ARQULE INC Form DEF 14A April 10, 2009

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

SCHEDULE 14A

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

Filed by the Registrant ý

Filed by a Party other than the Registrant o

Check the appropriate box:

- o Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- ý Definitive Proxy Statement
- o Definitive Additional Materials
- o Soliciting Material Pursuant to §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)

Payment of Filing Fee (Check the appropriate box):

- ý No fee required.
- o Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
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- o Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
 - (1) Amount Previously Paid:
 - (2) Form, Schedule or Registration Statement No.:
 - (3) Filing Party:
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Dear Stockholders,

As a result of highly positive developments that took place during 2008, ArQule enters 2009 and beyond in a strong financial position, with multiple value generating opportunities on the horizon. Our lead product, ARQ 197, is the subject of a broad Phase 2 clinical development program. We have advanced another molecule, ARQ 621, into Phase 1 clinical testing, and our discovery engine is being harnessed to generate a new generation of kinase inhibitors.

Supporting all of our activities is the financial strength that should allow us to meet critical value-adding milestones without needing to access unsettled financial markets shaped by the current macro economic environment. This strength positions us in a relatively small group of well financed, development-stage biotechnology companies. Our two agreements with our new partner, Daiichi Sankyo Co., Ltd., announced late last year, added \$75 million to our cash resources. These transactions also provide significant clinical trial cost-sharing and research support that will enhance our ability to control our financial expenditures and to fund operations into 2012.

We are working closely with both Daiichi Sankyo and Kyowa Hakko Kirin Co., Ltd., our partner in Asian territories, to define a global development plan for ARQ 197. The clinical trial program for ARQ 197 currently includes four indications: MiT (Microphthalmia Transcription factor) tumors, non-small cell lung cancer (NSCLC), hepatocellular carcinoma (HCC), and pancreatic cancer. In 2009, we plan to extend the clinical program from four to at least five tumor indications, and we plan to expand the combination therapy regimens from two to three combinations. This clinical program represents a good balance of fast-to-market and large market indications, and the scientific rationale of c-Met inhibition is being tested in each.

To date, we have observed in early clinical testing broad activity with ARQ 197, including tumor mass reduction and prolonged stable disease in multiple tumor types. The side effect profile in this testing defines a drug that is well tolerated, with a high degree of patient compliance, signifying the potential for combinability with both cytotoxic and targeted therapies. Patient enrollment in our Phase 2 trials continues to progress, and we look forward to reporting on these trials later in the year.

Elsewhere, our pipeline has advanced with the entry of ARQ 621 into Phase 1 clinical testing. This novel inhibitor of the Eg5 kinesin motor protein has been shown to cause cell death in multiple human cancer cell lines *in vitro* and *in vivo*, with no observed evidence of hematological changes or bone marrow toxicity, side effects that have hampered the development of first-generation Eg5 inhibitors by limiting the dosing regimens of these compounds. During 2009, we plan to identify a new product candidate from our existing pre-clinical programs and to ready this candidate for the filing of an Investigational New Drug application in the first half of 2010.

Earlier in our pipeline, we are developing the ArQule Kinase Inhibitor Discovery Platform (AKIP) in programs that are supported both by Daiichi Sankyo and directly by ArQule. This platform, informed by insights into the binding of ARQ 197 to c-Met, is potentially applicable to more than 150 kinases in multiple therapeutic areas. Many of the compounds generated from this platform represent new chemical entities and patentable intellectual property space. Our researchers are designing them to inhibit kinases potently, selectively and without competing with ATP (adenosine triphosphate). In 2009, we plan to explore additional collaborations focused on AKIP applications.

We ended 2008 with approximately \$158 million in net cash and marketable securities, and we expect to end 2009 with between \$109 and \$113 million. We plan to generate proof-of-principle clinical data for our key programs and to move into more advanced clinical development within the operational runway provided by these finances. We intend to carry our programs forward in a disciplined, cost-conscious fashion by continually prioritizing multiple product candidates based on evolving data. Finally, I believe our broad strengths in discovery, product development, deal-making and commercialization, which contributed to our success this past year, represent a strong underpinning for future progress.

Paolo Pucci Chief Executive Officer

ARQULE, INC.

