions.

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
William Waddill
Compensation Committee Interlocks and Insider Participation

During 2019, Dr. Perry, Dr. Ferrari, and Mr. Waddill served on the Compensation Committee. During fiscal year 2019 and through December 2019, there were no compensation committee interlocks between the Company and other entities involving the Company’s executive officers and directors.

Summary Compensation Table

The following table summarizes compensation earned for services rendered during fiscal 2019, 2018, and 2017 by our Chief Executive Officer, our Chief Financial Officer, our Chief Operating Officer, our General Counsel and our Senior Vice President of Chemistry and Non-Clinical Development, collectively our “Named Executive Officers”:

<table>
<thead>
<tr>
<th>Name and Principal Position</th>
<th>Year</th>
<th>Salary ($)</th>
<th>Stock Awards ($)</th>
<th>Non-Equity Incentive Plan Compensation ($)</th>
<th>All Other Compensation ($)</th>
<th>Total ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Anzalone</td>
<td>2019</td>
<td>674,375</td>
<td>— (4)</td>
<td>1,540,000</td>
<td>1,889</td>
<td>2,216,264</td>
</tr>
<tr>
<td>President and Chief</td>
<td>2018</td>
<td>643,012</td>
<td>— (5)</td>
<td>975,000</td>
<td>1,889</td>
<td>1,619,901</td>
</tr>
<tr>
<td>Executive Officer</td>
<td>2017</td>
<td>616,068</td>
<td>537,900(6)</td>
<td>715,357</td>
<td>1,889</td>
<td>1,871,214</td>
</tr>
<tr>
<td>Kenneth Myszkowski</td>
<td>2019</td>
<td>422,500</td>
<td>1,055,700</td>
<td>251,550</td>
<td>11,799</td>
<td>1,741,549</td>
</tr>
<tr>
<td>Chief Financial Officer</td>
<td>2018</td>
<td>384,841</td>
<td>276,000</td>
<td>180,000</td>
<td>12,177</td>
<td>853,018</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>336,099</td>
<td>224,750</td>
<td>152,713</td>
<td>11,809</td>
<td>725,371</td>
</tr>
<tr>
<td>Bruce D. Given</td>
<td>2019</td>
<td>488,750</td>
<td>2,608,200</td>
<td>850,000</td>
<td>11,799</td>
<td>3,958,759</td>
</tr>
<tr>
<td>Chief Operating Officer</td>
<td>2018</td>
<td>450,362</td>
<td>644,000</td>
<td>445,900</td>
<td>11,799</td>
<td>1,552,061</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>432,250</td>
<td>589,000</td>
<td>351,340</td>
<td>11,599</td>
<td>1,384,189</td>
</tr>
<tr>
<td>Patrick O’Brien</td>
<td>2019</td>
<td>422,300</td>
<td>869,400</td>
<td>249,444</td>
<td>11,799</td>
<td>1,552,943</td>
</tr>
<tr>
<td>General Counsel</td>
<td>2018</td>
<td>406,196</td>
<td>220,800</td>
<td>184,500</td>
<td>11,799</td>
<td>823,295</td>
</tr>
<tr>
<td></td>
<td>2017</td>
<td>390,988</td>
<td>224,750</td>
<td>177,653</td>
<td>11,599</td>
<td>804,990</td>
</tr>
<tr>
<td>Zhen Li (7)</td>
<td>2019</td>
<td>150,257</td>
<td>931,500</td>
<td>—</td>
<td>4,236</td>
<td>1,085,993</td>
</tr>
<tr>
<td>Senior Vice President, Chemistry and Non-</td>
<td>2018</td>
<td>287,462</td>
<td>239,200</td>
<td>150,000</td>
<td>9,462</td>
<td>686,124</td>
</tr>
<tr>
<td>Clinical Development</td>
<td>2017</td>
<td>247,448</td>
<td>131,750</td>
<td>120,000</td>
<td>6,798</td>
<td>505,996</td>
</tr>
</tbody>
</table>

(1) This column represents the total grant date fair value, computed in accordance with ASC 718, of restricted stock units granted during fiscal year 2019, 2018 and 2017. The assumptions used to calculate the value of the stock underlying the option and restricted stock unit awards are set forth in Note 5 of the Notes to the Consolidated Financial Statements included with the Company’s Annual Report on Form 10-K.

(2) These bonus amounts represent the amounts earned for performance under the Company’s Annual Bonus Incentive Plan during calendar year 2019, 2018 and 2017 and paid in fiscal year 2020, 2019 and 2018, respectively. The Annual Bonuses are described in more detail in the “Bonus Incentive” section.

(3) Amounts consist of 401(k) matching contribution, as well as life insurance premiums for the benefit of each executive officer.

(4) The amounts reported for Christopher Anzalone in the Stock Awards column reflect the grant date fair value of a January 2019 restricted stock unit award that is subject to vesting upon the achievement of specific performance 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 of $0 based on this evaluation. If we had determined that as of the date of the grant it was probable that 100% of the performance conditions would be achieved, we would have assigned a grant date fair value of $7,452,000 for the restricted stock units. The amounts reported in the Summary Compensation Table for these awards may not represent the amounts that Christopher Anzalone will 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.

(5) The amounts reported for Christopher Anzalone in the Stock Awards column reflect the grant date fair value of a January 2018 restricted stock unit award that is subject to vesting upon the achievement of specific performance 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 of $0 based on this evaluation. If we had determined that as of the date of the grant it was probable that 100% of the performance conditions would be achieved, we would have assigned a grant date fair value of $1,840,000 for the restricted stock units. The amounts reported in the
Summary Compensation Table for these awards may not represent the amounts that Christopher Anzalone will 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) The amounts reported for Christopher Anzalone in the Stock Awards column reflect the grant date fair value of an April 2017 restricted stock unit award that is subject to vesting upon the achievement of specific performance conditions. 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 of $537,900 based on this evaluation. If we had determined that as of the date of the grant it was probable that 100% of the performance conditions would be achieved, we would have assigned a grant date fair value of $1,613,700 for the restricted stock units. The amounts reported in the Summary Compensation Table for these awards may not represent the amounts that Christopher Anzalone will realize from the awards. Whether, and to what extent, a named executive officer realizes value will depend on our actual operating performance, stock price fluctuations and the named executive officer’s continued employment.

(7) Dr. Li’s employment with the Company terminated in February 2019.

Grants of Plan Based Awards Table

The following table sets forth cash bonus and equity grants made to the named executive officers in fiscal 2019:

<table>
<thead>
<tr>
<th>Name</th>
<th>Grant Date</th>
<th>Estimated Future Payouts Under Non-Equity Incentive Plan Awards (1)</th>
<th>Estimated Future Payouts Under Equity Incentive Plan Awards (2)</th>
<th>All Other Stock Awards: Number of Shares of Stock or Units (3)</th>
<th>Grant Date Fair Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Anzalone</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Bonus</td>
<td></td>
<td>$682,500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRSUs (4)</td>
<td>1/1/2019</td>
<td></td>
<td>200,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRSUs (4)</td>
<td>1/1/2019</td>
<td></td>
<td>200,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PRSUs (4)</td>
<td>1/1/2019</td>
<td></td>
<td>200,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kenneth Myszkowski</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Bonus</td>
<td></td>
<td>$193,500</td>
<td></td>
<td>85,000</td>
<td>$1,055,700</td>
</tr>
<tr>
<td>RSUs</td>
<td>1/1/2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bruce D. Given</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Bonus</td>
<td></td>
<td>$350,000</td>
<td></td>
<td>210,000</td>
<td>$2,608,200</td>
</tr>
<tr>
<td>RSUs</td>
<td>1/1/2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Patrick O’Brien</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Bonus</td>
<td></td>
<td>$191,880</td>
<td></td>
<td>70,000</td>
<td>$ 869,400</td>
</tr>
<tr>
<td>RSUs</td>
<td>1/1/2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zhen Li</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash Bonus</td>
<td></td>
<td>$156,000</td>
<td></td>
<td>75,000</td>
<td>$ 931,500</td>
</tr>
<tr>
<td>RSUs</td>
<td>1/1/2019</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(1) Amounts listed represent cash award targets for our named executive officers in 2019. Actual payments were made in fiscal 2020 and the amounts are reported in the Summary Compensation Table above. There are no thresholds or maximum levels for such awards.

