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SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of
the Securities Exchange Act of 1934 (Amendment No.)

Filed by the Registrant

Filed by a Party other than the Registrant

Check the appropriate box:

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

ArQule, Inc.

(Name of Registrant as Specified In Its Charter)

-

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

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LETTER TO SHAREHOLDERS

Introduction

When we look back at 2016, we are proud of the work that we accomplished to advance ArQule's proprietary pipeline. We made significant progress in our clinical programs for ARQ 087 and ARQ 092, and were able to advance ARQ 531 through GLP toxicology testing and prepare it for clinical launch this year. We look forward to achieving important clinical milestones for these programs in 2017.

As ArQule continues to advance its clinical-stage product candidates, we remain focused on precision medicine and on identifying biomarker-defined patient populations in areas of high unmet need. By seeking subgroups of patients that are most likely to respond to our drugs, we aim to identify small, often orphan, indications that allow for focused and efficient development strategies.

We are close to initiating a biomarker-driven, Phase 3 trial for ARQ 087 in intrahepatic cholangiocarcinoma (iCCA), marking our first unpartnered registrational study. By the time you read this letter, we expect to have initiated a Phase 1/2 study in rare overgrowth diseases driven by the PI3K or AKT1 mutation with our lead AKT inhibitor, ARQ 092, and by the summer, we plan to launch a Phase 1 study with ARQ 531, our BTK inhibitor.

Proprietary Pipeline

We not only advanced our proprietary pipeline in 2016, but we also expanded the number of our clinical programs. We initiated a Phase 1 study with ARQ 751, our next generation AKT inhibitor, and completed the preclinical work necessary to file an Investigational New Drug application for our BTK inhibitor, ARQ 531. We now have four proprietary molecules in the clinic, with a fifth, ARQ 531, planned to enter by the third quarter of 2017.

We completed enrollment of the Phase 1/2 trial with our lead clinical program, ARQ 087, in iCCA patients with FGFR2 fusions and presented strong preliminary data. In this study, we observed six partial responses in 25 evaluable patients resulting in a 24% response rate, consistent with the response rate we reported at ESMO GI in 2016. The disease control rate has also been very favorable at 76%. We plan to initiate a Phase 3 registrational trial in the third quarter of 2017.

Our AKT inhibitor, ARQ 092, is making progress in rare overgrowth diseases. Our collaborators at the Human Genome Research Institute of the National Institutes of Health (NIH) are continuing to dose patients in their Phase 1 trial, and we remain committed to supporting their efforts. Significantly, analysis of biopsies taken near the overgrowth tissue in the patients already treated demonstrate that ARQ 092 reduces the level of AKT signaling at levels pre-specified in the protocol for this trial. Having now achieved *in vitro* as well as *in vivo* proof of concept, we will begin in the second quarter of 2017 a company-sponsored Phase 1/2 trial for ARQ 092 in rare overgrowth diseases driven by the PI3K or AKT1 mutation, including PROS, CLOVES, and Proteus syndrome.

Turning to our AKT inhibitor program in oncology, which includes ARQ 092 and ARQ 751, the Phase 1b trial with ARQ 092 in AKT1 driven tumors is fully recruited and has generated interesting clinical activity data. In parallel the Phase 1 trial for ARQ 751, our next generation AKT inhibitor, was initiated in 2016 and is expected to complete enrollment this year.

For our BTK inhibitor, ARQ 531, we have completed toxicology studies and filed an IND with the FDA. We are actively planning for a Phase 1a/b dose finding and signal generation trial to be initiated by Q3'17.

Tivantinib

In early 2017 top-line results for the METIV-HCC and JET-HCC Phase 3 trials for tivantinib as second-line therapy in hepatocellular carcinoma were released. Unfortunately, neither trial met its primary endpoint. Full results from the trials will be presented at upcoming scientific forums. While the outcomes of the METIV-HCC and JET-HCC trials for tivantinib in HCC were disappointing, we are well positioned as a company to move forward with our proprietary pipeline.

Finances

We remained financially disciplined in 2016. Consequently, we came in at the high end of our 2016 guidance, ending the year with \$31.1 million in cash, cash equivalents and marketable securities. During the first week of January we entered into a loan and security agreement in the principal amount of \$15 million with Oxford Finance. Based on our current business plan, we anticipate that our financial resources will be sufficient to finance the Company's operations into at least mid-2018.

Building on the advancements to our proprietary pipeline in 2016, we look forward to achieving a number of significant clinical milestones in 2017. Our mission remains to dramatically extend and improve the lives of our patients, and our pipeline is now leading the way to the fulfillment of this purpose.

Sincerely,



Paolo Pucci
Chief Executive Officer

ARQULE, INC.

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD MAY 23, 2017

To Our Stockholders,

Our 2017 Annual Meeting of Stockholders will be held at the Boston Burlington Marriott, One Mall Road, Burlington, Massachusetts 01803 at 10:00 a.m. Eastern Daylight Savings Time on May 23, 2017 for the following purposes:

1. To elect Ronald M. Lindsay, William G. Messenger, and Patrick J. Zenner as directors to hold office for a term of three years and until their respective successors are elected and qualified;
2. To ratify the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2017;
3. To approve, by non-binding vote, the compensation of our named executive officers;
4. To recommend, by non-binding vote, the frequency of votes approving executive compensation; and
5. To transact any other business that may properly come before the meeting or any adjournment of the meeting.

Only stockholders of record at the close of business on March 31, 2017 will be entitled to vote at the meeting or any continuation of the meeting following an adjournment. A list of these stockholders will be available during ordinary business hours at the offices of ArQule, Inc. for a period beginning ten days before the meeting. Any stockholder may examine the list for any purpose germane to the meeting.

We look forward to seeing you at the meeting.

IT IS IMPORTANT THAT YOUR SHARES ARE REPRESENTED AT THE MEETING. THEREFORE, WHETHER OR NOT YOU PLAN TO ATTEND THE MEETING, PLEASE COMPLETE YOUR PROXY AND RETURN IT IN THE ENCLOSED ENVELOPE, WHICH REQUIRES NO POSTAGE IF MAILED IN THE UNITED STATES. YOU MAY ALSO SUBMIT YOUR PROXY ELECTRONICALLY OR BY TELEPHONE, ACCORDING TO THE INSTRUCTIONS ON THE ENCLOSED PROXY CARD. IF YOU ATTEND THE MEETING AND WISH TO VOTE IN PERSON, YOUR PROXY WILL NOT BE USED. YOU MAY REVOKE YOUR PROXY AT ANY TIME BEFORE IT IS VOTED.

By order of our Board of Directors,



Peter S. Lawrence
President and Chief Operating Officer

Burlington, Massachusetts

Dated: April 13, 2017

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ARQULE, INC.

One Wall Street
Burlington, Massachusetts 01803
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Proxy Statement

QUESTIONS AND ANSWERS ABOUT THE MEETING AND VOTING

Why am I receiving these materials?

ArQule, Inc., a Delaware corporation (“ArQule,” the “Company,” “we,” “us,” or “our”) sent you the Notice of Annual Meeting, this Proxy Statement and the accompanying proxy card because according to our stockholder records you own shares of our common stock, \$0.01 par value (“Common Stock”). Any stockholder of record at the close of business on March 31, 2017 (the “Record Date”) is entitled to vote those shares at the Company’s upcoming Annual Meeting of Stockholders (“Annual Meeting”), which will be held on May 23, 2017 at 10:00 a.m. Eastern Daylight Savings Time at the Boston Burlington Marriott, One Mall Road, Burlington, Massachusetts 01803. Our Board of Directors (the “Board”) is soliciting your proxy to vote at the Annual Meeting. All stockholders are invited to attend the Annual Meeting and are entitled to and requested to vote on the items of business described in this Proxy Statement; however, you do not need to attend the Annual Meeting to vote your shares. Instead, you may simply complete, sign and return the accompanying proxy card, or follow the instructions below to submit your proxy by telephone or on the Internet. Although our Annual Report on Form 10-K for the year ended December 31, 2016 is being delivered with the Proxy Statement, the Annual Report should not be deemed to be a part of the Proxy Statement.

What is a proxy statement and what is a proxy?

A proxy statement is a document that the Securities and Exchange Commission (“SEC”) regulations require us to give you when we ask you to sign a proxy designating individuals to vote on your behalf. A proxy is your legal designation of another person to vote the shares you own. That other person is called a proxy. If you designate someone as your proxy in a written document, that document also is called a proxy or proxy card. We have designated Peter S. Lawrence as proxy for the Annual Meeting. We will first provide this Proxy Statement and proxy card on or about April 13, 2017.

What is the difference between holding shares as a stockholder of record and as a beneficial stockholder?

If your shares are registered directly in your name with our registrar and transfer agent, American Stock Transfer and Trust Company, LLC, you are considered a stockholder of record with respect to those shares. If your shares are held in a bank or brokerage account or with another nominee, you are considered the “beneficial owner” of those shares.

What am I voting on?

The principal business expected to be transacted at the Annual Meeting, as more fully described below, will be:

- election of directors;
 - ratification of the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2017;
 - approval, by non-binding vote, of our named executive officers’ compensation; and
 - recommendation, by non-binding vote, of the frequency of votes approving executive compensation.
-

We will also consider any other business as may properly come before the Annual Meeting or any adjournment thereof. See “What happens if additional matters are presented at the Annual Meeting?” below.

What are my voting choices for each of the proposals to be voted on at the Annual Meeting?

Proposal	Voting Choices and Board Recommendation
Proposal 1: Election of Directors	<ul style="list-style-type: none"> • vote in favor of all nominees; • withhold authority to vote for all nominees; or • withhold authority to vote for any specified nominee. <p>The Board recommends a vote FOR each of the nominees.</p>
Proposal 2: Ratification of Selection of Independent Registered Public Accounting Firm	<ul style="list-style-type: none"> • vote in favor of ratification; • vote against ratification; or • abstain from voting on ratification. <p>The Board recommends a vote FOR ratification.</p>
Proposal 3: Advisory Proposal to Approve Executive Compensation	<ul style="list-style-type: none"> • vote in favor of ratification; • vote against ratification; or • abstain from voting on ratification. <p>The Board recommends a vote FOR the advisory vote to approve executive compensation.</p>
Proposal 4: Advisory Proposal to Recommend the Frequency of Vote to Approve Executive Compensation	<ul style="list-style-type: none"> • vote for “Every Year”; • vote for “Every Two Years” • vote for “Every Three Years”; or • abstain from voting on proposal. <p>The Board recommends a vote FOR “Every Year” on this proposal.</p>

For Proposal 1, subject to our Majority Voting Policy described below, the affirmative vote of a plurality of shares of Common Stock cast by stockholders present at the Annual Meeting, in person or by proxy, and entitled to vote on the proposal, is required to elect each of the nominees. In order to be approved, each of the other proposals will require the affirmative vote of a majority of shares cast by stockholders voting in person or by proxy at the Annual Meeting. As an advisory vote, Proposal 3, the proposal to approve executive compensation, is not binding on the Company. However, the Compensation, Nominating and Governance Committee of the Board (the “Compensation Committee”), which is responsible for designing and administering our executive compensation program, values the opinions expressed by stockholders and will consider the outcome of the vote when making future compensation decisions. As an advisory vote, Proposal 4, the proposal to recommend the frequency of vote to approve executive compensation, is not binding on the Company. However, the Compensation Committee values the opinions expressed by stockholders and will consider the outcome of the vote in deciding when to call for the next advisory vote on the Company’s executive compensation.

What is the Majority Voting Policy?

Our Board of Directors has adopted a policy that provides that in an uncontested election of directors, any nominee that is elected but receives a greater number of votes withheld from his or her election than votes in favor of election is expected to tender his or her resignation promptly following the date of the stockholders’ meeting at which the vote occurs. As described below, the Compensation Committee will consider the resignation and recommend to the Board whether to accept it in accordance with the terms of our Majority Voting Policy.

What shares can I vote?

Each holder of Common Stock is entitled to one vote for each share held as of the record date on each matter to be voted on at the Annual Meeting. March 31, 2017 is the record date for our Annual Meeting. On that date, we had outstanding 71,146,597 shares of Common Stock.

How many shares must be present or represented to conduct business at the Annual Meeting?

The presence at the Annual Meeting, in person or by proxy, of a majority of our outstanding shares of Common Stock entitled to vote at the Annual Meeting constitutes a quorum for the transaction of business. For purposes of determining whether a quorum exists, proxies received but marked “ABSTAIN” and so-called “broker non-votes” (described below) will be counted as present.

What if I am a beneficial owner and do not give voting instructions to my bank, broker or other nominee?

As a beneficial owner, in order to ensure that your shares of Common Stock are voted in the way you would like, you must provide voting instructions to your bank, broker or other nominee by the deadline provided in the materials received from your banker, broker or other nominee. If you do not provide voting instructions to your bank, broker or other nominee, whether your shares of Common Stock can be voted by such person depends on the type of item being voted on.

- **Non-Discretionary Items.** The election of directors is a non-discretionary item and may not be voted by banks, brokers or other nominees who have not received specific voting instructions from beneficial owners. If such a matter comes before the Annual Meeting and you have not specifically instructed your bank, broker or other nominee how to vote your shares, your shares will not be voted on that matter, creating what is called a “broker non-vote.”
- **Discretionary Items.** The ratification of the appointment of PricewaterhouseCoopers LLP as our independent registered public accounting firm is a discretionary item. Generally, banks, brokers or other nominees that do not receive specific voting instructions from beneficial owners may vote on this proposal at their discretion.