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD MAY 14, 2009

To Our Stockholders,

Our 2009 Annual Meeting of Stockholders will be held at the offices of ArQule, Inc. at 19 Presidential Way, Woburn, Massachusetts 01801-5140 at 10:00 a.m. Eastern Daylight Savings Time on Thursday, May 14, 2009 for the following purposes:

- To elect Timothy C. Barabe and Paolo Pucci as directors to hold office for a term of three years and until their respective successors are elected and qualified;
- To approve amendments to our Amended and Restated 1994 Equity Incentive Plan to increase the number of shares of common stock available for awards granted under the Plan by 1,400,000 from 9,600,000 to 11,000,000 shares of common stock and to incorporate other changes described in our proxy statement;
- To approve an amendment to our Amended and Restated 1996 Employee Stock Purchase Plan to increase the number of shares of common stock available for purchase by participants in such plan by 400,000 from 1,600,000 to 2,000,000 shares of common stock;
- 4. To ratify the selection of PricewaterhouseCoopers LLP, an independent registered public accounting firm, to audit our financial statements for the year ending December 31, 2009; 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 27, 2009 will be entitled to vote at the meeting or any 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

Woburn, Massachusetts

Dated: April 14, 2009

ARQULE, INC.

19 Presidential Way Woburn, Massachusetts 01801-5140 Telephone: (781) 994-0300

Proxy Statement

General Information

With the enclosed proxy card, our Board of Directors (the "Board") is soliciting your proxy for use at our 2009 Annual Meeting of Stockholders to be held at the offices of ArQule, Inc. at 19 Presidential Way, Woburn, Massachusetts 01801-5140 at 10:00 a.m. Eastern Daylight Savings Time on Thursday, May 14, 2009 and at any adjournments of the meeting. This proxy statement and accompanying proxy card are first being sent or given to stockholders on or about April 14, 2009.

The principal business expected to be transacted at the meeting, as more fully described below, will be the election of directors, the approval of amendments to our Amended and Restated 1994 Equity Incentive Plan, the approval of an amendment to our Amended and Restated 1996 Employee Stock Purchase Plan and the ratification of selection of PricewaterhouseCoopers LLP, an independent registered public accounting firm, to audit our financial statements for the fiscal year ending December 31, 2009.

Stockholders may revoke the authority granted by an executed proxy at any time before its exercise by voting in person at the meeting or by filing with our Secretary a written revocation or a duly executed proxy bearing a later date.

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. In addition, our officers, employees and other representatives may solicit proxies in person or by telephone.

Only stockholders of record at the close of business on March 27, 2009 will be entitled to vote at the meeting. On that date, we had outstanding 44,557,477 shares of common stock, \$0.01 par value ("Common Stock"), each of which is entitled to one vote. The presence at the meeting, in person or by proxy, of a majority of our outstanding shares of Common Stock entitled to vote at the Annual Meeting shall constitute a quorum for the transaction of business.

You may submit your proxy in writing, electronically, or by telephone according to the instructions on the enclosed proxy card. If you submit a 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 below and "FOR" proposals 2, 3, 4 and 5. The Company is not aware of any matters that will be brought before the annual meeting (other than procedural matters) that are not referred to herein. Abstentions and broker non-votes will be considered present for purposes of determining the presence of a quorum. Broker non-votes are proxies submitted by brokers that do not indicate a vote for one or more proposals because the brokers have not received instructions from the beneficial owners on how to vote on these proposals and do not have discretionary voting authority.

Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting of Stockholders to be Held May 14, 2009:

This Proxy Statement and the ArQule, Inc. 2008 Annual Report on Form 10-K for the year ended December 31, 2008 are available at www.proxyvote.com.

1

PROPOSAL 1 ELECTION OF DIRECTORS

Our By-laws provide that the number of directors is established by our Board of Directors. For 2009, 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 meeting, two directors will be elected to a term of office of three years, expiring in 2012, and until their respective successors are elected and qualified.

Timothy C. Barabe and Paolo Pucci, both of whom are presently serving as directors, have been nominated for re-election by our Board of Directors for a term of three years. Unless your proxy withholds authority to vote for either of the nominees, the shares represented by your proxy will be voted for their election as the Board's nominees. If either 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 of Directors.

Vote Required

The affirmative vote of a plurality of the shares of Common Stock cast by the stockholders present at the 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 Terms Expiring at the 2012 Annual Meeting

Timothy C. Barabe (Age: 56) Mr. Barabe has been a director since November 2001. Mr. Barabe is currently Senior Vice President and Chief Financial Officer of Human Genome Sciences, Inc. Previously, he was with Regent Medical Limited, a U.K.-based, privately owned, surgical supply company, where he was Chief Financial Officer from 2004-2006. Mr. Barabe served with Novartis AG from 1982 through August 2004 in a succession of senior executive positions in finance, general management, and strategic planning, most recently as the Chief Financial Officer of Sandoz GmbH, the generic pharmaceutical subsidiary of Novartis. From February 2002 until April 2003, Mr. Barabe was Group Vice President and President, CIBA Vision Corporation Specialty Lens Business. From 1993 through January 2002, Mr. Barabe was the Chief Financial Officer of CIBA Vision Corp., a contact lens and lens care 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: 48) Mr. Pucci joined ArQule as Chief Executive Officer and a member of the board of directors 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 multiple 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. Mr. Pucci holds an MBA from the University of Chicago and is a graduate of the Universita Degli Studi Di Napoli in Naples, Italy.