(2) These RSU and PRSU awards are described above in the “Compensation Discussion and Analysis” under the heading “Equity Compensation”.

(3) RSUs have various vesting parameters. The RSUs granted in 2019 vest in four equal annual installments beginning 1 year from 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 PRSU awards would be achieved and assigned a grant date fair value of $0 based on this evaluation.
## Outstanding Equity Awards at Fiscal Year End Table

The following table provides information, with respect to the Named Executive Officers, concerning the outstanding equity awards covering shares of the Company’s common stock as of September 30, 2019.

<table>
<thead>
<tr>
<th>Name</th>
<th>Grant Date</th>
<th>Number of Securities Underlying Unexercised Options (# Exercisable) (1)</th>
<th>Number of Securities Underlying Unexercised Options (# Unexercisable)</th>
<th>Option Exercise Price ($)</th>
<th>Option Expiration Date</th>
<th>Number of Shares or Units of Stock That Have Not Vested (#) (3)</th>
<th>Market Value of Shares or Units of Stock That Have Not Vested ($) (4)</th>
<th>Equity Incentive Plan Awards: Number of Unearned Shares or Units of Stock That Have Not Vested (#) (2)</th>
<th>Equity Incentive Plan Awards: Market Value of Unearned Shares or Units of Stock That Have Not Vested ($) (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>8/16/2010</td>
<td>50,000</td>
<td>—</td>
<td>9.90</td>
<td>8/16/2020</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>10/21/2011</td>
<td>15,000</td>
<td>—</td>
<td>4.60</td>
<td>10/21/2021</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2/16/2012</td>
<td>170,000</td>
<td>—</td>
<td>5.19</td>
<td>2/18/2022</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>5/6/2013</td>
<td>159,928</td>
<td>—</td>
<td>2.01</td>
<td>5/6/2023</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>9/21/2013</td>
<td>69,991</td>
<td>—</td>
<td>4.75</td>
<td>9/21/2023</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>2/8/2014</td>
<td>60,000</td>
<td>—</td>
<td>14.54</td>
<td>2/6/2024</td>
<td>—</td>
<td>—</td>
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<td>—</td>
</tr>
<tr>
<td></td>
<td>3/8/2015</td>
<td>300,000</td>
<td>—</td>
<td>7.75</td>
<td>3/6/2025</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>1/1/2016</td>
<td>73,333</td>
<td>6,667</td>
<td>6.15</td>
<td>1/1/2026</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>1/1/2018</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<td>—</td>
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<td></td>
<td>1/1/2019</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Kenneth Myszkowski</td>
<td>8/16/2010</td>
<td>12,000</td>
<td>—</td>
<td>9.90</td>
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<td>—</td>
</tr>
<tr>
<td></td>
<td>2/8/2014</td>
<td>50,000</td>
<td>—</td>
<td>14.54</td>
<td>2/6/2024</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
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<td>—</td>
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<tr>
<td></td>
<td>1/1/2016</td>
<td>36,666</td>
<td>3,334</td>
<td>6.15</td>
<td>1/1/2026</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
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<tr>
<td></td>
<td>1/1/2018</td>
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<td>1/1/2019</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Bruce D. Given</td>
<td>10/26/2011</td>
<td>30,000</td>
<td>—</td>
<td>5.20</td>
<td>10/26/2021</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>9/21/2013</td>
<td>40,000</td>
<td>—</td>
<td>4.75</td>
<td>9/21/2023</td>
<td>—</td>
<td>—</td>
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<tr>
<td></td>
<td>2/8/2014</td>
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<td>14.54</td>
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<td>7.75</td>
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<tr>
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<td>1/1/2016</td>
<td>55,000</td>
<td>5,000</td>
<td>6.15</td>
<td>1/1/2026</td>
<td>—</td>
<td>—</td>
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<tr>
<td></td>
<td>1/1/2018</td>
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<td>1/1/2019</td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Patrick O’Brien</td>
<td>12/2/2014</td>
<td>90,000</td>
<td>—</td>
<td>5.22</td>
<td>12/2/2024</td>
<td>—</td>
<td>—</td>
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<tr>
<td></td>
<td>1/1/2016</td>
<td>55,000</td>
<td>5,000</td>
<td>6.15</td>
<td>1/1/2026</td>
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<td></td>
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<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Zhen Li (5)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

(1) Options are priced at the market closing price on the date of grant. Options have various vesting parameters, but generally vest within 48 months after the award is granted.
(2) The amounts reported for Christopher Anzalone in this column reflect the January 2018 and January 2019 awards that contain performance-based vesting conditions. These awards and their vesting conditions are described above in the “Compensation Discussion and Analysis” under the heading “Equity Compensation”.

(3) Restricted stock units have various vesting parameters but generally vest in four equal annual installments beginning 1 year from the grant date.

(4) Value is based on the Company’s Common Stock closing price of $28.18 on September 30, 2019.

(5) Dr. Li’s employment with the Company terminated in February 2019.

Options Exercised and Stock Vested Table

The following table provides information, with respect to the Named Executive Officers, concerning options exercised or RSUs or PRSUs vested during fiscal 2019.

<table>
<thead>
<tr>
<th>Name</th>
<th>Option Awards</th>
<th>Stock Awards</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of Shares Acquired on Exercise</td>
<td>Value Realized on Exercise</td>
</tr>
<tr>
<td>Christopher Anzalone</td>
<td>162,098</td>
<td>3,723,993</td>
</tr>
<tr>
<td>Kenneth Myszkowski</td>
<td>43,000</td>
<td>759,456</td>
</tr>
<tr>
<td>Bruce D. Given</td>
<td>206,000</td>
<td>3,528,708</td>
</tr>
<tr>
<td>Patrick O’Brien</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Zhen Li</td>
<td>146,041</td>
<td>1,331,278</td>
</tr>
</tbody>
</table>

(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 30 days of medical and dental benefits. To receive such payments Dr. Anzalone is required to execute a general release in favor of the Company.

For purposes of Dr. Anzalone’s employment agreement:

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

“Good Reason” means (i) Executive’s duties, responsibilities, titles or offices are diminished as compared to those described in the employment agreement without Executive’s written consent, and the Company fails to reinstate such duties, responsibilities, titles or offices within 30 days after written demand by Executive identifying with reasonable particularity the diminishment, (ii) the relocation of Executive’s base office to an office that is more than thirty (30) highway miles from Pasadena, CA, (iii) the failure of the Company to obtain a satisfactory agreement from any successor to assume and agree to perform the obligations under 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, Mr. O’Brien is entitled to severance pay equal to six months’ base salary upon a qualifying 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 and except with respect to the outstanding awards held by the CEO whose awards will only become fully vested upon a qualifying termination of employment following a change of control.