How are abstentions and broker non-votes counted?

Abstentions and broker non-votes are included in determining whether a quorum is present and will have the following effects on each proposal:

Proposal	Abstentions	Broker Non-Votes
Proposal 1: Election of Directors	N/A	Not counted and no effect on vote.
Proposal 2: Ratification of Independent Registered Public Accounting Firm	Not counted and no effect on vote.	N/A
Proposal 3: Advisory Proposal to Approve Executive Compensation	Not counted and no effect on vote.	Not counted and no effect on vote.
Proposal 4: Advisory Proposal to Recommend the Frequency of Vote to Approve Executive Compensation	Not counted and no effect on vote.	Not counted and no effect on vote.

How do I vote if my shares are held by my broker?

If your shares are held by your broker in “street name,” you will need to instruct your broker, in the manner provided by your broker, how to vote your shares. If your shares are held in “street name” and you wish to vote them in person at the Annual Meeting, you must obtain from your broker a properly executed legal proxy, identifying you as an ArQule stockholder, authorizing you to act on behalf of the broker at the Annual Meeting and specifying the number of shares with respect to which the authorization is granted.

What different methods can I use to vote?

Your vote is very important. Whether or not you plan to attend the Annual Meeting, we urge you to either:

- complete, sign, date and return the accompanying proxy card;
- vote on the Internet pursuant to the instructions provided in the proxy card; or
- vote by telephone (toll-free) in the United States or Canada, in accordance with the instructions on the proxy card.

What if I am a stockholder of record and do not specify a choice for a matter when returning a proxy?

Stockholders should specify their choice for each matter on the Proxy Card. If you submit a valid proxy without directions as to votes on the matters to be considered at the Annual Meeting, the proxy will be voted “FOR” the election of the nominees listed herein “FOR” proposals 2 and 3 and for “EVERY YEAR” for proposal 4.

Can I change my vote after I have already voted?

Stockholders may revoke the authority granted by an executed proxy at any time before its exercise by voting in person at the Annual Meeting or by filing with our President and Chief Operating Officer a written revocation or a duly executed proxy with a later date. If your shares are held in “street name,” you should contact your broker for instructions on changing your vote.

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

We will bear the cost of solicitation of proxies, including charges and expenses of brokerage firms and others for forwarding solicitation material by mail to beneficial owners of stock. We have engaged The Proxy Advisory Group, LLC[®], to assist in the solicitation of proxies and provide related advice and informational support for a services fee and the reimbursement of customary disbursements in an amount that is not expected to exceed \$15,000 in the aggregate. In addition, our officers, employees and other representatives may solicit proxies in person or by telephone.

What happens if additional matters are presented at the Annual Meeting?

Other than the items of business described in this Proxy Statement, we are not aware of any other business to be acted upon at the Annual Meeting. If you grant a proxy, the persons named as proxy holders will have discretion to vote your shares on any additional matters properly presented for a vote at the Annual Meeting. If for any reason any of our nominees is not available as a candidate for director, the persons named as proxy holders will vote your proxy for such other candidates as may be nominated by the Board.

When will the Company announce the voting results?

We will announce the preliminary voting results at the Annual Meeting. The Company will report the final results in a Current Report on Form 8-K filed with the SEC which can be accessed on the SEC’s website at www.sec.gov or on our website at www.arqule.com.

Can I access the Notice of Annual Meeting, Proxy Statement and Annual Report on Form 10-K on the Internet?

The Notice of Annual Meeting, Proxy Statement and Annual Report are available at www.proxyvote.com. In addition, stockholders are able to view these documents by accessing the “Investors and Media” Section of our website at www.arqule.com and clicking on the heading “Financial Information”.

Instead of receiving future copies of our Notice of Annual Meeting, Proxy Statement and Form 10-K by mail, stockholders can elect to receive an e-mail that will provide electronic links to these documents. Opting to receive your proxy materials online will save us the cost of producing and mailing your documents to your home or business, and also will give you an electronic link to the proxy voting site.

- **Stockholders of Record.** If you vote on the Internet at *www.proxyvote.com*, simply follow the prompts for enrolling in the electronic proxy delivery service. You also may enroll in the electronic proxy delivery service at any time in the future by going directly to *www.proxyvote.com* and following the enrollment instructions.
- **Beneficial Owners.** If you hold your shares of Common Stock in a bank or brokerage account, you also may have the opportunity to receive copies of these documents electronically. Please check the information provided in your proxy material provided to you by your bank or broker regarding the availability of this service.

PROPOSAL 1—ELECTION OF DIRECTORS

Our By-laws provide that the number of directors is established by our Board. For 2017, the number of directors is currently fixed at seven, divided into three classes as equal in number as possible and defined by the expiration dates of their terms of service. At the Annual Meeting, three directors will be elected to terms of three years, expiring in 2020, and until their respective successors are elected and qualified.

Ronald M. Lindsay, William G. Messenger, and Patrick J. Zenner, all of whom are presently serving as directors, have been nominated for re-election by our Board for a term of three years. Unless your proxy withholds authority to vote for any of the nominees, the shares represented by your proxy will be voted for their election as the Board's nominees. If any nominee is unable to serve, which is not expected, the shares represented by your proxy will be voted for such other candidate as may be nominated by the Board.

Vote Required

Subject to our Majority Voting Policy described below, the affirmative vote of a plurality of the shares of Common Stock cast by the stockholders present at the Annual Meeting, in person or by proxy, and entitled to vote on this proposal is required to elect each of the nominees. Broker non-votes and votes withheld will not affect the outcome of the election of directors.

Set forth below is certain information about the qualifications and other directorships of the nominees and our continuing incumbent directors.

Nominees for Election at the Annual Meeting

Ronald M. Lindsay, Ph.D. (Age: 69) Dr. Lindsay has been a director since June 2005. He is currently Chairman and CEO of Zebra Biologics Inc., a privately held biopharmaceutical company and operates Milestone Consulting. He was formerly a director at Sequenom, Inc., and a former director of the privately-held NeurocentRx Pharmaceuticals Ltd, Edinburgh, Scotland, which he co-founded in 2008. Dr. Lindsay was previously Chief Scientific Officer and Vice President, Research and Development, at diaDexus, Inc. from 2000 to 2004, and held a number of positions at Millennium Pharmaceuticals, Inc., including Senior Vice President, Biotherapeutics, from 1997 to 2000. At Regeneron Pharmaceuticals, where he worked from 1989 to 1997, he was a founding scientist and Vice President, Neurobiology. Dr. Lindsay also worked at the Sandoz Institute for Medical Research, London from 1984 to 1989, where he was Head of Cell Biology. Dr. Lindsay completed post-doctoral work at the Friedrich Miescher Institute, and he holds a B.Sc. (Hons) in Chemistry from the University of Glasgow and a Ph.D. in Biochemistry from the University of Calgary.

William G. Messenger, D. Min. (Age: 56) Dr. Messenger has been a director since January 2005. He has been the owner and managing director of the Lexington Sycamore Group, consultants in the fields of business strategy, organization and leadership, since 1994. He also serves as Executive Editor of the Theology of Work Project, a small international organization conducting research and publication in the field of business ethics. From 1999 to 2008, Dr. Messenger served as Director of the Mockler Center for Faith and Ethics in the Workplace at Gordon-Conwell Theological Seminary. Dr. Messenger received a B.S. in Physics with highest honors from Case Western Reserve University, an M.B.A. with high distinction from Harvard Business School, a Master of Divinity degree, summa cum laude, from Boston University School of Theology, and a Doctor of Ministry from Gordon-Conwell Theological Seminary.

Patrick J. Zenner (Age: 70) Mr. Zenner was named Chairman of the Board in May 2004 and has been a director since 2002. Mr. Zenner retired in 2001 from the position of President and Chief Executive Officer of Hoffmann-La Roche Inc., North America, based in Nutley, N.J. Mr. Zenner held various executive positions during his 32-year career with the company. Mr. Zenner is currently a member of the Board of Trustees of Creighton University and is Chairman of the Board of Trustees of Fairleigh Dickinson University. In addition, Mr. Zenner is Chairman of the Board of Directors of West Pharmaceutical Services, Inc. Until its sale in 2012, Mr. Zenner was a director of Par Pharmaceuticals, Inc. In 2010, he resigned from the boards of Geron Corporation, Xoma Ltd. and Exact Sciences, Inc. Until its sale in September 2009, Mr. Zenner was a director of CuraGen Corporation. He has a B.S./B.A. from Creighton University and an M.B.A. from Fairleigh Dickinson University.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THE ELECTION OF THE NOMINEES LISTED ABOVE.

Directors with Term Expiring at the 2018 Annual Meeting

Timothy C. Barabe (Age: 64) Mr. Barabe has been a director since November 2001. In August of 2016, Mr. Barabe joined the Board of Selecta Biosciences, a biopharma company specializing in antigen immunotherapies for rare and serious diseases. He has been a member of the Board of Veeva Systems, Inc., a healthcare software company based in Pleasanton, CA, since September 2015; a member of the Board of Vigilant Biosciences, a private medical device company based in Fort Lauderdale, Florida, since November 2014; and a member of the Board of Opexa Therapeutics, a Nasdaq biotechnology company based in Woodlands, Texas, since March 2014. Mr. Barabe is on the Board and Executive Committee of Project Open Hand, a San Francisco-based nonprofit providing meals to the elderly and ill. Mr. Barabe retired in June 2013 from his position as Executive Vice President and Chief Financial Officer of Affymetrix, Inc. Previously, from July 2006 until March 2010, he was Senior Vice President and Chief Financial Officer of Human Genome Sciences, Inc. He was with Regent Medical Limited, a U.K.-based, privately owned, surgical supply company, where he was Chief Financial Officer, from 2004 to 2006. Mr. Barabe served with Novartis AG from 1982 through August 2004 in a succession of senior executive positions in finance and general management, most recently as the Chief Financial Officer of Sandoz GmbH, the generic pharmaceutical subsidiary of Novartis. Mr. Barabe received his B.B.A. degree from the University of Massachusetts (Amherst) and his M.B.A. degree from the University of Chicago.

Paolo Pucci (Age: 55) Mr. Pucci joined ArQule as Chief Executive Officer and a member of the Board in June 2008 from Bayer A.G., where he served as Senior Vice President and President-in-charge of the Bayer-Schering Pharmaceuticals Global Oncology/Specialized Therapeutics Business Units. Previously, Mr. Pucci was senior vice president of Bayer Pharmaceuticals Global Specialty Business Unit, President of U.S. Pharmaceutical Operations and a member of the Bayer Pharmaceuticals Global Management Committee. At Bayer, Mr. Pucci was involved in a broad range of activities related to Nexavar[®] (sorafenib), an oral kinase inhibitor used to treat liver and kidney cancers. These activities included clinical development, regulatory review, corporate alliance management, product launch and marketing. Mr. Pucci joined Bayer as head of its Italian Pharmaceutical operations in 2001. Prior to Bayer, Mr. Pucci held positions of increasing responsibility with Eli Lilly, culminating with his appointment as Managing Director, Eli Lilly Sweden AB. At Lilly, his responsibilities included operations, sales, marketing and strategic planning. In November 2011, Mr. Pucci was appointed to the Board of Directors of Dyax Corp where he served as an independent director, member of the audit committee and chairman of the governance and nomination committee until the acquisition of Dyax by Shire in January 2016. In April 2013, he was appointed to the Board of Directors of Algeta ASA, an oncology company based in Oslo, Norway, where he served as an independent director and member of the audit committee until the acquisition of Algeta by Bayer A.G. He has also been a Director of NewLink Genetics Corp., since 2015. During September 2016, Mr. Pucci was elected to the Board of Directors of West Pharmaceutical Services, Inc., an international manufacturer of packing components and delivery systems for injectable drugs and healthcare products. Mr. Pucci holds an M.B.A. from the University of Chicago, and is a graduate of the Università Degli Studi Di Napoli in Naples, Italy. He is also a chartered “Dottore Commercialista” in Italy.

Directors with Term Expiring at the 2019 Annual Meeting

Susan L. Kelley, M.D. (Age: 62) Dr. Kelley has been a director since April 2011. She is an independent consultant to the pharmaceutical and biotechnology industries in the field of oncology drug development and strategy. During June 2016, Dr. Kelley joined the Board of Directors of Immune Design, a clinical-stage immunotherapy company headquartered in Seattle, WA. In October 2014, she was named a director of Cerulean Pharma, Inc., of Waltham, MA. From March 2013 until June 2015, she was a director at Alchemia Ltd. a biotechnology company headquartered in Brisbane, Australia. From 2008 to 2011, she was Chief Medical Officer of the Multiple Myeloma Research Consortium and its sister organization, the Multiple Myeloma Research Foundation, where her responsibilities spanned the continuum of clinical drug development from translational research and clinical trials to FDA regulatory compliance. From 2001 to 2008, Dr. Kelley was employed by Bayer Healthcare Pharmaceuticals and Bayer-Schering Pharma as Vice President, Global Clinical Development and Therapeutic Area Head – Oncology. Dr. Kelley worked at Bristol-Myers Squibb Company from 1987 to 2001, most recently as Executive Director, Oncology Clinical Research, at the Bristol-Myers Squibb Pharmaceutical Research Institute. Dr. Kelley received her M.D. from Duke University School of Medicine and an A.B. in biology, magna cum laude, from Colgate

University. She was a Fellow in Medical Oncology and Clinical Fellow in Medicine at Dana-Farber Cancer Institute, Harvard Medical School, and a Fellow in Medical Oncology and Pharmacology at Yale University School of Medicine, where she also served as a Clinical Assistant Professor of Medicine.