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

Continuing Incumbent Directors with Terms Expiring at the 2010 Annual Meeting

Michael D. Loberg, Ph.D. (Age: 61) Dr. Loberg has been a director since January 2007. Dr. Loberg is Chairman of the Board of Directors of Inotek Pharmaceuticals Corporation, a developer of ophthalmic medicines, and recently served as its Interim Chief Executive Officer. 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 Chairman of the Board of Kereos, a developer of targeted molecular imaging agents and therapeutics and is a director of AMAG, a biotechnology company focused in renal disease. He holds a B.S. in Chemistry from Trinity College and a Ph.D. in Chemistry from Washington University.

Nancy A. Simonian, M.D. (Age: 48) Dr. Simonian has been a director since May 2006. Dr. Simonian is currently Chief Medical Officer and Senior Vice President of Clinical, Medical, and Regulatory Affairs at Millennium Pharmaceuticals, Inc. The Takeda Oncology Company, where she has worked since 2001. From 1995 to 2001, Dr. Simonian was at Biogen, Inc. where she was the Vice President of Medical Research, responsible for the development of Avonex, Tysabri, and multiple gene-therapy clinical development programs. Prior to joining the pharmaceutical industry, Dr. Simonian was on the faculty of Massachusetts General Hospital and Harvard Medical School as an assistant professor of neurology. She was also engaged in both basic science and clinical research related to neurodegenerative diseases. Dr. Simonian graduated from Princeton University, received her M.D. from the University of Pennsylvania Medical School, and completed her internship in medicine and residency in neurology at Massachusetts General Hospital.

Continuing Incumbent Directors with Terms Expiring at the 2011 Annual Meeting

Ronald M. Lindsay, Ph.D. (Age: 61) Dr. Lindsay has been a director since June 2005. He currently operates Milestone Consulting, a biopharmaceutical consulting enterprise. 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. He is a director of Sequenom Inc., HistoRx Inc., and a Senior Advisor to TVM-Capital, Munich. Dr. Lindsay is Executive Chairman of NeuroCentRx Pharmaceuticals Ltd., Edinburgh, Scotland, which he co-founded in 2008. 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: 48) 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. From 1999 to 2008, Dr. Messenger served as Director of the Mockler Center for Faith and Ethics in the Workplace at Gordon-Cornwell Theological Seminary. He currently serves as adjunct professor of business ethics at Rensselaer Polytechnic Institute. 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: 62) 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. Hoffmann-La Roche Inc., based in Nutley, N.J., is the prescription drug unit of the Roche Group. Mr. Zenner held various executive positions during his 32-year career with the Company. Mr. Zenner is currently on the Board of Trustees of Creighton University and is Chairman of the Board of Trustees of Fairleigh Dickinson University. In addition, Mr. Zenner is a member of the Boards of Directors of CuraGen Corporation, Geron Corporation, Xoma Ltd., West Pharmaceutical Services, Inc., and Exact Sciences, Inc.

CORPORATE GOVERNANCE

Corporate Governance Guidelines

At ArQule, Inc. ("ArQule" or the "Company"), 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 Securities and Exchange Commission ("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 the 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 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."

Corporate Code of Conduct

The Code of Conduct applies to our directors, employees and officers, including our Chief Executive Officer, President and Chief Operating Officer, Vice President of Finance, Corporate Controller and Treasurer (our principal executive officer, principal financial officer and principal accounting officer, respectively), and our Chief Medical Officer and Chief Scientific Officer. The Code of Conduct addresses: the standards of conduct expected of each director, officer and employee; conflicts of interest; disclosure process; 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 of Directors 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.

Director Qualifications and Nomination Process

Director Qualifications

The Compensation, Nominating and Governance Committee identifies nominees for directors from various sources including referrals from current Board members and industry contacts. In the past, the Compensation, Nominating and Governance Committee has used third party consultants to assist in identifying, evaluating, and recruiting potential nominees, but no third party consultant was used during 2008. 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, Nominating and

Governance Committee has developed a general profile for candidates which reflects the personal and professional characteristics that our directors believe a suitable individual should possess. Such characteristics include integrity, suitable 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 of Directors and its committees, and the ability to meet the independence and financial literacy requirements defined by applicable Nasdaq and SEC rules. 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.