The following tables set forth information regarding potential termination and change of control arrangements with our executive officers had their employment been terminated or a change in control of the Company taken place on September 30, 2019:

### Termination Payments

<table>
<thead>
<tr>
<th>Triggering Event</th>
<th>Salary ($)</th>
<th>Benefits ($)</th>
<th>Stock Awards ($) (1)</th>
<th>Option Awards ($) (1)</th>
<th>Total ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Termination by Employer without Cause</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christopher Anzalone (2)</td>
<td>56,875</td>
<td>1,888</td>
<td>—</td>
<td>—</td>
<td>58,673</td>
</tr>
<tr>
<td>Kenneth Myszkowski</td>
<td>107,500</td>
<td>8,619</td>
<td>—</td>
<td>—</td>
<td>116,119</td>
</tr>
<tr>
<td>Bruce D. Given</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Patrick O’Brien</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Zhen Li (3)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Change in Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christopher Anzalone</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Kenneth Myszkowski</td>
<td>107,500</td>
<td>8,619</td>
<td>3,980,425</td>
<td>73,448</td>
<td>4,169,992</td>
</tr>
<tr>
<td>Bruce D. Given</td>
<td>—</td>
<td>—</td>
<td>9,616,425</td>
<td>110,150</td>
<td>9,726,575</td>
</tr>
<tr>
<td>Patrick O’Brien</td>
<td>—</td>
<td>—</td>
<td>3,240,700</td>
<td>110,150</td>
<td>3,350,850</td>
</tr>
<tr>
<td>Zhen Li (3)</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Involuntary Termination Following a Change in Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Christopher Anzalone</td>
<td>56,875</td>
<td>1,888</td>
<td>26,301,324</td>
<td>146,874</td>
<td>26,506,961</td>
</tr>
<tr>
<td>Patrick O’Brien</td>
<td>213,200</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>213,200</td>
</tr>
</tbody>
</table>

(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, 2019 of $28.18. For option awards the value is calculated as the number of shares issuable upon unvested options multiplied by the difference between the Company’s closing stock price at September 30, 2019 of $28.18 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.

(3) Dr. Li’s employment with the Company terminated in February 2019.

### CEO Pay Ratio

Pursuant to Item 402(u) of RegulationS-K, we are required to calculate and disclose the median annual compensation of all of our employees (excluding our CEO, Dr. Anzalone), the annual compensation of Dr. Anzalone, and the ratio of these two amounts.
Our median employee was identified using the entire population of our employees as of September 30, 2019 based on a consistently applied compensation measure ("CACM"), that reasonably reflects the annual compensation of employees. The CACM selected by us for our disclosure included annual base salary, overtime for the year-to-date period ended September 30, 2019, the cash bonus amount for fiscal 2019, the grant-date fair value for stock-based awards (calculated in accordance with requirements for the Summary Compensation Table), and welfare and health benefits for fiscal 2019.

Based on the CACM methodology described above, we identified the median employee and calculated the 2019 compensation for this selected employee in the same manner we determine the annual total compensation of our Named Executive Officers for purposes of the Summary Compensation Table. The median employee total compensation is $179,403. Dr. Anzalone’s 2019 compensation as disclosed in the Summary Compensation Table is $2,216,264. As a result, our CEO to median employee pay ratio for 2018 is 12:1.

This pay ratio is a reasonable estimate calculated by a method consistent with the SEC requirements, described above, based on our payroll and employment records. As a result of a variety of factors, including employee populations, potential differences in the components used for the CACM, compensation philosophies and certain assumptions, pay ratios reported by other companies may not be comparable to our pay ratio. The pay ratio is not utilized by our management or our compensation committee for compensation-related decisions.
Proposal Four — 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, 2020, and that selection is now being submitted to the stockholders.

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

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

**Vote Required; Recommendation of the Board**

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

THE BOARD UNANIMOUSLY RECOMMENDS A VOTE “FOR” PROPOSAL FOUR.
Audit Fees

The Audit Committee regularly reviews and determines whether specific projects or expenditures with our independent auditors, RS&J, 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 2019 and 2018 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, 2019 and September 30, 2018:

<table>
<thead>
<tr>
<th>Description</th>
<th>Year Ended September 30, 2019</th>
<th>Year Ended September 30, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audit fees (1)</td>
<td>$231,325</td>
<td>$194,000</td>
</tr>
<tr>
<td>Audit-related fees (2)</td>
<td>17,000</td>
<td>59,500</td>
</tr>
<tr>
<td>Tax Fees</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>All other fees</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>$248,325</td>
<td>$253,500</td>
</tr>
</tbody>
</table>

(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 2019, which include the consolidated balance sheets of the Company as of September 30, 2019 and September 30, 2018, and the related consolidated statements of operations, stockholders’ equity and cash flows for the fiscal years ended September 30, 2019, September 30, 2018 and September 30, 2017, and the notes thereto.

Composition. At September 30, 2019, The Audit Committee of the Board was comprised of three directors and operates under a written charter adopted by the Board. The members of the Audit Committee were William Waddill, Mauro Ferrari and Michael S. Perry. All members of the Audit Committee were “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 November 18, 2019, the Audit Committee consisted of William Waddill, Mauro Ferrari and Michael S. Perry. On that date, the Audit Committee met separately to review the Company’s consolidated audited financial statements and held discussions with management and RS&J. Management represented to the Audit Committee that the Company’s consolidated financial statements were prepared in accordance with generally accepted accounting principles. The members of the Audit Committee discussed with RS&J matters required to be discussed under the applicable standards of the Public Company Accounting Oversight Board. The Company’s independent registered public accounting firm also provided to the Audit Committee the written disclosures and the letter required by the Public Company Accounting Oversight Board regarding the independent registered public accounting firm’s communications with the Audit Committee concerning independence and the Audit Committee discussed the firm’s independence with RS&J.

Conclusion. Based upon the Audit Committee’s review of the financial statements and discussions with management and RS&J, the Audit Committee’s review of the representations of management and the report of RS&J to the Audit Committee, the Audit Committee recommended that the Board include the audited consolidated financial statements in the Company’s Annual Report on Form 10-K for the fiscal year ended September 30, 2019, as filed with the SEC.

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

William Waddill, Chairman
Mauro Ferrari
Michael S. Perry
The following table sets forth the beneficial ownership of the Company’s Common Stock as of January 14, 2020, by (i) each of the named executive officers named in the table under “Executive Compensation and Related Information,” (ii) each director, (iii) all current directors and executive officers as a group, and (iv) the holders of greater than 5% of our total shares outstanding known to us. Unless otherwise specified in the footnotes to the table below, the persons and entities named in the table have sole voting and investment power with respect to all shares beneficially owned, subject to community property laws, where applicable, and the address of each stockholder is c/o Arrowhead Pharmaceuticals, Inc., 177 E. Colorado Blvd, Suite 700, Pasadena, CA, 91105 unless otherwise indicated.

<table>
<thead>
<tr>
<th>5% Beneficial Owners</th>
<th>Shares</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>BlackRock Inc (2)</td>
<td>14,869,280</td>
<td>14.6%</td>
</tr>
<tr>
<td>The Vanguard Group (3)</td>
<td>10,844,571</td>
<td>10.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Executive Officers and Directors</th>
<th>Shares</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Anzalone (4)</td>
<td>2,350,780</td>
<td>2.3%</td>
</tr>
<tr>
<td>Kenneth Myszkowski (5)</td>
<td>354,402</td>
<td>*</td>
</tr>
<tr>
<td>Bruce D. Given (6)</td>
<td>713,993</td>
<td>*</td>
</tr>
<tr>
<td>Patrick O’Brien (7)</td>
<td>255,875</td>
<td>*</td>
</tr>
<tr>
<td>Douglass Given</td>
<td>172,925</td>
<td>*</td>
</tr>
<tr>
<td>Michael S. Perry (8)</td>
<td>113,000</td>
<td>*</td>
</tr>
<tr>
<td>Mauro Ferrari (9)</td>
<td>26,900</td>
<td>*</td>
</tr>
<tr>
<td>William Waddill</td>
<td>46,500</td>
<td>*</td>
</tr>
<tr>
<td>Marianne De Backer</td>
<td>—</td>
<td>*</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>All Executive Officers and Directors as a group (9 persons) (10)</th>
<th>Shares</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4,034,375</td>
<td>4.0%</td>
</tr>
</tbody>
</table>

* Less than 1%

(1) Based on 101,529,466 shares of Common Stock issued and outstanding as of January 14, 2020. Shares not outstanding but deemed beneficially owned by virtue of the right of a person to acquire them as of January 14, 2020, or within sixty days of such date are treated as outstanding only when determining the percentage owned by such individual and when determining the percentage owned by a group.