Michael D. Loberg, Ph.D. (Age: 69) Dr. Loberg has been a director since January 2007. Previously, he served as Chief Executive Officer and a member of the Board of Directors of NitroMed, Inc., a pharmaceutical company, from September 1997 to March 2006 and as its President from September 2003 to March 2006. From 1979 to 1997, Dr. Loberg held a number of senior management positions at Bristol-Myers Squibb, including President of Bristol-Myers Squibb's Oncology and Immunology, U.S. Primary Care, Northern Europe, Specialty Pharmaceuticals and Squibb Diagnostics divisions, as well as director and Vice President, E.R. Squibb & Sons Research and Development. Prior to his employment with Bristol-Myers Squibb, Dr. Loberg was an associate professor of medicine and pharmacy from 1976 to 1979 and an assistant professor from 1973 to 1976 at the University of Maryland. Dr. Loberg is a Director of IGM Biosciences, a developer of immunotherapeutics, and a Director of Kereos, Inc., a developer of targeted molecular imaging agents and therapeutics. He holds a B.S. in Chemistry from Trinity College and a Ph.D. in Chemistry from Washington University.

Corporate Governance Guidelines and Code of Conduct

At ArQule, we value honesty, integrity, and fairness in our dealings with our fellow employees, our stockholders, our collaborators and our communities. In addition to meeting both the letter and the spirit of regulations and rules adopted by the SEC, other federal and state laws and regulations and the standards of the Nasdaq Global Market ("Nasdaq"), our directors have mandated that our business dealings comply with the highest ethical and corporate governance standards.

We have adopted general corporate governance principles, the ArQule Corporate Code of Conduct ("Code of Conduct") and related policies to provide guidance to our directors and management in their efforts to provide effective and appropriate corporate governance. As is the case with our other policies and practices, the tenets reflected in our governance principles, Code of Conduct and policies are intended to align the interests of our directors, management and other employees with those of our stockholders. We will review and, if necessary in our judgment, modify the guidelines from time to time.

The Code of Conduct applies to our directors, employees and officers, including our Chief Executive Officer, President and Chief Operating Officer and Chief Financial Officer and Treasurer (our principal executive officer, principal financial officer and principal accounting officer, respectively), and our Chief Medical Officer. The Code of Conduct addresses: the standards of conduct expected of each director, officer and employee; conflicts of interest; corporate disclosure processes; compliance with laws, rules and regulations (including insider trading laws); corporate opportunities; confidentiality; fair dealing; and protection and proper use of Company assets. It also strongly encourages the reporting of any illegal or unethical behavior. Waivers of the requirements of the Code of Conduct or associated policies with respect to members of the Board and executive officers are subject to the approval of the full Board or a committee of the Board to which resolution of the matter is delegated and will be disclosed on our website. The governance principles, Code of Conduct, and certain related policies are available on our website at <http://www.arqule.com> in the "Investors and Media" Section under the heading "Corporate Governance."

Director Qualifications and Nomination Process

Director Qualifications

Our Compensation Committee identifies nominees for director from various sources including referrals from current Board members and industry contacts. In the past, the Compensation Committee has also used third party consultants to assist in identifying, evaluating, and recruiting potential nominees; however, no third party consultant was used for this purpose during 2016. The directors have not set formal criteria or qualifications for individuals to be nominated or re-nominated as candidates for Board membership. Instead, the Compensation Committee has developed a general profile for candidates reflecting the personal and professional characteristics that our directors believe a suitable individual should possess. Such characteristics include integrity, business acumen and educational background, relevant industry experience, understanding of interpersonal relationships, no conflict of interest, a high degree of commitment to the

functioning of the Board and its committees, and the ability to meet the independence and financial literacy requirements defined by applicable Nasdaq and SEC rules. Additionally, the Compensation Committee carefully considers issues of diversity among its members in identifying and considering potential nominees and attempts, where appropriate, to achieve a diversity of professional experiences, business cultures, perspectives, genders, ages and ethnicities, among other characteristics, in the membership of the Board and its committees. The Company does not require members of the Board (or our executive officers) to purchase or hold a minimum number of shares of our Common Stock.

Our Company is a clinical-stage biotechnology company engaged in the research and development of innovative therapeutics to treat cancers and rare diseases. In light of the Company's current needs and business priorities, the Compensation Committee believes that the Board's membership should include directors with a high level of scientific and relevant business experience. Our business requires an understanding of the science behind our pre-clinical and clinical product candidates, as well as the clinical development and commercialization processes. Accordingly, the Compensation Committee has determined that scientific, drug development and commercialization experience should be represented on the Board. In addition, as a public company, our Board should include individuals who are financially literate to serve as members of the audit and other committees. We also believe that members should have a firm grounding in corporate governance and business ethics. Lastly, our business is dynamic and rapidly evolving and benefits from having a Board that includes individuals from a variety of backgrounds and professional experiences who contribute to the Board's overall ability to identify and ask difficult questions and to think innovatively.

The following table summarizes how the qualifications, attributes, skills and experience described above relate to each individual director's contributions to the Board and its Committees. An "X" in the chart below indicates a specific competency for which the director has been nominated to serve on the Company's Board and its Committees.

The lack of an "X" for a particular qualification does not mean that the director does not possess that qualification or skill. Rather, an "X" indicates a primary area of focus or expertise of a director on which the Board currently relies.

	Timothy C. Barabe (1)	Ronald M. Lindsay (3)	Michael Loberg (2)(3)	William Messenger (1)(2)	Paolo Pucci	Patrick Zenner (1)(2)	Susan L. Kelley (3)
High level of financial literacy	X		X	X	X	X	
Relevant biotechnology business experience	X	X	X	X	X	X	X
Extensive knowledge of drug research and development		X	X		X	X	X
Extensive knowledge of drug commercialization and marketing	X	X	X		X	X	
Expertise in corporate governance and business ethics	X			X	X	X	
Diversity of background, professional experience or culture			X	X	X		X

(1) Member of Audit Committee

(2) Member of Compensation Committee

(3) Member of Science Committee

Stockholder Nominations

The Compensation Committee has not established any special procedures for stockholder submissions of nominees for election to the Board. Our By-laws permit any stockholder entitled to vote for the election of directors to nominate one or more directors. We believe that this long-standing mechanism, in place since incorporation of the Company, provides the appropriate means for stockholder nominations.

Pursuant to our By-laws, a stockholder wishing to nominate a director candidate must deliver or mail written notice of such nomination to the Chairman of the Board, the President, or the Secretary of the Company at our principal executive office. If a stockholder is nominating a director candidate for election at the annual meeting of stockholders, notice must be received at least 75 days before the anniversary date of the prior year's meeting, assuming there was an annual meeting in the prior year and the date of the current year's annual meeting is within 30 days of the anniversary date of the prior year's meeting. Otherwise, notice must be received at least 45 days before the date of the current year's annual meeting or a special meeting, if at least 60 days' notice or prior public disclosure of the date of the current year's annual meeting or the special meeting is provided. If neither of the previous two sentences applies, notice must be received no later than 15 days after the date on which notice of the date of the current year's annual meeting or the special meeting was mailed or public disclosure was made of such meeting date. The notice must include the stockholder's name and address, the class and number of shares of securities beneficially owned by such stockholder, and each nominee's:

- (i) name, age, business address, and home address;
- (ii) principal occupation or employment;
- (iii) beneficial ownership of Company securities, including the class and number of shares of stock; and
- (iv) any other information relating to the nominee that is required to be disclosed in solicitations for proxies for election of directors by Regulation 14A under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

The Compensation Committee will consider all nominees submitted by stockholders in the manner described above and will evaluate all potential nominees using the same criteria.

Majority Voting Policy

On March 18, 2014, our Board adopted the "Majority Voting Policy with Respect to the Election of Directors". The Majority Voting Policy provides that in an uncontested election of directors of the Company, any nominee for election as a director who receives a greater number of votes "withheld" from his or her election than votes "for" such election (a "Majority Withheld Vote") shall, promptly following the date of the stockholders' meeting at which the election occurred, tender his or her resignation to the Chairman of the Board for consideration by the Compensation Committee. For purposes of the Majority Voting Policy, an "uncontested election" means an election in which the number of nominees for election as director is equal to the number of directors to be elected.

The Compensation Committee will consider the resignation and, promptly following the stockholders' meeting at which the election occurred, will recommend to the Board whether or not to accept it. The Compensation Committee will be expected to accept the resignation except in situations where circumstances would warrant the applicable director continuing to serve on the Board.

In its deliberations about the proper recommendation, the Compensation Committee will consider a range of possible alternatives concerning the director's tendered resignation as it deems appropriate including, without limitation, acceptance of the resignation, rejection of the resignation, or rejection of the resignation coupled with a commitment to seek to address and cure the underlying reasons reasonably believed by the Compensation Committee to have substantially resulted in the "withheld" votes.

The Board will act on the Compensation Committee's recommendation within 90 days of the date of the stockholders' meeting at which the election occurred. The Board will consider the information, factors and alternatives evaluated by the Compensation Committee in arriving at its recommendation and such additional information, factors and alternatives that the Board may consider to be relevant.

Following the Board's decision on the Compensation Committee's recommendation, the Company will promptly disclose the decision regarding whether or not to accept the nominee's resignation (or the reasons for rejecting the resignation, if applicable), as well as a summary of the factors considered, in a Form 8-K furnished to the SEC.

The Board's Role in Risk Oversight

Our Board retains ultimate responsibility for risk oversight and our management retains the responsibility for risk management. The role of our Board in our Company's risk oversight process includes receiving regular reports that include areas of material long- and short-term internal and external risks to our Company, including clinical, regulatory, manufacturing, financial, information technology, intellectual property, legal, compensation, strategic and reputational risks. The full Board (or the appropriate committee in the case of risks that are under the purview of a particular committee) receives these reports from the member of management responsible for the function from which the risk arises so that it can understand and assess our ongoing risk identification, risk management and risk mitigation strategies. Our Board also administers its risk oversight function through the required approval by the Board (or a committee of the Board) of significant transactions and other material decisions, and regular periodic reports from our company's independent registered public accounting firm and other outside consultants regarding various areas of potential risk, including, among others, those relating to our internal controls and financial reporting. As part of its charter, the Audit Committee discusses with management and our independent registered public accounting firm significant financial risks and exposures and the steps management has taken to minimize those risks.

Communications with Directors

We do not have a formal process for communication by stockholders with our directors. However, stockholders and others who wish to communicate may write to the Board as a whole, or to individual directors c/o:

Investor Relations
ArQule, Inc.
One Wall Street
Burlington, Massachusetts 01803-4757
Attn. Dawn Schottlandt
Senior Director, Investor Relations/Corporate Communications

Such communications will be forwarded directly to the addressee.

Director Independence

For a director to be designated as independent, as defined by the Nasdaq listing standards set forth below, our Board must determine that he or she has no "material relationship" with ArQule other than that of a director. When assessing the materiality of a director's relationship with ArQule, the Board considers:

- all relevant facts and circumstances, including not only a director's relationship with the Company, but also all relevant affiliations;
- the frequency and regularity of any services the director performed for the Company outside of the scope of duties as a director;
- whether the director carried out those services at arm's length in the ordinary course of business; and
- whether the director provided those services on substantially the same terms as those prevailing at the time for unrelated parties in comparable transactions.

For a Nasdaq-listed company, a director is not considered independent if any of the following circumstances exist:

- the director is currently, or was at any time during the preceding three years, employed by the listed company, its parent or subsidiaries, or if any of the director's family members is, or was, an executive officer of the listed company, its parent or subsidiaries, at any time during the preceding three years;
- the director has accepted, or has a family member who has accepted, from the listed company, its parent or subsidiaries, any payment in excess of \$120,000 during any twelve-month period within

the preceding three years, other than (a) compensation for board or board committee services, (b) compensation paid to a family member who is a non-executive employee of the listed company, its parent or any subsidiary; or (c) benefits under a tax-qualified retirement plan or non-discretionary compensation;

- the director is, or has a family member who is, employed as an executive officer of any other entity where at any time during the preceding three years any of the executive officers of the company served on the compensation committee of such other entity;
- the director is, or has a family member who is, a partner in, or a controlling stockholder or an executive officer of, any organization to which the listed company made, or from which the company received, payments (other than payments arising solely from investments in the listed company's securities or payments under non-discretionary charitable contribution matching programs) that exceed the greater of \$200,000 or 5% of the recipient's consolidated gross revenues during the current or any of the past three fiscal years;
- the director is, or has a family member who is, a current partner of the listed company's outside auditors, or was a partner or employee of the listed company's outside auditor who worked on the listed company's audit at any time during the past three years; or
- the director otherwise has a relationship that, in the opinion of the listed company's board of directors, would interfere with the exercise of independent judgment in carrying out the responsibilities of a director.