Stockholder Nominations

The Compensation, Nominating and Governance Committee has not established any special procedures for stockholder submissions to the Compensation, Nominating and Governance Committee of nominees for election to the Board of Directors. Our By-laws permit any stockholder entitled to vote for the election of directors to nominate 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, Nominating and Governance Committee will consider all nominees submitted by stockholders in the manner described above and will evaluate all potential nominees using the same criteria.

Communications with Directors

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

Investor Relations
ArQule, Inc.
19 Presidential Way
Woburn, Massachusetts 01801-5140
Attn. William B. Boni
Vice President, Investor Relations/Corporate Communications

Such communications will be forwarded directly to the addressee(s).

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, not only of the director's relationship with the Company, but also that of the persons or organizations with which the director is affiliated;

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 20, 2009, our Board of Directors determined that all of our Directors, other than our Chief Executive Officer, are "independent directors" as defined in Rule 4200(a)(15) of the listing standards of the Nasdaq Marketplace Rules, and these directors constitute a majority of the members of the Board.

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 the 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 SEC Regulation S-K, 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.

Certain relationships or transactions may arise that would be deemed acceptable and appropriate upon full disclosure of the relationship or transaction, after review of all of the relevant factors, including those specified in our Conflict of Interest Policy, and approval by the Compensation, Nominating and Governance Committee.

Compensation, Nominating and Governance Committee Interlocks and Insider Participation

No member of the Compensation, Nominating and Governance Committee during 2008 served as an officer, former officer, or employee of the Company or had a relationship disclosable under our policies. Further, during 2008, 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, Nominating and Governance Committee; or

a director of any other entity, one of whose executive officers or their immediate family member served on our Compensation, Nominating and Governance Committee.

BOARD COMMITTEES AND MEETINGS

The Board of Directors held eight meetings during 2008. 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 2008, all our incumbent directors and Paolo Pucci, our Chief Executive Officer-elect at the time, attended our annual meeting.

Committees of the Board

Our Board of Directors has a standing audit committee (the "Audit Committee"), compensation, nominating, and governance committee (the "Compensation, Nominating and Governance Committee"), and science committee (the "Science Committee"). Independent directors chair and entirely make up each of these committees. The Board of Directors 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 headings "Corporate Governance" and "Committee Charters."

Audit Committee

In 2008, the members of the Audit Committee were Mr. Barabe (Chairman), Dr. Messenger, and Mr. Zenner. The Audit Committee met seven times in 2008. Each member of the Audit Committee meets the independence and financial literacy requirements as defined by applicable Nasdaq and SEC rules. The Board of Directors 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, to oversee the integrity of the Company's financial reporting process;

in particular, to monitor:

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 of its internal audit function;

pre-approval of all audit services; and

preparing the audit committee report that is required to be included in the proxy statement for our annual meeting of stockholders;

The Company's independent registered public accounting firm (currently, PricewaterhouseCoopers LLP, an independent registered public accounting firm) are 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.

Additional information regarding the responsibilities of the Audit Committee is provided in the committee's charter.

The report of the Audit Committee is on page 31.

Compensation, Nominating and Governance Committee

In 2008, the members of the Compensation, Nominating and Governance Committee were Dr. Messenger (Chairman), Dr. Loberg and Mr. Zenner. The Compensation, Nominating and Governance Committee met six times in 2008.

The duties and purposes of the Compensation, Nominating and Governance 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;

preparing the Committee's report that is required to be included in the proxy statement for our annual meeting of stockholders; and

overseeing the Company's efforts to meet its corporate governance, legal, and regulatory obligations and identifying, reviewing, and resolving issues relating to such matters.

Additional information regarding the responsibilities of the Compensation, Nominating and Governance Committee is provided in the committee's charter.

The report of the Compensation, Nominating and Governance Committee is on page 18.

Science Committee

In 2008, the members of the Science Committee were Dr. Lindsay (Chairman), Dr. Loberg and Dr. Simonian. The Science Committee met six times during 2008.

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 organization (whether by acquisition, merger, in-licensing, internal growth, or a combination of those methods);

evaluating the scientific opportunities under consideration by management; and

as requested by management, to review data relating to new scientific directions for the Company and other science-related matters.

Additional information regarding the responsibilities of the Science Committee is provided in the committee's charter.

DIRECTOR COMPENSATION

The following table provides information concerning compensation paid by the Company to its non-employee directors during 2008. Any director who is also an employee of the Company is not compensated for his or her service as a director. During 2008 Mr. Pucci, the Company's Chief Executive Officer, also served on the Board of Directors, but did not receive any compensation for services as a director.