(2) Based on a Schedule 13G filed October 10, 2019 by The Vanguard Group. According to the Form 13G, The Vanguard Group has sole voting power and sole dispositive power over 198,567 shares and 10,639,170 shares, respectively, and has shared voting power and shared dispositive power over 16,160 shares and 205,041 shares, respectively.

(3) Based on Amendment No. 1 to Schedule 13G filed on June 7, 2019 by BlackRock Inc. According to the Amendment No. 1, BlackRock Inc. has sole voting power of 14,646,012 shares and sole dispositive power with respect to all of the Arrowhead shares it beneficially holds.

(4) Includes 945,543 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 14, 2020.

(5) Includes 149,467 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 14, 2020.

(6) Includes 350,000 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 14, 2020.

(7) Includes 150,000 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 14, 2020.

(8) Includes 77,000 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 14, 2020.

(9) Includes 20,000 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 14, 2020.

(10) Includes 1,692,010 shares issuable upon the exercise of stock options that are exercisable within 60 days of January 14, 2020.
Equity Compensation Plan Information

The following table provides information as of September 30, 2019 with respect to shares of our Common Stock that may be issued under our equity compensation plans.

<table>
<thead>
<tr>
<th>Equity Compensation Plan Information</th>
<th>Number of Shares to be Issued upon exercise of outstanding options, warrants and rights</th>
<th>Weighted average exercise price of outstanding options, warrants and rights</th>
<th>Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity compensation plans approved by security holders (1)</td>
<td>5,984,992</td>
<td>$ 7.00</td>
<td>341,294</td>
</tr>
<tr>
<td>Equity compensation plans not approved by security holders (2)</td>
<td>851,511</td>
<td>$13.57</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>6,836,503</td>
<td>$ 8.16</td>
<td>341,294</td>
</tr>
</tbody>
</table>

(1) Includes options outstanding representing 1,099,337 and 2,831,322 shares of Common Stock under the 2004 Equity Incentive Plan and the 2013 Incentive Plan, respectively. Also includes 2,054,333 restricted stock units subject to the 2013 Incentive Plan.

(2) Includes 843,011 inducement option grants and 8,500 inducement restricted stock unit grants issued to newly hired employees.

Current Executive Officers of the Registrant

The names, ages and positions of our current executive officers serving as of January 14, 2020 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.

<table>
<thead>
<tr>
<th>Name</th>
<th>Age</th>
<th>Position with Arrowhead</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christopher Anzalone</td>
<td>50</td>
<td>Chief Executive Officer &amp; President and Director</td>
</tr>
<tr>
<td>Kenneth A. Myszkowski</td>
<td>53</td>
<td>Chief Financial Officer</td>
</tr>
<tr>
<td>Bruce Given</td>
<td>65</td>
<td>Chief Operating Officer</td>
</tr>
<tr>
<td>Patrick O’Brien</td>
<td>56</td>
<td>General Counsel</td>
</tr>
</tbody>
</table>

Kenneth A. Myszkowski, Chief Financial Officer, joined the Company 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: Nanolink, 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 the Company 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 & Johnson, Sandoz Pharmaceuticals and Schering-Plough. Dr. Given obtained his bachelor of sciences degree from Colorado State University, graduating Phi Beta Kappa. He received his M.D. degree with honors from the University of Chicago, Pritzker School of Medicine and completed his medical training at the University of Chicago and at Brigham and Women’s Hospital in Boston, where he was a Clinical Fellow at Harvard Medical School. He is board certified in internal medicine and endocrinology and metabolism and has authored 33 scientific publications. Dr. Bruce Given is a brother of Dr. Douglass Given, a director of the company.

Patrick C. O’Brien, General Counsel, joined the Company in December 2014. Mr. O’Brien has practiced in the healthcare legal field for over 25 years. Before joining the Company, from 2012 to 2014, Mr. O’Brien was with Shire, as global pharmaceutical company, 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 to 2010, Mr. O’Brien was a partner in Burke O’Neil LLC. From 2001 to 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.

Dr. Curt Bradshaw, Chief Scientific Officer, joined the Company in November 2019. From 2018 to November 2019 Dr. Bradshaw was President, Chief Scientific Officer, and a member of the board of directors of Tolinine, a company he co-founded to develop novel antibody conjugates for immunology. From 2012 — 2019 he served as Chief Scientific Officer and a member of the board of directors of Solstice Biologics, where he managed and oversaw all company operations and research exploring novel siRNA technologies for the development of human therapeutics. Before Solstice, Dr. Bradshaw was Vice President of Research and Development and Chief Scientific Officer at Traversa Therapeutics. At Traversa, he had primary R&D oversight and was a key strategic contributor to internal technology development, business strategy, and oversaw research alliances with multiple major pharmaceutical collaborators. Prior to Traversa, Dr. Bradshaw spent 7 years at CovX Research, a cornerstone of the Pfizer, Inc. Bioinnovation and Biotherapeutics Center. Prior to CovX, he spent 4 years at Ligand Pharmaceuticals and was responsible for the chemical development of clinical-phase active pharmaceutical ingredients. Dr. Bradshaw started his career at Abbott Laboratories, where he spent 6 years as a Research Chemist, Senior Research Chemist, and Project Leader. He received a PhD in Organic Chemistry from Texas A&M University.

Javier San Martin, Chief Medical Officer, joined the Company in November 2019. Dr. San Martin previously served as Senior Vice President and Head of Global Clinical Development at Ultragenyx from 2013 until November 2019. At Ultragenyx he led the development of burosumab, a novel drug for the treatment of X-Linked Hypophosphatemia approved across major regions including the United States, the European Union, and Canada. Before his tenure at Ultragenyx, he served as Senior Vice President of Clinical Development at Alder Biopharmaceuticals, where he was responsible for managing the medical, regulatory, and clinical operations group focused on early clinical programs. From 2006 to 2011, Dr. San Martin was a Global Development Leader at Amgen, Inc., where he was responsible for two major development programs. He directed the romosozumab clinical program through the end of phase II, and before that, was responsible for the development and approval of denosumab, the largest branded anti-osteoporosis treatment for postmenopausal osteoporosis and the first monoclonal antibody to address a very prevalent disease treated by primary care physicians. Prior to his time at Amgen, he spent seven years at Eli Lilly and Company, supporting late stage clinical development as well as medical affairs activities, including the successful launch of Evista and Forteo. He received his medical degree from the University of Buenos Aires Medical School and completed his residence in internal medicine at CEMIC University Hospital in Buenos Aires, Argentina, serving as Chief Resident, and, thereafter, as Attending Physician responsible for the internal medicine ward.