On January 17, 2017, our Board determined that all of our directors, other than our Chief Executive Officer, are "independent directors" as defined in the listing standards of the Nasdaq Marketplace Rules, and these independent directors constitute a majority of the members of the Board and each of its committees.

Compensation Committee Interlocks and Insider Participation

No member of the Compensation Committee during 2016 was an officer, former officer, or employee of the Company or had a relationship disclosable under our policies or SEC regulations. Further, during 2016, no executive officer of the Company served as:

- a member of the compensation committee (or equivalent) of any other entity, one of whose executive officers served as one of our directors or was an immediate family member of a director, or served on our Compensation Committee; or
- a director of any other entity, one of whose executive officers or their immediate family member served on our Compensation Committee.

BOARD COMMITTEES AND MEETINGS

During 2016, the Board held seven meetings in person or by telephone. Each director attended at least 75% of the aggregate number of meetings of the Board and the committees of the Board on which he or she served.

We do not have a policy regarding attendance of directors at our annual meeting of stockholders. In May 2016, all of our directors attended our 2016 Annual Meeting. We also do not have a formal policy regarding the separation of our Board Chairman and Chief Executive Officer positions. At this time, the positions are separate, because the Board believes that this structure is in the best current interest of the Company and our stockholders.

Committees of the Board

Our Board has a standing audit committee (the "Audit Committee"), compensation, nominating, and governance committee (the "Compensation Committee"), and science committee (the "Science Committee"). Independent directors chair and make up the entire membership of each of these committees. The Board has adopted written charters for each of our standing committees, which may be viewed by accessing the "Investors and Media" Section of our website at www.arqule.com and clicking on the heading "Corporate Governance".

Audit Committee

In 2016, the members of the Audit Committee were Mr. Barabe (Chairman), Dr. Messenger and Mr. Zenner. The Audit Committee met five times in 2016. Each member of the Audit Committee meets the independence and financial literacy requirements as defined by applicable Nasdaq and SEC rules. The Board has determined that Mr. Barabe is an “audit committee financial expert” as defined by the rules and regulations of the SEC.

The duties and principal purposes of the Audit Committee include:

- generally, oversight of the integrity of the Company’s financial reporting process;
- in particular, monitoring of:
 - the integrity of the Company’s financial statements;
 - the Company’s compliance with legal and regulatory requirements; and
 - the qualifications, independence and performance of the Company’s independent registered public accountants and, as necessary and appropriate, of its internal audit function;
- pre-approval of all audit and non-audit services;
- review and approval of the audit committee report that is required to be included in the proxy statement for our annual meeting of stockholders;
- assessment of significant financial risks and exposures and the adequacy of the Company’s overall risk assessment and risk management policies and procedures to mitigate such risks and exposures;
- evaluation of whether risks presented by the Company’s financial policies and practices are likely to have a material adverse effect on the Company; and
- assessment of the steps management has taken to control such risks to the Company.

The Company’s independent registered public accounting firm (currently, PricewaterhouseCoopers LLP) is ultimately accountable to the Audit Committee in its capacity as a committee of the Board. The Audit Committee has sole authority and responsibility to select, hire, oversee, evaluate, approve the compensation of, and, where appropriate, replace our independent registered public accounting firm.

A more detailed description of the duties of the Audit Committee is set forth in the committee’s charter.

Compensation Committee

In 2016, the members of the Compensation Committee were Dr. Messenger (Chairman), Dr. Loberg and Mr. Zenner. The Compensation Committee met five times in 2016.

The duties and purposes of the Compensation Committee include:

- advising the Board concerning the Company’s compensation philosophy and policies, in general, and, in particular, to determine, or recommend to the Board for determination, the compensation of the Company’s Chief Executive Officer and all other executive officers and directors;
- advising the Board regarding succession planning for the Company’s Chief Executive Officer;
- identifying individuals qualified to become members of the Board;
- recommending candidates to the Board to fill vacancies on the Board;
- recommending to the Board the directors to be appointed to its committees;
- assessing, or ensuring that the Board assesses, the performance of individual members of the Board and the Board as a whole;
- administering our stock option, stock purchase, and other stock compensation plans;

- reviewing and approving or rejecting proposed related party transactions;
- reviewing with management the annual compensation discussion and analysis (“CD&A”) section of the Company’s disclosures to the SEC prepared by management and recommending to the Board whether the CD&A should be included in the Company’s filings with the SEC;
- reviewing and approving an annual report on the Compensation Committee’s review of the CD&A for inclusion in the Company’s proxy statement;
- overseeing the Company’s efforts to meet its corporate governance, legal, and regulatory obligations and identifying, reviewing, and resolving issues relating to such matters;
- reviewing and discussing with management any risks created by the Company’s compensation practices and determining the adequacy of the Company’s risk assessment and risk management policies and procedures to mitigate such risks and exposures; and
- reviewing and recommending to the Board the frequency of “Say-on-Pay” voting.

A more detailed description of the duties of the Compensation Committee is set forth in the committee’s charter.

Science Committee

In 2016, the members of the Science Committee were Dr. Lindsay (Chairman), Dr. Loberg and Dr. Kelley. The Science Committee met six times in 2016.

The Science Committee is responsible for:

- reviewing the scientific direction of the Company;
- playing a role in assessing the manner by which the Company will continue to enhance its capabilities as a drug discovery and development organization (whether by acquisition, merger, in-licensing, internal growth, or a combination of those methods);
- evaluating the scientific opportunities under consideration by management; and
- regularly reviewing data relating to pre-clinical and clinical testing and analysis being conducted by the Company.

A more detailed description of the duties of the Science Committee is set forth in the committee’s charter.

2016 DIRECTOR COMPENSATION

The following table provides information concerning compensation paid by the Company to its non-employee directors during 2016. Any director who is also an employee of the Company is not compensated for his or her service as a director. During 2016, Mr. Pucci, the Company's Chief Executive Officer, also served on the Board, but did not receive any compensation for services as a director.

Name	Fees Earned or Paid in Cash (\$)	Option Awards(1) (\$)	Total (\$)
Timothy C. Barabe(2)	\$ 60,250	\$16,478	\$76,728
Susan L. Kelley, M.D.	50,000	16,478	66,478
Ronald M. Lindsay, Ph.D.	74,000	16,478	90,478
Michael D. Loberg, Ph.D.(3)	60,250	16,478	76,728
William G. Messenger, D. Min.	66,500	16,478	82,978
Patrick J. Zenner	71,500	20,598	92,098

- (1) This column reflects the aggregate grant date fair values for all option awards granted during 2016. Assumptions used in the calculation of these amounts are included in Note 2 to the Company's audited financial statements for the year ended December 31, 2016, set forth in the Company's Annual Report on Form 10-K filed with the SEC on March 9, 2017 ("2016 Annual Report on Form 10-K"). As of December 31, 2016, for each director the aggregate number of shares of Common Stock that may be acquired upon exercise of outstanding option awards is as follows: Mr. Barabe, 140,000; Dr. Kelley, 125,000; Dr. Lindsay, 140,000; Dr. Loberg, 160,000; Dr. Messenger, 140,000; and Mr. Zenner, 220,000.
- (2) Mr. Barabe elected to have a portion of his fees for service as a director in the amount of \$36,142, paid to him in the form of 22,791 shares of our Common Stock in accordance with our 2005 Director Stock Compensation Plan. The number of shares was determined on the date of the payment of director fees based on the closing market price for a share on that date.
- (3) Dr. Loberg elected to have a portion of his fees for service as a director in the amount of \$30,112 paid to him in the form of 18,934 shares of our Common Stock in accordance with our 2005 Director Stock Compensation Plan. The number of shares was determined on the date of the payment of director fees based on the closing market price for a share on that date.

Currently, each of our non-employee directors who is serving as a director prior to and immediately following any annual meeting of stockholders receives a \$25,000 annual retainer. Each non-employee director receives \$2,000 for each day on which the Board meets and the director attends. For attendance at committee meetings, a non-employee director will be paid \$1,250 per day for meetings of the Audit Committee and the Compensation Committee, and \$2,500 for meetings of the Science Committee. In addition to the base compensation for directors, chairs of committees receive additional compensation. The director serving as Chairman of the Board (currently, Mr. Zenner) receives an additional \$20,000 annual retainer; the director serving as Chairman of the Audit Committee (currently, Mr. Barabe) receives an additional \$15,000 annual retainer, the director serving as Chairman of the Compensation Committee (currently, Dr. Messenger) receives an additional \$15,000 annual retainer; and the director serving as Chairman of the Science Committee (currently, Dr. Lindsay) receives an additional \$20,000 annual retainer.

All of our non-employee directors, currently six directors, are eligible to participate in our Amended and Restated 1996 Director Stock Option Plan. Pursuant to the Director Stock Option Plan, an option to purchase 30,000 shares of Common Stock is automatically granted to each non-employee director at the time that he or she is first elected or appointed to the Board. This initial option becomes exercisable as to 10,000 shares on the date of the Company's next annual meeting following the date of grant and as to 10,000 shares on the date of each of the next two annual meetings.

Also, at each annual meeting of stockholders, each eligible director (other than the Chairman) serving as a member of the Board prior to and immediately after such annual meeting is automatically granted an option to purchase 20,000 shares of Common Stock (whether or not the director is a nominee for election at such annual meeting). This annual option becomes exercisable as to all shares one year from the date of grant.

Upon the initial election of a non-employee director as Chairman of the Board, the non-employee director will be automatically granted an option to purchase 25,000 shares of Common Stock (in addition to the initial option awarded to directors). This initial option becomes exercisable as to 8,334 shares on the date of the Company's next annual meeting following the date of grant and as to 8,333 shares on the date of each of the next two annual meetings.

In addition, at each annual meeting of stockholders, the eligible director serving as Chairman of the Board prior to and immediately after such annual meeting is automatically granted an option to purchase 25,000 shares of Common Stock (whether or not the Chairman is a nominee for election at such annual meeting). This annual option becomes exercisable as to all shares one year from the date of grant.

Pursuant to our 2005 Director Stock Compensation Plan, the Company's non-employee directors may elect to receive in lieu of all or a part of their cash compensation for service as a director, an equivalent amount of Common Stock. As noted in the table above, in 2016 Mr. Barabe and Dr. Loberg received a portion of their director fees in the amount of \$36,142 and \$30,112, respectively, in the form of Common Stock. The number of shares was determined on the date of the payment of director fees based on the closing market price for a share of Common Stock.

COMPENSATION DISCUSSION AND ANALYSIS

The Compensation Committee is responsible for determining the recommended compensation of our named executive officers, including our Chief Executive Officer.

Compensation Philosophy

Guiding Principles:

Our executive compensation program is designed to be closely linked to corporate performance and returns to stockholders. To this end, we have developed an overall compensation strategy and a specific compensation plan that establish competitive base salaries and tie a significant portion of executive compensation to the Company's success in meeting specified and measurable Company-wide performance goals. By using stock options and other stock-based awards, we ensure that part of each executive's compensation is closely tied to the performance of our stock. We believe that a significant part of overall compensation for senior executives should be "at risk," i.e., contingent upon successful implementation of the Company's strategy and achievement of its goals. Individuals with the greatest influence on company-wide performance should have the largest amount of cash benefits and stock-based awards at risk. In our view, a balanced approach to compensation decisions motivates management's efforts to drive positive outcomes in both current and future environments and mitigates the risk that any one incentive could lead executive officers to take actions that are not in our best interests. In addition, the tying of compensation to performance goals that must be achieved in a heavily regulated business environment such as ours adds an additional layer of scrutiny to the Company's actions and lessens greatly the opportunities for individuals to take inappropriate actions without discovery and sanctions.

Objectives:

- To attract and retain the best executive talent available;
- To motivate our executives to achieve the goals inherent in our business strategy;
- To link executive and stockholder interests through equity-based compensation; and
- To provide a compensation package that recognizes corporate performance and individual contributions.

Key compensation elements:

- Base salary;
- Annual performance-based cash bonuses;
- Stock-based incentive awards; and
- Employee benefits.

Each of these elements is described in more detail below.

The Role of the Compensation Committee

The members of the Compensation Committee are currently Michael D. Loberg, William G. Messenger (Chairman), and Patrick J. Zenner. Each of the current members is an "independent director" under Nasdaq listing standards, a "Non-Employee Director" within the meaning of Section 16 of the Exchange Act, and an "outside director" within the meaning of Section 162(m) of the Internal Revenue Code of 1986, as amended (the "Tax Code").

The Compensation Committee advises our Board concerning the Company's compensation philosophy and policies, in general, and, in particular, determines, or recommends to the Board for determination, the compensation of our Chief Executive Officer and other named executive officers and of members of the Board. Recommendations and decisions made by the Compensation Committee are reported to the full Board for approval, endorsement or ratification, as appropriate.

As part of our Board's risk oversight responsibilities, our Compensation Committee reviews the Company's compensation policies and practices as generally applicable to our employees and discusses with management risks created by such policies and practices. Based on that review and discussions with management, and taking into consideration ArQule's risk assessment and risk management policies and procedures, we believe that our compensation policies and procedures do not encourage excessive or unnecessary risk-taking and that the level of risk that they do encourage is not reasonably likely to have a material adverse effect on ArQule.