James Hassard, Chief Commercial Officer, joined the Company in January 2020. Mr. Hassard served as Senior Vice President of Marketing and Market Access at Coherus BioSciences since 2016, where he was instrumental in building the commercial organization and commercial capabilities. He co-led the launch of Coherus’ first product, a biosimilar, pegfilgrastim; one of the most successful pharmaceutical launches of 2019. Prior to his tenure at Coherus, Mr. Hassard served as Vice President of Marketing at Medivation, prior to and through its acquisition by Pfizer Pharmaceuticals. From 1999 to...
2016, he held multiple increasingly senior commercial roles at Amgen, Inc., across sales and marketing, domestic and international, including an assignment as General Manager of Amgen Portugal. He was responsible for the launch, growth, and subsequent life-cycle management of several oncology and nephrology products, including darbepoetin alfa and cinacalcet. Prior to Amgen, Mr. Hassard spent several years at Schering-Plough Canada, in sales and marketing roles, in the therapeutic areas of oncology, cardiovascular and hepatitis. He received his Bachelor of Science in pharmacology from the University of Toronto and a master’s in business administration from Nova Southeastern University, Florida.
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. 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 Audit Committee’s guidelines and that the related-party transaction remains appropriate.
Certain Relationships and Related Transactions, and Director Independence

As of September 30, 2019, 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 CEO. Vincent Anzalone earned base salary and bonus of $273,560 during fiscal year 2019. His current base salary is $244,860. In January 2019, Mr. Anzalone was awarded 40,000 restricted stock units, and this award vests in four annual tranches from the grant date. The grant date fair value of this award is $496,800.

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, 2019 including the financial statements, schedules and a list of exhibits. Requests should be sent to Arrowhead Pharmaceuticals, Inc., 177 E. Colorado Blvd., Suite 700, Pasadena, CA 91105, 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 Pharmaceuticals, Inc.
177 E. Colorado Blvd., Suite 700
Pasadena CA 91105
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/ Patrick O'Brien
Patrick O'Brien,
Secretary

Pasadena, California
January, 2020
Amended and Restated
Bylaws of
Arrowhead Pharmaceuticals, Inc.

ARTICLE I
STOCKHOLDERS

Section 1.1 Annual Meeting.

(a) General. The annual meeting of stockholders shall be held at the hour, date and place within or without the State of Delaware which is fixed by the Board of Directors, which time, date and place may subsequently be changed at any time by vote of the Board of Directors. If no annual meeting has been held for a period of thirteen (13) months after the corporation’s last annual meeting, a special meeting in lieu thereof may be held, and such special meeting shall have, for the purposes of these bylaws or otherwise, all the force and effect of an annual meeting. Any and all references hereafter in these bylaws to an annual meeting or annual meetings also shall be deemed to refer to any special meeting(s) in lieu thereof.

(b) Notice of Stockholder Business and Nominations.

(1) Nominations of persons for election to the Board of Directors and the proposal of other business to be considered by the stockholders may be brought before an annual meeting: (i) by or at the direction of the Board of Directors, or (ii) by any stockholder of the corporation who was a stockholder of record at the time of giving of notice provided for in this bylaw, who is entitled to vote at the meeting, who is present (in person or by proxy) at the meeting and who complies with the notice procedures set forth in this bylaw as to such nomination or business. For the avoidance of doubt, the foregoing clause (ii) shall be the exclusive means for a stockholder to bring nominations or business properly before an annual meeting (other than matters properly brought under Rule 14a-8 (or any successor rule) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)), and such stockholder must comply with the notice and other procedures set forth in Article I, Section 1.1(b)(2) and (3) of this bylaw to bring such nominations or business properly before an annual meeting. In addition to the other requirements set forth in this bylaw, for any proposal of business to be considered at an annual meeting, it must be a proper subject for action by stockholders of the corporation under Delaware law.

(2) For nominations or other business to be properly brought before an annual meeting by a stockholder pursuant to clause (ii) of Article I, Section 1.1(b)(1) of this bylaw, the stockholder must (i) have given Timely Notice (as defined below) thereof in writing to the Secretary of the corporation, (ii) have provided any updates or supplements to such notice at the times and in the forms required by this bylaw and (iii) together with the beneficial owner(s), if any, on whose behalf the nomination or business proposal is made, have acted in accordance with the representations set forth in the Solicitation Statement (as defined below) required by this bylaw. To be timely, a stockholder’s written notice shall be received by the Secretary of the corporation not later than the close of business on the 90th day nor earlier than the close of business on the 120th day prior to the one-year anniversary of the preceding year’s annual meeting; provided, however, that in the event the annual meeting is first convened more than 30 days before or more than 60 days after such anniversary date, or if no annual meeting were held in the preceding year, notice by the stockholder to be timely must be received by the Secretary of the corporation not later than the close of business on the later of the 90th day prior to the scheduled date of such annual meeting or the 10th day following the day on which public announcement of the date of such meeting is first made (such notice within such time periods shall be referred to as “Timely Notice”). Such stockholder’s Timely Notice shall set forth:

(A) as to each person whom the stockholder proposes to nominate for election or reelection as a director, all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors in an election contest, or is otherwise required, in each case pursuant to Regulation 14A under the Exchange Act (including such person’s written consent to being named in the proxy statement as a nominee and to serving as a director if elected);

(B) as to any other business that the stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest in such business of each Proposing Person (as defined below);

(C) (i) the name and address of the stockholder giving the notice, as they appear on the corporation’s books, and the names and addresses of the other Proposing Persons (if any) and (ii) as to each Proposing Person, the following:
information: (a) the class or series and number of all shares of capital stock of the corporation which are, directly or indirectly, owned beneficially or of record by such Proposing Person or any of its affiliates or associates (as such terms are defined in Rule 12b-2 promulgated under the Exchange Act), including any shares of any class or series of capital stock of the corporation as to which such Proposing Person or any of its affiliates or associates has a right to acquire beneficial ownership at any time in the future, (b) all Synthetic Equity Interests (as defined below) in which such Proposing Person or any of its affiliates or associates, directly or indirectly, holds an interest including a description of the material terms of each such Synthetic Equity Interest, including without limitation, identification of the counterparty to each such Synthetic Equity Interest and disclosure, for each such Synthetic Equity Interest, as to (x) whether or not such Synthetic Equity Interest conveys any voting rights, directly or indirectly, in such shares to such Proposing Person, (y) whether or not such Synthetic Equity Interest is required to be, or is capable of being, settled through delivery of such shares and (z) whether or not such Proposing Person and/or, to the extent known, the counterparty to such Synthetic Equity Interest has entered into other transactions that hedge or mitigate the economic effect of such Synthetic Equity Interest, (c) any proxy (other than a revocable proxy given in response to a public proxy solicitation made pursuant to, and in accordance with, the Exchange Act), agreement, arrangement, understanding or relationship pursuant to which such Proposing Person has or shares a right to, directly or indirectly, vote any shares of any class or series of capital stock of the corporation, (d) any rights to dividends or other distributions on the shares of any class or series of capital stock of the corporation, directly or indirectly, owned beneficially by such Proposing Person that are separated or separable from the underlying shares of the corporation, and (e) any performance-related fees (other than an asset based fee) that such Proposing Person, directly or indirectly, is entitled to based on any increase or decrease in the value of shares of any class or series of capital stock of the corporation or any Synthetic Equity Interests (the disclosures to be made pursuant to the foregoing clauses (a) through (e) are referred to, collectively, as "Material Ownership Interests") and (iii) a description of the material terms of all agreements, arrangements or understandings (whether or not in writing) entered into by any Proposing Person or any of its affiliates or associates with any other person for the purpose of acquiring, holding, disposing or voting of any shares of any class or series of capital stock of the corporation;

(D) (i) a description of all agreements, arrangements or understandings by and among any of the Proposing Persons, or by and among any Proposing Persons and any other person (including with any proposed nominee(s)), pertaining to the nomination(s) or other business proposed to be brought before the meeting of stockholders (which description shall identify the name of each other person who is party to such an agreement, arrangement or understanding), and (ii) identification of the names and addresses of other stockholders (including beneficial owners) known by any of the Proposing Persons to support such nominations or other business proposal(s), and to the extent known the class and number of all shares of the corporation’s capital stock owned beneficially or of record by such other stockholder(s) or other beneficial owner(s); and

(E) a statement whether or not the stockholder giving the notice and/or the other Proposing Person(s), if any, will deliver a proxy statement and form of proxy to holders of, in the case of a business proposal, at least the percentage of voting power of all of the shares of capital stock of the corporation required under applicable law to approve the proposal or, in the case of a nomination or nominations, at least the percentage of voting power of all of the shares of capital stock of the corporation reasonably believed by such Proposing Person to be sufficient to elect the nominee or nominees proposed to be nominated by such stockholder (such statement, the "Solicitation Statement").

For purposes of this Article I of these bylaws, the term "Proposing Person" shall mean the following persons: (i) the stockholder of record providing the notice of nominations or business proposed to be brought before a stockholders’ meeting, and (ii) the beneficial owner(s), if different, on whose behalf the nominations or business proposed to be brought before a stockholders’ meeting is made. For purposes of this Section 1.1 of Article I of these bylaws, the term "Synthetic Equity Interest" shall mean any transaction, agreement or arrangement (or series of transactions, agreements or arrangements), including, without limitation, any derivative, swap, hedge, repurchase or so-called "stock borrowing" agreement or arrangement, the purpose or effect of which is to, directly or indirectly: (a) give a person or entity economic benefit and/or risk similar to ownership of shares of any class or series of capital stock of the corporation, in whole or in part, including due to the fact that such transaction, agreement or arrangement provides, directly or indirectly, the opportunity to profit or avoid a loss from any increase or decrease in the value of any shares of any class or series of capital stock of the corporation, (b) mitigate loss to, reduce the economic risk of or manage the risk of share price changes for, any person or entity with respect to any shares of any class or series of capital stock of the corporation, (c) otherwise provide in any manner the opportunity to profit or avoid a loss from any increase or decrease in the value of any shares of any class or series of capital stock of the corporation, or (d) increase or decrease the voting power of any person or entity with respect to any shares of any class or series of capital stock of the corporation.

(3) A stockholder providing Timely Notice of nominations or business proposed to be brought before an annual meeting shall further update and supplement such notice, if necessary, so that the information (including, without limitation, the Material Ownership Interests information) provided or required to be provided in such notice pursuant to this bylaw shall be true and correct as of the record date for the meeting and as of the date that is ten business days prior to such annual
meeting, and such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the fifth business day after the record date for the annual meeting (in the case of the update and supplement required to be made as of the record date), and not later than the close of business on the eighth business day prior to the date of the annual meeting (in the case of the update and supplement required to be made as of ten business days prior to the meeting).

(4) Notwithstanding anything in the second sentence of Article I, Section 1.1(b)(2) of this bylaw to the contrary, in the event that the number of directors to be elected to the Board of Directors of the corporation is increased and there is no public announcement naming all of the nominees for director or specifying the size of the increased Board of Directors made by the corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination in accordance with the second sentence of Article I, Section 1.1(b)(2), a stockholder’s notice required by this bylaw shall also be considered timely, but only with respect to nominees for any new positions created by such increase, if it shall be received by the Secretary of the corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the corporation.

(c) Other.

(1) Only such persons who are nominated in accordance with the provisions of this bylaw shall be eligible for election and to serve as directors and only such business shall be conducted at an annual meeting as shall have been brought before the meeting in accordance with the provisions of this bylaw. The Board of Directors or a designated committee thereof shall have the power to determine whether a nomination or any business proposed to be brought before the meeting was made in accordance with the provisions of this bylaw. If neither the Board of Directors nor such designated committee makes a determination as to whether any stockholder proposal or nomination was made in accordance with the provisions of this bylaw, the presiding officer of the annual meeting shall have the power and duty to determine whether the stockholder proposal or nomination was made in accordance with the provisions of this bylaw. If the Board of Directors or a designated committee thereof or the presiding officer, as applicable, determines that any stockholder proposal or nomination was not made in accordance with the provisions of this bylaw, such proposal or nomination shall be disregarded and shall not be presented for action at the annual meeting.

(2) Except as otherwise required by law, nothing in this Article I, Section 1.1 shall obligate the corporation or the Board of Directors to include in any proxy statement or other stockholder communication distributed on behalf of the corporation or the Board of Directors information with respect to any nominee for director or any other matter of business submitted by a stockholder.

(3) Notwithstanding the foregoing provisions of this Article I, Section 1.1, if the proposing stockholder (or a qualified representative of the stockholder) does not appear at the annual meeting to present a nomination or any business, such nomination or business shall be disregarded, notwithstanding that proxies in respect of such vote may have been received by the corporation. For purposes of this Article I, Section 1.1, to be considered a qualified representative of the proposing stockholder, a person must be authorized by a written instrument executed by such stockholder or an electronic transmission delivered by such stockholder to act for such stockholder as proxy at the meeting of stockholders and such person must produce such written instrument or electronic transmission, or a reliable reproduction of the written instrument or electronic transmission, to the presiding officer at the meeting of the stockholders.

(4) For purposes of this bylaw, “public announcement” shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

(5) Notwithstanding the foregoing provisions of this bylaw, a stockholder shall also comply with all applicable requirements of the Exchange Act and the rules and regulations thereunder with respect to the matters set forth in this bylaw. Nothing in this bylaw shall be deemed to affect any rights of (i) stockholders to have proposals included in the corporation’s proxy statement pursuant to Rule 14a-8 (or any successor rule) under the Exchange Act and, to the extent required by such rule, have such proposals considered and voted on at an annual meeting or (ii) the holders of any series of Preferred Stock to elect directors under specified circumstances.

Section 1.2 Special Meetings. Except as otherwise required by statute and subject to the rights, if any, of the holders of any series of Preferred Stock, special meetings of the stockholders of the corporation may be called only by the Board of Directors acting pursuant to a resolution approved by the affirmative vote of a majority of the Directors then in office. The Board of Directors may postpone or reschedule any previously scheduled special meeting of stockholders. Only those matters set forth in the notice of the special meeting may be considered or acted upon at a special meeting of stockholders of the corporation. Nominations of persons for election to the Board of Directors of the corporation and stockholder proposals of other business shall not be brought before a special meeting of stockholders to be considered by the stockholders unless such special meeting is held in lieu of an annual meeting of stockholders in accordance with Article I, Section 1.1(a) of these bylaws, in
which case such special meeting in lieu thereof shall be deemed an annual meeting for purposes of these bylaws and the provisions of Article I, Section 1.1(b) of these bylaws shall govern such special meeting.

Section 1.3 Notice of Meetings. Whenever stockholders are required or permitted to take any action at a meeting, a written notice of the meeting shall be given which shall state the place, date and hour of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Unless otherwise provided by law, the written notice of any meeting shall be given not less than ten nor more than sixty days before the date of the meeting to each stockholder entitled to vote at such meeting. If mailed, such notice shall be deemed to be given when deposited in the mail, postage prepaid, directed to the stockholder at his/her address as it appears on the records of the corporation.

Section 1.4 Adjournments. Any meeting of stockholders, annual or special, may adjourn from time to time to reconvene at the same or some other place, and notice need not be given of any such adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 1.5 Quorum. At each meeting of stockholders, except where otherwise provided by law or the certificate of incorporation or these bylaws, the holders of shares representing a majority of the votes entitled to be cast by the holders of the outstanding shares of stock entitled to vote at the meeting, present in person or by proxy, shall constitute a quorum. In the absence of a quorum, the stockholders so present may, by majority vote, adjourn the meeting from time to time in the manner provided in Section 1.4 of these bylaws until a quorum shall attend. Shares of its own stock belonging to the corporation or to another corporation, if a majority of the shares entitled to vote in the election of directors of such other corporation is held, directly or indirectly, by the corporation, shall neither be entitled to vote nor be counted for quorum purposes; provided, however, that the foregoing shall not limit the right of the corporation to vote stock, including but not limited to its own stock, held by it in a fiduciary capacity.