The Compensation Committee's Process

General

Our Compensation Committee sets the mix of elements of executive compensation to be recommended to the Board for approval including base salary, annual performance-based cash bonuses and stock-based awards for our named executive officers. While the Compensation Committee considers the elements of compensation described below separately, it takes into account the full compensation package afforded to each executive officer in making its recommendations. The Compensation Committee also makes recommendations concerning the appropriate linkage of executive compensation to corporate and individual performance and financial returns to stockholders.

Independent Compensation Consultant

Under its charter, SEC regulations and Nasdaq rules, the Compensation Committee has access to extensive resources and broad discretionary authority to engage compensation consultants and other advisors to assist it in its deliberations. From time to time and on an *ad hoc* basis, as needed, the Compensation Committee retains Radford, an Aon Hewitt Company ("Radford"), as its independent compensation consultant to provide executive compensation advice. The Compensation Committee has assessed Radford's independence and concluded that no conflict of interest exists that would prevent Radford from exercising independent judgment when advising the Compensation Committee.

While the Company pays for the costs of Radford's services, our Compensation Committee has the authority to engage and terminate Radford's engagement. Radford makes recommendations to the Compensation Committee, but has no authority to make compensation decisions on behalf of the Compensation Committee or the Company. Radford attends Compensation Committee meetings either in person or via conference call as deemed appropriate by the Compensation Committee. Our management provides historical data, reviews reports for accuracy and interacts directly with Radford, at the direction of the Compensation Committee. The Compensation Committee, at its discretion, also communicates and meets with Radford without participation of the Company's management. We did not engage Radford for any consulting services in 2016.

The Compensation Committee considers the views of our Chief Executive Officer regarding achievement of individual and departmental objectives of those executives reporting directly to him. Approximately every two years the Compensation Committee reviews peer group compensation data and additional selected compensation data produced by Radford. Our peer group of companies, which we evaluate in conjunction with our review of peer compensation data, is comprised principally of non-commercial, life sciences companies with products in phase 2 or phase 3 clinical trials that Radford has deemed to be most comparable to us in market capitalization and head count. Since we did not conduct a review of peer group compensation data and additional selected compensation data in 2016, we did not compile a list of peer group companies for 2016.

Benchmarking

In general terms on a periodic basis, the Compensation Committee benchmarks total compensation for all of our employees to the median compensation (i.e. 50th percentile) of employees performing similar job functions at biotechnology companies nationally, adjusted for differences in company size, stage of development, location, and performance as a basis for its compensation recommendations. However, we

strongly believe in retaining the best talent among our executive management team. Therefore, we have recommended, and may recommend in the future, total compensation packages for executive management that vary substantially from the median based on factors such as industry experience, scope of responsibility, knowledge, and unique qualifications.

Say-on-Pay

In May 2016 our stockholders cast an advisory vote on the compensation of our named executive officers. The compensation disclosure and analysis and compensation tables in our 2016 proxy statement provided our stockholders with then current information identical in scope with the discussion and analysis and tables in this section.

In the 2016 proxy statement, we stated our belief that our compensation policies and procedures support our business strategy by rewarding successful achievement of specific financial and operational goals and providing performance-based incentives to maximize stockholder value. We also expressed our belief that these policies and procedures are closely aligned with the long-term interests of our stockholders.

Our stockholders endorsed our compensation philosophy with 96% of stockholders' votes cast to approve our named executive officers' compensation. Consequently, our current intention is to continue implementing our existing programs and policies.

Elements of Compensation

Base Salary

Salary levels are considered annually as part of our performance review process, but also in cases including promotion or other change in the job responsibilities of an executive officer. For named executive officers, initial base salaries generally are established in connection with negotiation of an offer of employment and employment agreement. Increases in base salary have several elements. In addition to promotion and increased responsibilities, merit and company-wide general increases are also factored in. Salaries of our named executive officers for 2016 and certain prior years are also reported in the Summary Compensation Table.

The following table shows changes in the annualized base salaries of our named executive officers from 2015 to 2016:

Name and Principal Position	2015 Annualized Base Salary (\$)	2016 Annualized Base Salary (\$)	% Increase	Comment
Paolo Pucci, CEO	489,000	489,000	—	Base salary negotiated in and adjusted per amended employment agreement and annual review.
Peter S. Lawrence, COO	422,000	431,000	2.0	Base salary negotiated in and adjusted per amended employment agreement and annual review.
Dr. Brian Schwartz, CMO	412,000	429,000	4.0	Base salary negotiated in and adjusted per employment agreement and annual review.
Robert J. Weiskopf, CFO	305,000	305,000	—	No increase due to promotion to Chief Financial Officer and Treasurer in June 2015.

Performance-Based Bonuses

Cash bonuses represent a percentage of each named executive officer's salary. In determining the target award opportunity for the bonus of a particular executive, we consider compensation data and level of strategic contribution to the Company's performance. This determination is made at the time an executive officer is hired and generally is one of the negotiated terms of his or her employment agreement.

Adjustments to bonus targets are also considered, subject to the requirements of those employment agreements, as part of the annual review process.

At the beginning of each fiscal year, we set corporate goals at minimum, planned, and maximum levels of performance and weight the goals according to their importance to our corporate strategy. Levels of performance for these goals are expressed as percentages which, when determined by our Compensation Committee and Board following conclusion of the fiscal year, are aggregated to arrive at an overall level of performance for the Company. In determining individual bonus amounts for our named executive officers, our directors take into consideration the Company's overall performance, the named executive officer's achievement of specific individual goals, and the amount of the named executive officer's target bonus.

The following is a summary description of the primary corporate goals for 2016 used to determine performance-based bonuses:

Tivantinib / MET Program

- complete the planned interim analysis of the Phase 3 METIV-HCC trial and determine next steps.

Pipeline Programs

ARQ 092

- complete patient enrollment of Phase 1b expansion cohort with ARQ 092;
- evaluate next steps for ARQ 092 in cancers with AKT1 and PI3K mutations based on Phase 1b results;
- complete Phase 1 trial with ARQ 092 in Proteus syndrome; and
- evaluate next steps for ARQ 092 in Proteus syndrome based on Phase 1 results.

ARQ 087

- complete Phase 2 portion of trial in iCCA;
- evaluate next steps for ARQ 087 in iCCA based on results from the Phase 2.

ARQ 751

- begin a Phase 1 trial in oncology in patients with AKT1 and PI3K mutations for ARQ 751, a next-generation AKT inhibitor

Finance

- end 2016 with a specified amount of cash and marketable securities while meeting all key budget parameters.

Business Development

- conclude one or more business development transactions generating a specified amount of upfront payments.

Following the recommendations of the Compensation Committee, our Board determined that, on a weighted basis, our overall level of performance warranted payment of bonuses at 87% of the bonus target. This determination reflected results with respect to development and finance goals that were at planned performance levels and other development and business development goals that were below planned performance levels. The following table shows percentages of target and actual bonuses paid to our named executive officers.

The following table shows percentages of target and actual bonuses paid to our named executive officers.

Name and Principal Position	2016 Bonus Target (% of Base Salary)	2016 Bonus Actual (% of Base Salary)	Comment
Paolo Pucci, CEO	60.0%	52.2%	Target bonus set by terms of amended employment agreement. Actual bonus 87% of target.
Peter S. Lawrence, COO	45.0%	39.2%	Target bonus set by terms of amended employment agreement. Actual bonus 87% of target.
Dr. Brian Schwartz, CMO	40.0%	34.8%	Target bonus set by terms of employment agreement. Actual bonus 87% of target.
Robert J. Weiskopf, CFO	35.0%	30.5%	Bonus target set by Compensation Committee in accordance with annual standard process. Actual bonus 87% of target.

The amounts of cash bonus awards made to our named executive officers are also reported in the Summary Compensation Table.

Stock-based Awards

Primarily, we have granted stock options and/or shares of restricted stock to our named executive officers under our Amended and Restated 1994 Equity Incentive Plan and our 2014 Equity Incentives Plan approved by stockholders in 2015. It is our current policy to grant stock options and/or shares of restricted stock with an exercise price or share valuation equal to the closing price of our Common Stock as reported by Nasdaq on the date of grant. Options vest over various periods of time, generally four years. Restricted stock awards have restrictions which lapse over various periods of time, also generally four years. We have also awarded performance-based stock units (PSUs), each of which represents a contingent right to receive one share of Common Stock. Under our Amended and Restated 1994 Equity Incentive Plan and our 2014 Equity Incentives Plan and subject to the restrictions contained in those plans, the Compensation Committee has the flexibility to rebalance the vesting terms and performance conditions of these awards as it deems necessary or advisable, e.g., to take into account unforeseen adverse events or clinical developments.

Stock option grants, and awards of restricted stock and stock units, are designed to encourage the creation of stockholder value over the long term since the full benefits of the options and awards cannot be realized unless stock price appreciation is achieved, and, once achieved, is maintained and increased. Accordingly, awards of options, restricted stock and stock units align the interests of executive officers and employees with those of stockholders.

In general, we establish ranges for these grants and awards to our named executive officers based on a number of factors, including data from Radford, the executive's job level, promotions, responsibilities he or she may assume in the upcoming year, responsibilities undertaken in prior years and other considerations deemed appropriate by the Compensation Committee. In determining an executive's annual grant, we apply the results of the Company's annual performance and the executive's individual performance to the applicable range, and then take into consideration any other factors that the Compensation Committee deems relevant.

After consideration of all of these factors, as well as corporate and individual performance, in January 2017 for performance in 2016, we awarded Mr. Pucci an option to purchase 300,000 shares of our Common Stock; Mr. Lawrence, an option to purchase 185,000 shares of our Common Stock, Dr. Schwartz, an option to purchase 130,000 shares of our Common Stock and Mr. Weiskopf, an option to purchase 95,000 shares of our Common Stock. All of these options vest ratably over a four-year period commencing from the date awarded.

The Compensation Committee comes to a recommendation regarding annual stock option awards at a meeting in December prior to the first meeting of the Board in the following calendar year. The effective date for such awards is the date of such meeting of the full Board. At its January meeting, the Board acted upon the recommendations of the Compensation Committee.

Performance-Based Option Awards

On April 4, 2017, the Compensation Committee approved a new stock-based incentive and retention program for certain senior executives. This new program replaces a program previously established by the Committee related to tivantinib performance goals that expired in March of this year.

Under the new program, the Compensation Committee granted participating executives performance-based options (the “Performance-based Options”) at an exercise price of \$ 0.95 per share. Mr. Pucci, Mr. Lawrence, Dr. Schwartz and Mr. Weiskopf have the opportunity to earn options covering up to 600,000, 300,000, 260,000 and 160,000 shares, respectively, under this plan, and another executive has the opportunity to earn options covering up to a total of 110,000 shares. In addition to time-based vesting, the options only will vest and become exercisable if specified performance conditions are satisfied. All of the Performance-based Options have vesting conditions linked to our product candidate development pipeline, with the percentage option vesting ranging from 25% to 100% depending upon the level of our clinical success. In addition, the option grants to Messrs. Pucci and Lawrence are subject to an additional condition tied to our stock price. If the applicable performance conditions are not satisfied within 36 months, the options will terminate.

Other Factors

Each year, prior to arriving at final compensation for the Company’s named executive officers, the Compensation Committee typically considers all other factors that it deems relevant in addition to those listed above. These factors may include the performance of the Company’s stock relative to its peer group as well as other considerations and circumstances. As a result, even in cases where progress against corporate performance goals has been positive and an individual’s performance has been judged as strong, the individual’s compensation may be impacted. For example, our Chief Executive Officer’s realizable pay (base salary and bonus) has been effectively unchanged for five years since its last adjustment in January 2012 despite relatively strong performance against corporate performance goals and high levels of individual performance during that period. The Compensation Committee will continue to exercise this type of discretion in situations where it is deemed appropriate.

Employment Agreements

ArQule generally enters into employment agreements with its named executive officers. Typically, these agreements are offered in connection with recruiting executive officers when ArQule deems it necessary or appropriate to attract, incentivize and retain new hires. Agreements of this type exist to establish initial salary and bonuses, benefits, initial option grants, reporting lines, and change of control and related severance provisions, among other things. Mr. Pucci, Mr. Lawrence and Dr. Schwartz have such agreements.

Other Elements of Compensation and Perquisites

We provide our named executive officers with certain benefits and perquisites. In general, we provide these benefits on the same terms as those applicable to all of our other employees. Any non-recurring benefit or program such as housing allowance or relocation costs, will be reported as “All Other Compensation” in the Summary Compensation Table. The primary benefits are:

- health (medical, dental and vision) insurance for which the Company pays a portion of the premiums;
- a life insurance benefit equivalent to two times base salary up to a maximum of \$400,000 for which the Company pays the premiums;
- long-term disability insurance equal to 60% of base salary up to \$15,000 per month, the premiums for which are paid by the Company with the amount of the premiums being included in the taxable compensation of employees;

- if necessary in given circumstances to attract management talent, housing allowances and relocation costs;
- a retirement plan (401(k) Plan) under which an employee can choose to contribute up to 60% (subject to Tax Code limits) of compensation on a pre-tax basis with a matching contribution from the Company of \$0.50 for each \$1.00 contributed up to the first 6% of compensation;
- a tax-qualified stock purchase plan which permits participants to acquire shares of Common Stock at a price that is 85% of the stock price on either the first day or last day of the designated offering period (generally six months), whichever is lower; and
- tuition reimbursement up to \$3,000 per year for undergraduate courses and \$6,000 for graduate courses.