Section 1.6 Organization. Meetings of stockholders shall be presided over by the Chairman of the Board, if any, or in his/her absence by the Vice Chairman of the Board, if any, or in his/her absence by the President, or in his/her absence by a Vice President, or in the absence of the foregoing persons by a chairman designated by the Board of Directors, or in the absence of such designation by a chairman chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his/her absence the chairman of the meeting may appoint any person to act as secretary of the meeting.

Section 1.7 Voting; Proxies. Except as otherwise provided in the certificate of incorporation or any amendment thereto, each stockholder entitled to vote at any meeting of stockholders shall be entitled to one vote for each share of stock held by him which has voting power upon the matter in question. Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for him by proxy, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by filing an instrument in writing revoking the proxy or another duly executed proxy bearing a later date with the Secretary of the corporation. Voting at meetings of stockholders need not be by written ballot and need not be conducted by inspectors unless the holders of shares representing a majority of the votes entitled to be cast by the holders of the outstanding shares of all classes of stock entitled to vote thereon present in person or by proxy at such meeting shall so determine. At all meetings of stockholders for the election of directors a plurality of the votes cast shall be sufficient to elect at which a quorum is present, all corporate actions to be taken by vote of the stockholders shall, unless otherwise provided required by law or by the certificate of incorporation or these bylaws, be decided by the vote of shares representing a majority of the votes entitled to be cast by the holders of the outstanding shares of stock entitled to vote thereon present in person or by proxy at the meeting.

Section 1.8 Fixing Date for Determination of Stockholders of Record. In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, or to express consent to corporate action in writing without a meeting, or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may, in advance, a record date, which shall not be more than sixty nor less than ten days prior to any other action. If no record date is fixed: (1) the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; and (2) the record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.
Section 1.9 List of Stockholders Entitled to Vote. The Secretary shall prepare and make, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof and may be inspected by any stockholder who is present. Upon the willful neglect or refusal of the directors to produce such a list at any meeting for the election of directors, they shall be ineligible for election to any office at such meeting. The stock ledger shall be the only evidence as to who are the stockholders entitled to examine the stock ledger, the list of stockholders or the books of the corporation, or to vote in person or by proxy at any meeting of stockholders.

Section 1.10 Action by Consent of Stockholders. Unless otherwise restricted by the Certificate of Incorporation, any action required or permitted to be taken at any annual or special meeting of the stockholders may be taken without a meeting, without prior notice and without a vote, if a consent in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those stockholders who have not consented in writing.

ARTICLE II
BOARD OF DIRECTORS

Section 2.1 Number; Qualifications. The Board of Directors shall consist of one or more members, the number thereof to be determined from time to time by resolution of the Board of Directors. Directors need not be stockholders.

Section 2.2 Election; Resignation; Removal; Vacancies. The Board of Directors shall initially consist of the persons named as Directors by the incorporator, and each Director so elected shall hold office until the first annual meeting of stockholders or until his/her successor is elected and qualified. At the first annual meeting of stockholders and at each annual meeting thereafter, the stockholders shall elect Directors each of whom shall hold office for a term of one year or until his/her successor is elected and qualified. At any meeting of stockholders for the election of Directors at which a quorum is present, each Director shall be elected by a majority of the votes cast; provided that, if the election is contested, the Directors shall be elected by a plurality of the votes cast. An election shall be contested if the number of nominees for Director exceeds the number of Directors to be elected, as determined by the Board of Directors. For purposes of this Section 2.2, a majority of votes cast shall mean that the number of votes cast "for" a Director’s election exceeds the number of votes cast "against" that Director’s election (with abstentions and broker non-votes not counted as a vote cast either "for" or "against" such Director’s election). Any Director may resign at any time upon written notice (including by electronic transmission) to the corporation; such resignation shall take effect upon delivery, unless the resignation specifies a later effective date or time or an effective date or time determined upon the happening of an event or events. Any vacancy occurring in the Board of Directors for any cause may be filled by a majority of the remaining members of the Board of Directors, although such majority is less than a quorum, or by a plurality of the votes cast at a meeting of stockholders, and each Director so elected shall hold office until the expiration of the term of office of the Director whom he has replaced or until his/her successor is elected and qualified.

Section 2.3 Regular Meetings. Regular meetings of the Board of Directors may be held at such places within or without the State of Delaware and at such times as the Board of Directors may from time to time determine, and if so determined notices thereof need not be given.

Section 2.4 Special Meetings. Special meetings of the Board of Directors may be held at any time or place within or without the State of Delaware whenever called by the President, any Vice President, the Secretary, or by any member of the Board of Directors. Reasonable notice thereof shall be given by the person or persons calling the meeting, not later than the second day before the date of the special meeting.

Section 2.5 Telephonic Meetings Permitted. Members of the Board of Directors, or any committee designated by the Board, may participate in a meeting of such Board or committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this bylaw shall constitute presence in person at such meeting.

Section 2.6 Quorum; Vote Required for Action. At all meetings of the Board of Directors a majority of the directors then in office shall constitute a quorum for the transaction of business. Except in cases in which the certificate of incorporation or these
Section 2.7 Organization. Meetings of the Board of Directors shall be presided over by the Chairman of the Board, if any, or in his/her absence by the Vice Chairman of the Board, if any, or in his/her absence by the President, or in their absence by a chairman chosen at the meeting. The Secretary shall act as secretary of the meeting, but in his/her absence the chairman of the meeting may appoint any person to act as secretary of the meeting.

Section 2.8 Informal Action by Directors. Unless otherwise restricted by the certificate of incorporation or these bylaws, any action required or permitted to be taken at any meeting of the Board of Directors, or of any committee thereof, may be taken without a meeting if all members of the Board or such committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or committee.

ARTICLE III
COMMITTEES

Section 3.1 Committees. The Board of Directors may designate one or more committees, each committee to consist of one or more of the directors of the corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of the committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it, but no such committee shall have the power or authority in reference to amending the Amended and Restated Certificate of Incorporation, as it may be amended from time to time (the "Certificate of Incorporation") (except that any such committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of Preferred Stock adopted by the Board of Directors pursuant to Article Fourth of the Certificate of Incorporation, fix any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of the assets of the corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the corporation), adopting an agreement of merger or consolidation under Sections 251 or 252 of the General Corporation Law of the State of Delaware, recommending to the stockholders the sale, lease or exchange of all or substantially all of the corporation’s property and assets, recommending to the stockholders a dissolution of the corporation or a revocation of a dissolution, or amending these Bylaws; and unless the resolution or the Certificate of Incorporation expressly so provides, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of the State of Delaware.

Section 3.2 Committee Rules. Unless the Board of Directors otherwise provides, each committee designated by the Board may make, alter and repeal rules for the conduct of its business. In the absence of such rules each committee shall conduct its business in the same manner as the Board of Directors conducts its business pursuant to Article II of these Bylaws.
Section 4.2 Powers and Duties of Executive Officers. The officers of the corporation shall have such powers and duties in the management of the corporation as may be prescribed by the Board of Directors and, to the extent not so provided, as generally pertain to their respective offices, subject to the control of the Board of Directors. The Board of Directors may require any officer, agent or employee to give security for the faithful performance of his/her duties.

ARTICLE V
STOCK

Section 5.1 Certificates. The Board may provide by resolution or resolutions that some or all of any or all classes or series of the stock of the Company shall be uncertificated shares. Certificates, if any, representing shares of stock of the Company will be in such form as is determined by the Board, subject to applicable legal requirements. Each such certificate shall be numbered and shall be signed by or in the name of the corporation by the Chairman or Vice Chairman of the Board of Directors, if any, or the President or a Vice President, and by the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary, of the corporation, certifying the number of shares owned by him in the corporation. Any of or all the signatures on the certificate may be a facsimile. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he were such officer, transfer agent, or registrar at the date of issue. Records shall be kept of the amount of stock of the corporation issued and outstanding, the manner in which and the time when such stock was paid for, the respective names, alphabetically arranged, and the addresses, of the persons, firms or corporations owning of record the stock represented by certificates for stock of the corporation, the number, class and series of shares represented by such certificates, respectively, the time when each became an owner of record thereof, and the respective dates of such certificates, and in case of cancellation, the respective dates of cancellation.

Section 5.2 Lost, Stolen or Destroyed Stock Certificates; Issuance of New Certificates. The corporation may issue a new certificate of stock in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate, or his/her legal representative, to give the corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate.

Section 5.3 Transfers of Stock. Transfers of shares shall be made upon the books of the Company (i) only by the holder of record thereof, or by a duly authorized agent, transferee or legal representative and (ii) in the case of certificated shares, upon the surrender to the Company of the certificate or certificates for such shares. No transfer shall be made that is inconsistent with the provisions of applicable law. The person in whose name shares of stock stand on the books of the corporation shall be deemed the owner thereof for all purposes as regards the corporation. Whenever any transfer of shares shall be made for collateral security and not absolutely, such fact shall be so expressed in the entry of transfer if, when the certificate of shares shall be presented to the corporation for transfer, both the transferor and the transferee request the corporation to do so.

Section 5.4 Regulations Concerning Transfer of Stock. The Board of Directors may make such rules and regulations as it may deem expedient, not inconsistent with these Bylaws, concerning the issue, transfer and registration of certificates for stock of the corporation. The Board of Directors may appoint, or authorize any officer or officers to appoint, one or more transfer agents and one or more registrars, and may require all certificates for stock to bear the signature or signatures of any of them.

ARTICLE VI
INDEMNIFICATION OF DIRECTORS,
OFFICERS, EMPLOYEES AND AGENTS

Section 6.1 Right to Indemnification. The corporation shall indemnify and hold harmless, to the fullest extent permitted by applicable law as it presently exists or may hereafter be amended, any person who was or is made or is threatened to be made a party or is otherwise involved in any action, suit, or proceeding, whether civil, criminal, administrative, or investigative (a “proceeding”) by reason of the fact that he, or a person for whom he is the legal representative, is or was a director, officer, employee or agent of the corporation or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust, enterprise or non-profit entity, including service with respect to employee benefit plans, against all liability and loss suffered and expenses reasonably incurred by such person. The corporation shall indemnify a person in connection with a proceeding initiated by such person only if the proceeding was authorized by the Board of Directors of the corporation.
Section 6.2 Prepayment of Expenses. The corporation shall pay the expenses incurred in defending any proceeding in advance of its final disposition, provided, however, that the payment of expenses incurred by a director or officer in his/her capacity as a director or officer (except with regard to service to an employee benefit plan or non-profit organization) in advance of the final disposition of the proceeding shall be made only upon receipt of an undertaking by the director or officer to repay all amounts advanced if it should be determined that the director or officer is not entitled to be indemnified under this Article VI or otherwise.

Section 6.3 Claims. If a claim for indemnification or payment of expenses under this Article VI is not paid in full within 90 days after a written claim therefor has been received by the corporation, the claimant may file suit to recover the unpaid amount of such claims and, if successful in whole or in part, shall be entitled to be paid the expense of prosecuting such claim. In any such action the corporation shall have the burden of proving that the claimant was not entitled to the requested indemnification or payment of expenses under applicable law.

Section 6.4 Non-Exclusivity of Rights. The rights conferred on any person by this Article shall not be exclusive of any other rights which such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, these Bylaws, agreement, vote of stockholders or disinterested directors or otherwise.

Section 6.5 Amendment or Repeal. Any repeal or modification of the foregoing provisions of this Article VI shall not adversely affect any right or protection of a director, officer or employee of the corporation in respect of any act or omission occurring prior to the time of such repeal or modification.

ARTICLE VII
MISCELLANEOUS

Section 7.1 Fiscal Year. The fiscal year of the corporation shall be determined by resolution of the Board of Directors.

Section 7.2 Seal. The Board of Directors may, but need not, adopt a corporate seal. If adopted, the corporate seal shall have the name of the corporation inscribed thereon and shall be in such form as may be approved from time to time by the Board of Directors.

Section 7.3 Waiver of Notice of Meetings of Stockholders, Directors and Committees. Any written waiver of notice, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of any regular or special meeting of the stockholders, directors, or members of a committee of directors need be specified in any written waiver of notice.

Section 7.4 Interested Directors; Quorum. No contract or transaction between the corporation and one or more of its directors or officers, or between the corporation and any other corporation, partnership, association, or other organization in which one or more of its directors or officers are directors or officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board or committee thereof which authorizes the contract or transaction, or solely because his/her or their votes are counted for such purpose, if: (1) the material facts as to his/her relationship or interest and as to the contract or transaction are disclosed or known to the Board of Directors or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum; or (2) the material facts as to his/her relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or (3) the contract or transaction is fair as to the corporation as of the time it is authorized, approved or ratified, by the Board of Directors, a committee thereof, or the stockholders. Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee, which authorizes the contract or transaction.

Section 7.5 Form of Records. Any records maintained by the corporation in the regular course of its business, including its stock ledger, books of account, and minute books, may be kept on, or be in the form of, punch cards, magnetic tape, photographs, microphotographs, or any other information storage device, provided that the records so kept can be converted into clearly legible form within a reasonable time. The corporation shall so convert any records so kept upon the request of any person entitled to inspect the same.
Section 7.6 Amendment of Bylaws. These Bylaws may be altered or repealed, and new bylaws made, by the Board of Directors, but the stockholders may make additional bylaws and may alter and repeal any bylaws whether adopted by them or otherwise.

* * *

A-9
VOTE BY INTERNET
Before The Meeting - Go to www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up to 11:59 p.m. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

During The Meeting - Go to www.virtualshareholdermeeting.com/AFWR2020

You may attend the meeting via the Internet and vote during the meeting. Have the information that is printed in the box marked by the arrow available and follow the instructions.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time the day before the cut-off date or meeting date. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Madison Ave, Orangeburg, NY 10962.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

The Board of Directors recommends you vote FOR ALL proposals 2, 3, and 4:

2. To approve, in an advisory (non-binding) vote, the compensation paid to the Company’s named executive officers, as disclosed pursuant to Item 402 of Regulation S-K, including the compensation tables and narrative discussion.

3. To approve an amendment to the Company’s Amended and Restated Bylaws to implement a majority vote standard in uncontested elections of directors.

4. To ratify the selection of Rose, Snyder & Jacobs LLP as independent auditors of the Company for the fiscal year ending September 30, 2020.

NOTE: Other business as may properly come before the meeting or any adjournment thereof.

Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.

Signature (PLEASE SIGN WITHIN BOX) Date Signature (Joint Owners) Date
Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:

ARROWHEAD PHARMACEUTICALS, INC.
Annual Meeting of Stockholders
March 19, 2020 10:00 AM, PT
This proxy is solicited by the Board of Directors

The stockholder(s) hereby appoint(s) Christopher Anzalone and Patrick O’Brien or either of them, as proxies, each with the power to appoint his substitute, and hereby authorize(s) them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of Common Stock of ARROWHEAD PHARMACEUTICALS, INC. that the stockholder(s) is/are entitled to vote at the Annual Meeting of Stockholders to be held at 10:00 AM, PT on March 19, 2020, online at WWW.VirtualShareholderMeeting.com/ARWR2020, and any adjournment or postponement thereof.

This proxy, when properly executed, will be voted in the manner directed herein. If no such direction is made, this proxy will be voted in accordance with the Board of Directors’ recommendations.

Continued and to be signed on reverse side