Currently, the Company does not have a nonqualified deferred compensation plan, a pension plan, or other defined benefit plan. In addition, the Company does not have a policy on adjustments to, or recovery of, awards if the performance measures on which they were based are adjusted or restated.

Potential Payments to Named Executive Officers upon Termination or Change of Control

The employment agreements of Mr. Pucci, Mr. Lawrence and Dr. Schwartz provide for certain payments to be made to them in the event that their employment with the Company is, or is deemed to be (as provided in the employment agreements), terminated without “cause.” Severance benefits are an important tool in attracting and retaining key employees, and provide a degree of financial security to such employees where their employment is terminated through no fault of their own. Each of the agreements also provides for acceleration of vesting of the executive’s stock-based awards in certain circumstances following the occurrence of a change of control of the Company. We believe that it is generally appropriate to vest stock-based awards to key employees in a change of control transaction, as such a transaction may often result in the elimination or reduction of the employee’s ability to realize value from his or her options.

For information regarding the severance and change of control benefits provided to Mr. Pucci, Mr. Lawrence and Dr. Schwartz under their employment agreements, see “Payments upon Termination or Change of Control”.

Tax Considerations

If an executive is entitled to nonqualified deferred compensation benefits that are subject to Section 409A of the Tax Code, and such benefits do not comply with Section 409A, the executive would be subject to adverse tax treatment, including accelerated income recognition (in the first year that benefits are no longer subject to a substantial risk of forfeiture) and an additional income tax of 20% of the amount so recognized. The employment agreements of our named executive officers described herein contain provisions intended to limit or eliminate adverse tax consequences through timing of payments.

Section 162(m) of the Tax Code generally denies a deduction to any publicly held corporation for compensation paid to its named executive officers to the extent that any such individual’s compensation exceeds \$1 million, subject to certain exceptions, including one for “performance-based compensation.” Generally, the Compensation Committee seeks to maximize executive compensation deductions for federal income tax purposes. However, certain awards under the Company’s Amended and Restated 1994 Equity Incentive Plan and 2014 Equity Incentives Plan may result in an amount of compensation not being deductible under Section 162(m) of the Tax Code. At the Company’s present stage of development, management and the Compensation Committee believe that the loss of a deduction is not significant to the Company. Management and the Compensation Committee take the issue of deductibility into consideration as our Amended and Restated 1994 Equity Incentive Plan, 2014 Equity Incentives Plan and other benefit plans are updated. The Compensation Committee believes that none of the Company’s named executive officers received compensation in 2016 that was nondeductible under Section 162(m) of the Tax Code.

COMPENSATION COMMITTEE REPORT

The Compensation, Nominating and Governance Committee of the Board of Directors of ArQule, Inc., composed entirely of independent directors in accordance with applicable laws, regulations, Nasdaq rules and listing requirements and our governance guidelines, sets and administers policies that govern the Company's executive compensation programs and various incentive and stock programs. The Compensation, Nominating and Governance Committee has reviewed and discussed the Compensation Discussion and Analysis with the management of ArQule, Inc. Based on this review and discussion, the Committee recommended to the full Board of Directors that the Compensation Discussion and Analysis be included in this Proxy Statement.

Submitted by the Compensation,
Nominating and Governance Committee,

William G. Messenger, Chairman
Michael D. Loberg
Patrick J. Zenner

EXECUTIVE COMPENSATION

The table and text below describe the cash and additional incentive compensation paid to the Company's Chief Executive Officer, President and Chief Operating Officer (principal financial officer for SEC reporting purposes), Chief Medical Officer and Chief Financial Officer (the "named executive officers") for the fiscal periods indicated.

SUMMARY COMPENSATION TABLE

The following table summarizes total compensation earned during the fiscal years ended December 31, 2016, 2015 and 2014 by each of our named executive officers:

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock	Option	Non-Equity	All Other	Total (\$)
		(1)		Awards (\$)	Awards (\$)	Incentive Plan	Compensation (\$)	
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
Paolo Pucci	2016	489,345	—	—	548,208	255,438	8,550	1,301,541
Chief Executive Officer	2015	489,345	—	—	285,948	293,607	8,550	1,077,450
	2014	489,345	—	—	532,134	249,566	8,400	1,279,445
Peter S. Lawrence	2016	430,286	—	—	274,104	168,597	8,550	881,536
President, Chief Operating	2015	421,562	—	—	160,571	189,990	8,550	780,673
Officer, General Counsel and Secretary	2014	413,921	—	—	245,130	158,325	8,400	825,776
Dr. Brian Schwartz	2016	428,001	—	—	237,557	149,187	8,550	823,295
Chief Medical Officer and	2015	410,991	—	—	107,780	164,884	8,550	692,205
Senior Vice President	2014	394,597	—	—	185,811	134,761	8,400	723,569
Robert J. Weiskopf(5)	2016	305,000	—	—	137,052	92,873	8,550	543,475
Chief Financial Officer and Treasurer	2015	288,372	—	—	91,876	106,750	8,550	495,548

- (1) The amounts in this column include compensation earned but deferred at the election of the named executive officer, under the Company's retirement savings plan established under Section 401(k) of the Tax Code.
- (2) This column reflects the aggregate grant date fair values for all option awards granted during the fiscal year. Assumptions used in the calculation of these amounts are included in Note 2 to the Company's audited financial statements for the year ended December 31, 2016, included in the Company's 2016 Annual Report on Form 10-K. Additional information regarding stock options issued to the named executive officers is provided in the table "Outstanding Equity Awards at Fiscal Year-End".
- (3) Represents bonus amounts earned under our annual incentive program for 2016 and paid in the first quarter of 2017. Additional information regarding the annual incentive program is provided in "Compensation Discussion and Analysis—Performance-Based Bonuses".
- (4) In 2016, for each named executive officer, the amount includes the Company's contributions to a 401(k) plan account for the executive and payment of group term life insurance and long-term disability premiums.
- (5) Mr. Weiskopf was appointed as our Chief Financial Officer and Treasurer on June 1, 2015.

EMPLOYMENT AGREEMENTS

The Company is party to employment agreements with several of its named executive officers. A summary of the material terms of these agreements follows below. For information regarding the post-employment and change of control benefits provided by these agreements, see “Payments upon Termination or Change of Control”.

Employment Agreement with Paolo Pucci

Mr. Pucci’s employment agreement, as amended, provides that the Company will employ Mr. Pucci as its Chief Executive Officer at a base salary of \$475,000. The base salary is subject to annual review and upward adjustment by the Company. Mr. Pucci is also eligible to receive a discretionary annual cash bonus based on a target amount of 60% of his base salary. The award of a bonus is in the discretion of the Board based on Company and individual performance. The agreement also establishes the vesting conditions for performance-based stock units (PSUs) that were awarded to Mr. Pucci and provides that all such PSUs will be subject to accelerated vesting if Mr. Pucci is terminated or deemed terminated without cause in connection with a change of control of the Company.

Employment Agreement with Peter S. Lawrence

Mr. Lawrence’s employment agreement, as amended, provides that the Company will employ Mr. Lawrence as President and Chief Operating Officer at an initial base salary of \$375,000 per year. The base salary is subject to annual review and upward adjustment by the Company. Mr. Lawrence is also eligible to receive a discretionary annual cash bonus based on a target amount of 40% of his base salary. The award of a bonus is in the discretion of the Company’s Board based on Company and individual performance. The agreement also establishes the vesting conditions for PSUs that were awarded to Mr. Lawrence and provides that all such PSUs will be subject to accelerated vesting if Mr. Lawrence is terminated or deemed terminated without cause in connection with a change of control of the Company.

Employment Agreement with Brian Schwartz

Dr. Schwartz’s employment agreement, as amended, provides that the Company will employ Dr. Schwartz as its Chief Medical Officer at an initial base salary of \$325,000. The base salary is subject to annual review and upward or downward adjustment by the Company. Dr. Schwartz is also eligible to receive a discretionary annual cash bonus based on a target amount of 35% of base salary. The award of a bonus is in the discretion of the Company’s Board based on Company and individual performance. The agreement also establishes the vesting conditions for PSUs that were awarded to Mr. Schwartz and provides that all such PSUs will be subject to accelerated vesting if Mr. Schwartz is terminated or deemed terminated without cause in connection with a change of control of the Company.

GRANTS OF PLAN-BASED AWARDS FOR FISCAL YEAR 2016

The following table sets forth certain information with respect to awards granted during the fiscal year ended December 31, 2016 to our named executive officers under our equity and non-equity incentive plans.

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1)			All Other Option Awards: Number of Securities Underlying Options (#)	Grant Date Fair Value of Stock and Option Awards(2) (\$)
		Threshold (\$)	Target (\$)	Maximum (\$)		
Paolo Pucci	N/A	—	299,479	449,219		
	1/19/2016				480,000	548,208
Peter S. Lawrence	N/A	—	201,541	302,311		
	1/19/2016				240,000	274,104
Dr. Brian Schwartz	N/A	—	178,339	267,508		
	1/19/2016				208,000	237,557
Robert J. Weiskopf	N/A	—	126,880	190,320		
	1/19/2016				120,000	137,052

(1) The threshold amount under the cash bonus program is zero. The target amount is based on the individual's current salary. The target represents 60%, 45%, 40% and 40% of the base salaries of Mr. Pucci, Mr. Lawrence, Dr. Schwartz and Mr. Weiskopf, respectively. The maximum amount is 150% of the target amount.

(2) The dollar amount for PSUs is calculated as the number of PSUs granted times the market price on the date of award.

OUTSTANDING EQUITY AWARDS AT 2016 FISCAL YEAR-END

The following table sets forth certain information with respect to the value of all unexercised options previously awarded to our named executive officers as of December 31, 2016:

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#)(1) Exercisable	Number of Securities Underlying Unexercised Options (#)(1) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Equity Incentive Plan Awards: Number of Shares, Units or Other Rights that Have Not Vested	Equity Incentive Plan Awards: Market or Payout Value of Shares, Units or Other Rights that Have Not Vested(2)
Paolo Pucci	500,000(3)		\$ 3.95	6/9/2018		
	225,000		3.42	1/21/2020		
	100,000		4.14	7/15/2020		
	300,000		6.70	1/24/2021		
	315,000		7.95	2/1/2022		
	213,750	71,250	2.51	1/14/2023		
	152,500	152,500	2.57	1/22/2024		
	2	292,500	1.16	1/20/2025		
		480,000	1.79	1/19/2026		
					390,000(4)	\$ 1,614,600
Peter S. Lawrence	50,000		6.16	1/16/2017		
	100,000		7.56	10/4/2017		
	200,000		4.75	1/17/2018		
	130,000		3.42	1/21/2020		
	130,000		6.70	1/24/2021		
	25,000		6.70	1/24/2021		
	147,750		7.95	2/1/2022		
	92,625	30,875	2.51	1/14/2023		
	70,250	70,250	2.57	1/22/2024		
	42,250	126,750	1.16	1/20/2025		
	12,500	37,500	1.16	1/20/2025		
		240,000	1.79	1/19/2026		
					6,250(5)	\$ 15,688
					125,000(6)	\$ 307,500
Dr. Brian Schwartz	200,000		3.62	7/14/2018		
	90,000		3.42	1/21/2020		
	90,000		6.70	1/24/2021		
	50,000		6.70	1/24/2021		
	109,500		7.95	2/1/2022		
	64,125	21,375	2.51	1/14/2023		
	53,250	53,250	2.57	1/22/2024		
	29,250	87,750	1.16	1/20/2025		
	7,500	22,500	1.16	1/20/2025		
		208,000	1.79	1/19/2026		
					50,000(7)	\$ 375,000
					7,500	\$ 18,825
					120,000(8)	\$ 295,200

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options (#)(1) Exercisable	Number of Securities Underlying Unexercised Options (#)(1) Unexercisable	Option Exercise Price (\$)	Option Expiration Date	Equity Incentive Plan Awards: Number of Shares, Units or Other Rights that Have Not Vested	Equity Incentive Plan Awards: Market or Payout Value of Shares, Units or Other Rights that Have Not Vested(2)
Robert J. Weiskopf	30,000		6.81	2/19/2017		
	22,500		4.75	1/17/2018		
	45,000		3.42	1/21/2020		
	45,000		6.70	1/24/2021		
	40,500		7.95	2/01/2022		
	32,062	10,688	2.51	1/14/2023		
	24,125	24,125	2.57	1/22/2024		
	14,625	43,875	1.16	1/20/2025		
	5,000	15,000	1.16	1/20/2025		
	7,500	22,500	1.80	6/01/2025		
		120,000	1.79	1/19/2026		
					3,200(9)	\$ 8,032

- (1) Except as otherwise noted, each option award vests at the rate of one-fourth of the underlying shares annually beginning on the anniversary of the date of grant.
- (2) Market value is calculated as the number of shares of unvested stock awarded times the market price on the date of award.
- (3) In accordance with Mr. Pucci's employment agreement dated as of April 15, 2008, Mr. Pucci was granted an option to purchase 500,000 shares of the Company's Common Stock, of which 125,000 vested on June 9, 2008, and 125,000 vested on the anniversary of the date of grant for the following three years.
- (4) PSUs granted in tranches of 300,000 that vest upon the achievement of certain performance targets related to the development of the Company's products and 90,000 units that vest only after satisfaction of the development target and a performance target based on the average price of the Company's Common Stock.
- (5) Shares of restricted stock that vest ratably over four years.
- (6) PSUs will vest if, during the course of Mr. Lawrence's employment with the Company, a certain performance goal related to the development of the Company's products is achieved by a date specified by the Compensation Committee.
- (7) PSUs will vest if, during the course of Dr. Schwartz's employment with the Company, a certain performance goal related to the development of the Company's products is achieved by a date specified by the Compensation Committee.
- (8) Shares of restricted stock that vest ratably over four years.
- (9) Shares of restricted stock that vest ratably over four years.

OPTION EXERCISES AND STOCK VESTED IN FISCAL YEAR 2016

The table below sets forth certain information regarding stock option exercises and vested stock awards for the Company's executive officers during the last fiscal year.

Name	Option Awards		Stock Awards	
	Number of Securities Acquired on Exercise	Value Realized Upon Exercise (\$)	Number of Shares Acquired on Vesting	Value Realized on Vesting (\$)(1)
Paolo Pucci	97,498	173,546	—	—
Peter S. Lawrence	—	—	6,250	11,625
Dr. Brian Schwartz	—	—	7,500	13,950
Robert J. Weiskopf	—	—	3,200	5,952

- (1) On January 14, 2013, Mr. Lawrence, Dr. Schwartz and Mr. Weiskopf were awarded 25,000, 30,000 and 12,799 shares of restricted stock, respectively, the restrictions on 25% of which lapsed on each of the next four anniversaries of the award date. The fair market value of the Company's Common Stock was \$1.86 on January 14, 2016.

PAYMENTS UPON TERMINATION OR CHANGE OF CONTROL

The Company has employment agreements with Mr. Pucci, Mr. Lawrence and Dr. Schwartz. Each of these employment agreements provides for the payment of severance and change of control benefits. The following discussion and table provide information about the severance and change of control provisions of these employment agreements, and are qualified by reference to the full text of the agreements, as amended, each of which is on file with the SEC.

The following terms are used in the discussion below:

- “*Change of Control*” means any of the following:
 - the acquisition by any person or entity of our Common Stock so that such person or entity holds or controls 50% or more of our outstanding Common Stock;
 - the merger or consolidation of the Company with or into any other entity in circumstances where the holders of the Company's outstanding shares of capital stock before the transaction do not retain stock representing a majority of the voting power of the surviving entity;
 - a sale of all or substantially all of the assets of the Company to a third party;
 - within any 24-month period, the election by the Company's stockholders of 20% or more of the Company's directors other than pursuant to nomination by management; or
 - the execution of an agreement approved by the Board providing for any of the above.
- “*Cause*” means any of the following:
 - arbitrary, unreasonable, or willful failure of the executive to follow the reasonable instructions of the Chief Executive Officer (or, in the case of the Chief Executive Officer, the Board), or otherwise perform his or her duties;
 - willful misconduct by the executive that is materially injurious to the Company;
 - willful commission by the executive of an act constituting fraud with respect to the Company;
 - conviction of the executive for a felony under state or federal law; or
 - material breach by the executive of his or her obligations to the Company regarding confidentiality of information or rights in intellectual property.

- Termination “*without Cause*” means any of the following occurrences:
 - the Company terminates the executive’s employment without Cause; or
 - the executive terminates his employment upon the occurrence of any of the following: (a) the Company substantially reduces or diminishes the executive’s responsibilities or title without cause; (b) the Company reduces the executive’s base salary or bonus target (other than in connection with a Company-wide decrease in salary or bonus, respectively); (c) the Company materially breaches any of its obligations to the executive under his or her employment agreement, and fails to cure such breach; (d) the Company relocates the executive’s place of employment without his or her consent by a distance of more than fifty (50) miles; or (e) a successor in interest to the Company fails to assume the obligations of the employment agreement.
- In the case of Mr. Pucci, Termination without Cause shall also occur if, following a Change of Control, the executive terminates his employment:
 - because the executive is unable to have direct responsibility for the Company’s fully-integrated profit and loss statement (whether as a stand-alone entity or as a division or other business unit of some other acquiring entity); or
 - because of the exclusion from, or failure to appoint the executive to, the board of directors, or the executive committee, management committee or equivalent corporate managerial body of senior executives, of the acquiring company.

Employment Agreement with Paolo Pucci

Mr. Pucci’s agreement, as amended, provides for continued employment until April 4, 2020. If Mr. Pucci is terminated without Cause, the Company will be required to pay Mr. Pucci an amount equal to twenty-four months of his base salary in effect at the time of termination, plus an amount equal to the total of bonuses paid to him with respect to the two years preceding the year in which he is terminated. These amounts will be paid in substantially equal installments according to the Company’s normal payroll schedule during the twenty-four month period following termination. In addition, the Company will, at its expense, continue to provide Mr. Pucci with certain employee benefits for a period of twenty-four months from the date of termination. Finally, all of Mr. Pucci’s unvested stock options and restricted stock that would have become exercisable or vested within one year from the termination date will immediately become exercisable or vested free of restrictions without regard to the original vesting schedule. The employment agreement further provides that, if the Company terminates (or is deemed to terminate) Mr. Pucci’s employment with the Company without Cause within one year following a Change of Control of the Company, in addition to the severance benefits described above, any then unvested stock options will become immediately exercisable without regard to the original vesting schedule and any shares of restricted stock previously granted shall immediately be free and clear of any restrictions.

Employment Agreement with Peter S. Lawrence

Mr. Lawrence’s employment agreement, as amended, provides for continued employment until April 4, 2020. If Mr. Lawrence is terminated without Cause, he is entitled, subject to the execution of a general release of claims, to a lump sum severance payment equal to twelve months’ base salary as of the date of termination, plus the average of the annual performance bonuses that he received in the preceding two years. In addition, 50% of any then unvested options that were granted at the time that the employment agreement was originally executed will become immediately exercisable on the termination date, and the Company will pay, for the twelve-month period following the date of termination, the cost of continuing the health and other employee benefits that Mr. Lawrence is entitled to receive under his employment agreement at the level in effect as of the termination date. The employment agreement further provides that, if the Company terminates (or is deemed to terminate) Mr. Lawrence’s employment with the Company without Cause within one year following a Change of Control of the Company, in addition to the severance benefits described above, any then unvested options held by Mr. Lawrence will become immediately exercisable and any shares of restricted stock previously granted shall immediately be free and clear of any restrictions.

Employment Agreement with Brian Schwartz

Dr. Schwartz's employment agreement provides for continued employment until April 4, 2020. If Dr. Schwartz is terminated without Cause, he is entitled, subject to the execution of a general release of claims, to a severance payment equal to twelve months' base salary as of the date of termination, plus the average of the annual performance bonuses that he received in the preceding two years. This amount will be paid in substantially equal installments according to the Company's normal payroll schedule during the twelve-month period following termination. In addition, the Company will pay, for the 12-month period following the date of termination, the cost of continuing the benefits that Dr. Schwartz is entitled to receive under his employment agreement at the level in effect as of the termination date. The employment agreement further provides that, if the Company terminates (or is deemed to terminate) Dr. Schwartz's employment with the Company without Cause within one year following a Change of Control of the Company, in addition to the severance benefits described above, any then unvested stock options will become immediately exercisable without regard to the original vesting schedule and any shares of restricted stock previously granted shall immediately be free and clear of any restrictions.

The following table sets forth information with respect to compensation that would have been payable to Mr. Pucci, Mr. Lawrence and Dr. Schwartz if the named executive officer's employment had been terminated without Cause as of December 31, 2016 immediately following a Change of Control of the Company:

Name	Cash Payment(1) (\$)	Equity Acceleration(2) (\$)	Benefits and Perquisites(3) (\$)	Total (\$)
Paolo Pucci	\$1,521,863	530,400	\$27,617	\$2,079,880
Peter S. Lawrence	624,432	181,800	27,617	833,849
Dr. Brian Schwartz	600,178	234,675	27,617	862,470

-
- (1) For Mr. Pucci, the cash payment is calculated as the sum of an amount equal to two times his annual salary as of December 31, 2016, plus a bonus payment equal to the sum of the 2015 and 2016 bonuses. For each of Mr. Lawrence and Dr. Schwartz, the cash payment is calculated as the sum of the executive's annual salary as of December 31, 2016, plus a bonus payment equal to 45% and 40%, respectively, of annual salary.
- (2) For Mr. Pucci, the equity acceleration is calculated as the product of the number of his 390,000 PSUs times the market value of our Common Stock as of December 31, 2016. For Mr. Lawrence, the equity acceleration is calculated as the product of the number of his 125,000 PSUs plus his 18,750 shares of restricted stock times the market value of our Common Stock as of December 31, 2016. For Dr. Schwartz, the equity acceleration is calculated as the product of the number of his 170,000 PSUs plus his 22,500 shares of restricted stock times the market value of our Common Stock as of December 31, 2016.
- (3) Reflects the premiums for twelve months for group medical, dental, life and disability programs. Amounts are based on the premiums in effect at December 31, 2016.

REPORT OF THE AUDIT COMMITTEE

In the course of its oversight of the Company's financial reporting process, the Audit Committee of the Board of Directors has:

- reviewed and discussed with management the Company's audited financial statements for the fiscal year ended December 31, 2016;
- discussed with our independent registered public accounting firm, PricewaterhouseCoopers LLP, matters required to be discussed under Public Company Accounting Oversight Board standards;
- received the written disclosures and the letter from PricewaterhouseCoopers LLP pursuant to applicable requirements of the Public Company Accounting Oversight Board regarding the independent accountant's communications with the Audit Committee concerning independence;
- discussed with PricewaterhouseCoopers LLP the firm's independence; and
- considered whether the provision of non-audit services by PricewaterhouseCoopers LLP is compatible with maintaining independence.

Based on the foregoing review and discussions, the Audit Committee recommended to the Board of Directors that the Company's audited financial statements be included in the Company's Annual Report on Form 10-K for the year ended December 31, 2016 for filing with the SEC.

By the Audit Committee,

Timothy C. Barabe, Chairman
William G. Messenger
Patrick J. Zenner

**PROPOSAL 2—RATIFICATION OF SELECTION OF INDEPENDENT
REGISTERED PUBLIC ACCOUNTING FIRM**

We are asking our stockholders to ratify the selection by our Audit Committee of PricewaterhouseCoopers LLP, as our independent registered public accounting firm for the fiscal year ending December 31, 2017. PricewaterhouseCoopers LLP has audited our financial statements since our inception.

The Audit Committee of our Board selected PricewaterhouseCoopers LLP to audit our financial statements and internal control over financial reporting for the year ending December 31, 2017. We expect that representatives of PricewaterhouseCoopers LLP will attend our Annual Meeting to respond to appropriate questions. They will also have the opportunity to make a statement if they so desire. PricewaterhouseCoopers LLP has no direct or indirect financial interest in the Company or in any of its subsidiaries, nor has it had any connection with the Company or any of its subsidiaries in the capacity of promoter, underwriter, voting trustee, director, officer or employee.

The following table presents fees billed and expected to be billed for professional audit and audit related services rendered by PricewaterhouseCoopers LLP for fiscal years 2016 and 2015.

	<u>2016</u>	<u>2015</u>
Audit Fees	\$471,500	\$410,000
Audit-Related Fees	—	—
Tax Fees	—	—
All Other Fees	—	—
Total	<u>\$471,500</u>	<u>\$410,000</u>

“Audit Fees” are fees for the audit of our financial statements and internal controls over financial reporting, included in our Annual Reports on Form 10-K, the review of interim financial statements included in our Quarterly Reports on Form 10-Q, other services normally associated with statutory and regulatory filings or engagements, and services that generally only the principal auditor can reasonably provide to a client, such as comfort letters, consents and assistance with review of documents to be filed with the SEC. In 2016, these fees included \$21,500 incurred in connection with the filing with the SEC of a prospectus supplement in March 2016 and a Form S-3 in September 2016, and \$30,000 incurred in connection with the filing of a Form 8-K with the SEC in October 2016.

The Audit Committee pre-approves each proposed service by PricewaterhouseCoopers LLP on a case-by-case basis. The Audit Committee does not have any pre-approval policies or procedures for PricewaterhouseCoopers LLP’s services. The Audit Committee approved 100% of the audit and audit-related services PricewaterhouseCoopers LLP provided to us in 2016 and 2015.

The affirmative vote of a majority of the total votes cast by the stockholders present at the Annual Meeting, in person or by proxy, and entitled to vote on this proposal is necessary to ratify the selection of PricewaterhouseCoopers LLP to audit our financial statements. If you submit a proxy without direction as to a vote on this matter, your proxy will be treated as a vote “FOR” this proposal. Abstentions will have no effect on this proposal.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THIS PROPOSAL.

**PROPOSAL 3—ADVISORY VOTE ON APPROVAL OF THE COMPENSATION OF
THE COMPANY’S NAMED EXECUTIVE OFFICERS**

The SEC’s proxy rules permit our stockholders to cast an advisory vote on the compensation of our named executive officers as described in this proxy statement. Furthermore, our Board recognizes that stockholders have a legitimate interest in executive compensation matters and a growing interest in voicing their approval on our policies with respect to such matters.

Accordingly, this proposal gives you, as a stockholder, the opportunity to endorse or not endorse our overall compensation programs and policies relating to our named executive officers, as described in detail in the Compensation Discussion and Analysis, the Summary Compensation Table and related compensation tables (and accompanying narrative disclosures) contained in this proxy statement, by voting for or against the compensation of our named executive officers. The affirmative vote of a majority of the total votes cast by the stockholders present at the Annual Meeting, in person or by proxy, is necessary to approve this proposal.

Your vote will not directly affect or otherwise limit any compensation or award arrangements that have already been granted to any of our named executive officers. Because your vote is advisory, it will not be binding on the Board. However, our Compensation Committee will take into account the outcome of the vote when considering future executive compensation arrangements.

We believe that our compensation policies and procedures support our business strategy by rewarding successful achievement of specific business goals, as well as our operating and financial results. Furthermore, we believe that our compensation policies and procedures, which provide performance-based incentives to maximize stockholder value, are strongly aligned with the long-term interests of our stockholders.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE “FOR” THIS PROPOSAL.

**PROPOSAL 4—ADVISORY VOTE REGARDING
THE FREQUENCY OF STOCKHOLDER VOTES ON EXECUTIVE COMPENSATION**

The SEC’s proxy rules permit our stockholders to express their views on how frequently the advisory vote on executive compensation described in Proposal 3 should occur. Stockholders can advise the Board on whether such vote should occur every year, every two years or every three years, or they may abstain from voting.

This is an advisory vote, and as such is not binding on the Company. However, the Board will take the results of the vote into account in deciding when to call for the next advisory vote on the Company’s executive compensation. Because this is a non-binding advisory vote, the Board may decide that it is in the best interests of the Company and its stockholders to hold an advisory vote on executive compensation more or less frequently than the option preferred by stockholders

The Board recommends that the non-binding advisory vote on executive compensation be held every year. The Board recognizes that stockholders want the ability to voice their views on compensation for our named executive officers from time-to-time. The Board believes that it is in the Company’s best interest and in the best interest of its stockholders that a vote on the frequency of stockholder votes on executive compensation be held every year.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE FOR “EVERY YEAR” FOR THIS PROPOSAL.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Review and Approval of Related Person Transactions

Pursuant to our written Conflict of Interest Policy, no director, director nominee, or executive officer may enter into any transaction or relationship that is disclosable by the Company pursuant to SEC Regulation S-K, Item 404, without the prior approval of the disinterested members of our Compensation Committee. No director or executive officer may directly or indirectly approve, or represent the Company or the other party in arranging, the terms of any transaction between the Company and a party with which he/she has any relationship of a type that is disclosable by the Company pursuant to Item 404. All transactions between ArQule and a party with which a director or executive officer has such a relationship shall be on an arm's length basis.

Relationships or transactions disclosable under Item 404 may be deemed acceptable and appropriate upon full disclosure of the relationship or transaction, review of all of the relevant factors, including those specified in our Conflict of Interest Policy, and approval by the disinterested members of our Compensation Committee.

Certain Relationships and Related Party Transactions

There is no amount due to or from a related party as of December 31, 2016 and there was no revenue from a related party in 2016.

SHARE OWNERSHIP OF CERTAIN BENEFICIAL OWNERS

The following table and footnotes set forth certain information regarding the beneficial ownership of the Company's Common Stock by persons known by us based on required filings made by the holders with the SEC to be beneficial owners of more than 5% of our Common Stock as of March 31, 2017.

We had approximately 71,146,597 shares of Common Stock outstanding as of March 31, 2017.

Name	Common Stock Owned	Options to Purchase Common Stock	Total Stock and Stock-based Holdings	Percent of Class
First Eagle Investment Management, LLC(1) 1345 Avenue of the Americas New York, NY 10105	10,912,733	—	10,912,733	15.3%
Nantahala Capital Management, LLC(2) 19 Old Kings Highway S, Suite 200 Darien, CT 06820	9,333,541	—	9,333,541	13.1%
BVF Partners, LP(3) 900 North Michigan Avenue, Suite 1100 Chicago, IL 60611	7,400,128	—	7,400,128	10.4%
IGlobe Capital LLC(4) 245 First Street Riverview II, 18th Floor Cambridge, MA 02142	3,956,171	—	3,956,171	5.6%

(1) These shares are beneficially owned by First Eagle Investment Management, LLC based on the Schedule 13G/A it filed with the SEC on February 6, 2017 and the records of the Company relating to its March 2, 2016 financing. The percentage of ownership is calculated as of March 31, 2017. According to the Schedule 13G/A filed with the SEC on February 6, 2017, First Eagle Investment Management, LLC has sole voting power and sole dispositive power over all of the shares.

(2) These shares are beneficially owned by Nantahala Capital Management, LLC and persons associated with it based on the Amendment to Schedule 13G filed with the SEC on February 14, 2017. The

percentage of ownership is calculated as of March 31, 2017. According to the Schedule 13G Amendment, Nantahala Capital Management, LLC and persons associated with it have shared voting power and shared dispositive power over all of the shares.

- (3) These shares are beneficially owned by BVF Partners, LP and persons associated with it based on the Schedule 13G Amendment it filed with the SEC on February 14, 2017 and the records of the Company relating to its March 2, 2016 financing. The percentage of ownership is calculated as of March 31, 2017. According to the Schedule 13G Amendment, BVF Partners, LP and persons associated with it have shared voting power and shared dispositive power over all of the shares.
- (4) These shares are beneficially owned by 1Globe Capital LLC based on the Schedule 13G/A it filed with the SEC on February 15, 2017. The percentage of ownership is calculated as of March 31, 2017. According to the Schedule 13G/A, 1Globe Capital LLC has sole voting power and sole dispositive power over all of the shares.

The following table and footnotes set forth certain information regarding the beneficial ownership of the Company's Common Stock as of March 31, 2016 by (i) our directors, (ii) our named executive officers, and (iii) all directors and executive officers as a group. Shares of Common Stock underlying options include shares for which options are currently exercisable or will become exercisable within 60 days after March 31, 2016. Those options are deemed to be outstanding for computing the percentage of the person or group holding such options, but are not deemed outstanding for computing the percentage of any other person or group.

Directors and Executive Officers(1)	Common Stock Owned	Options to Purchase Common Stock	Total Stock and Stock-based Holdings	Percent of Class
Timothy C. Barabe(2)	136,897	140,000	276,897	*
Susan L. Kelley	50,000	125,000	175,000	*
Ronald M. Lindsay	20,000	140,000	160,000	*
Michael D. Loberg	157,522	140,000	297,522	*
William G. Messenger	10,000	140,000	150,000	*
Patrick J. Zenner	73,770	220,000	293,770	*
Peter S. Lawrence	77,743	1,131,125	1,208,868	1.7%
Paolo Pucci	424,065	2,171,252	2,595,317	3.6%
Brian Schwartz	63,886	830,375	894,261	1.3%
Robert J. Weiskopf	30,407	338,687	369,094	*
Directors and executive officers as a group (10 persons)	<u>1,044,290</u>	<u>5,376,439</u>	<u>6,420,729</u>	<u>9.0%</u>

* Indicates less than 1%.

- (1) The persons named in the table have sole voting and investment power with respect to the shares beneficially owned by them, except as noted below or as otherwise provided under community property laws. Total Stock and Stock-based Holdings numbers include shares of Common Stock issuable pursuant to outstanding options that may be exercised within 60 days after March 31, 2017.
- (2) Mr. Barabe disclaims any direct, indirect or beneficial ownership of 420 shares of Common Stock owned by his spouse.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Our executive officers and directors and persons who beneficially own more than 10% of a registered class of our equity securities are required under Section 16(a) of the Exchange Act to file reports of ownership and changes in ownership of our securities with the SEC. Copies of those reports must also be furnished to us, unless we and the person reporting have agreed that we will file on his or her behalf pursuant to a power of attorney.

We file reports required under Section 16(a) on behalf of all our directors and officers pursuant to powers of attorney. Based solely on a review of the copies of reports furnished to, or filed by, us and written representations that no other reports were required, we believe that during 2016, our executive officers and directors and persons who beneficially own more than 10% of a registered class of our equity securities complied with all applicable Section 16(a) filing requirements.

STOCKHOLDER PROPOSALS

If you wish to bring business before the 2018 Annual Meeting of Stockholders and have your proposal included in the proxy statement and card for that meeting, you must give written notice to ArQule by December 14, 2017, provided that the 2018 Annual Meeting of Stockholders is within 30 days of May 23, 2018 (December 14, 2017 being the date 120 days before the anniversary of the date the 2017 proxy statement was mailed to stockholders).

If you intend to bring such a proposal at the 2018 Annual Meeting outside the SEC's stockholder proposal rules, or wish to propose a director nomination at the 2018 Annual Meeting, you must provide written notice to ArQule of such proposal or nomination by March 9, 2018 (the date 75 days before the anniversary of the 2017 Annual Meeting).

Notices of stockholder proposals and nominations should be given in writing to:

Peter S. Lawrence
President and Chief Operating Officer
ArQule, Inc.
One Wall Street
Burlington, Massachusetts 01803-4757

OTHER MATTERS

Our Board does not know of any business to come before the Annual Meeting other than the matters described in the Notice of Annual Meeting. If other business is properly presented for consideration at the meeting, the enclosed proxy authorizes the persons named therein to vote the shares represented thereby in their discretion.

A copy of our Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the SEC on March 9, 2017, accompanies this Proxy Statement. Any exhibit to Form 10-K is also available upon written request at a reasonable charge for copying and mailing. Written requests should be addressed to:

Dawn Schottlandt
Senior Director, Investor Relations/Corporate Communications
ArQule, Inc.
One Wall Street
Burlington, Massachusetts 01803-4757

Copies of these documents may also be accessed electronically by means of the SEC's website at <http://www.sec.gov> and <http://www.proxyvote.com>. The Annual Report on Form 10-K is not part of the proxy solicitation material.



ARQULE, INC.
ONE WALL STREET
BURLINGTON, MA 01803

VOTE BY INTERNET - www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 5:00 P.M. Eastern Daylight Savings Time, May 22, 2017. 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.

ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS

If you would like to reduce the costs incurred by ArQule, Inc. in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 5:00 P.M. Eastern Daylight Savings Time, May 22, 2017. 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 ArQule, Inc., c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

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

E26017-P87966

KEEP THIS PORTION FOR YOUR RECORDS

DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

ARQULE, INC.		For All	Withhold All	For All Except	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the name(s) of the nominee(s) on the line below.	
The Board of Directors recommends a vote "FOR" the election of the nominees listed below and "FOR" proposals 2 and 3.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____	
1.	To elect Ronald M. Lindsay, William G. Messenger, and Patrick J. Zenner as directors to hold office for a term of three years and until their respective successors are elected and qualified.					
						For Against Abstain
2.	To ratify the selection of PricewaterhouseCoopers LLP as our independent registered public accounting firm for the year ending December 31, 2017.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
3.	To approve, by non-binding vote, the compensation of our named executive officers.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
The Board of Directors recommends you vote 1 year on the following proposal.						1 Year 2 Years 3 Years Abstain
4.	To recommend, by non-binding vote, the frequency of votes approving executive compensation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Please sign exactly as name appears on stock certificate. When shares are held by joint tenants, both should sign. When signing as attorney, executor, administrator, trustee, or guardian, please give full title as such. If a corporation, please sign in full corporate name by President or other authorized officer. If a partnership, please sign in partnership name by authorized person.</p>						
<input type="text"/> Signature [PLEASE SIGN WITHIN BOX]		<input type="text"/> Date		<input type="text"/> Signature (Joint Owners)		<input type="text"/> Date

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:
The Notice and Proxy Statement, Form 10-K and Stockholder Letter are available at www.proxyvote.com.

E26018-P87966

**THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS
OF ARQULE, INC.
ANNUAL MEETING OF STOCKHOLDERS
May 23, 2017**

The undersigned stockholder of ArQule, Inc. hereby appoints Peter S. Lawrence as proxy with the power to appoint his substitute, and hereby authorizes him to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of ArQule, Inc. that the undersigned is entitled to vote at the Annual Meeting of Stockholders to be held at the Boston Burlington Marriott, One Mall Road, Burlington, Massachusetts 01803 at 10:00 a.m. Eastern Daylight Saving Time on May 23, 2017 and any adjournment or postponement thereof.

THIS PROXY, WHEN PROPERLY EXECUTED, WILL BE VOTED AS DIRECTED BY THE UNDERSIGNED STOCKHOLDER. IF NO SUCH DIRECTIONS ARE GIVEN, THIS PROXY WILL BE VOTED "FOR" THE ELECTION OF THE NOMINEES LISTED ON THE REVERSE SIDE, "FOR" PROPOSALS 2 AND 3, AND FOR "1 YEAR" FOR PROPOSAL 4.

PLEASE MARK, SIGN, DATE AND RETURN THIS PROXY CARD PROMPTLY USING THE ENCLOSED REPLY ENVELOPE.

Continued and to be signed on reverse side