		Earned or		Option	
Name	Paid	in Cash (\$)	AV	wards(1) (\$)	Total (\$)
Timothy C. Barabe(2)	\$	52,500	\$	21,580	\$74,080
Ronald M. Lindsay, Ph.D.		49,000		25,657	74,657
Michael D Loberg, Ph.D.(3)		46,000		21,580	67,580
William G. Messenger, D. Min.		59,000		21,580	80,580
Nancy A. Simonian, MD		37,000		32,244	69,244
Patrick J. Zenner		61,000		32,370	93,370

- This column reflects the dollar amount recognized for financial reporting purposes during 2008 in accordance with Financial Accounting Standards Board Statement No. 123(R), *Share-Based Payment* ("FAS 123(R)") for all option awards outstanding for any portion of the current year. Assumptions used in the calculation of this amount are included in Note 2 to the Company's audited financial statements for the year ended December 31, 2008, included in the Company's Annual Report on Form 10-K filed with the SEC on March 6, 2009 ("2008 Annual Report on Form 10-K"). As of December 31, 2008, 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, 56,000; Dr. Lindsay, 40,000; Dr. Loberg, 40,000; Dr. Messenger, 45,000; Dr. Simonian, 40,000; and Mr. Zenner, 67,500.
- Mr. Barabe elected to have a portion of his fees for service as a director in the amount of \$31,455 paid to him in the form of 8,670 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.
- Mr. Loberg elected to have a portion of his fees for service as a director in the amount of \$20,951 paid to him in the form of 5,847 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 \$15,000 annual retainer. Each non-employee director also receives \$2,000 for each day on which the Board of Directors meets and the director attends and \$1,000 for each day on which a committee of the Board of Directors meets and the director attends. In addition to the base compensation for directors, certain directors receive additional compensation. The director serving as Chairman of the Board of Directors (currently, Mr. Zenner) receives a \$15,000 annual retainer; the director serving as Chairman of the Audit Committee (currently, Mr. Barabe) receives a \$12,500 annual retainer; the director serving as Chairman of the Compensation, Nominating and Governance Committee (currently, Dr. Messenger) receives a \$10,000 annual retainer; and the director serving as Chairman of the Science Committee (currently, Dr. Lindsay) receives a \$10,000 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 20,000 shares of Common Stock is automatically granted to each non-employee director (other than the Chairman) at the time that he or she is first elected or appointed to the Board of Directors. The exercise price of the option is the fair

market value on the date of grant. This initial option will become exercisable as to 6,666 shares on the date of the Company's next annual meeting following the date of grant and as to 6,667 shares on the date of each of the next two annual meetings. Also, at each annual meeting of stockholders, each non-employee director (other than the Chairman) serving as a member of the Board of Directors prior to and immediately after such annual meeting is automatically granted an immediately exercisable option to purchase 10,000 shares of Common Stock (whether or not the director is a nominee for election at such annual meeting).

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. Those options will become exercisable as to 8,334 shares on the date of the Company's next annual meeting of stockholders following the date of grant and as to 8,333 shares on the date of each of the next two annual meetings of stockholders. The exercise price of the options is the fair market value on the date of grant. In addition, at each annual meeting of stockholders, such eligible director serving as Chairman of the Board prior to and immediately after such annual meeting will be automatically granted an immediately exercisable option to purchase 15,000 shares of Common Stock (whether or not the Chairman is a nominee for election at such annual meeting). The exercise price of the option is the fair market value on the date of grant. The exercise price of the options is the fair market value on 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 2008 Mr. Barabe and Dr. Loberg received a portion of their director fees in the amount of \$31,455 and \$20,951, 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, Nominating and Governance Committee of the Board of Directors (the "Compensation Committee") is responsible for determining the 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 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. Individuals with the greatest influence on company-wide performance should have the largest amount of cash benefits and stock options at risk.

Objectives:	
То	attract and retain the best executive talent available;
То	o motivate our executives to achieve the goals inherent in our business strategy;
То	link executive and stockholder interests through equity-based compensation; and
То	provide a compensation package that recognizes individual contributions as well as corporate performance.
Key compens	sation elements:
Ba	ase salary;
An	nnual performance-based cash bonuses;
Sto	ock-based incentive awards; and
Em	nployee benefits.
Each of these elen	ments is described in more detail below.

The Role of the Compensation Committee

The members of the Compensation Committee are currently Michael D. Loberg, Ph.D., William G. Messenger, D. Min. (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 of Directors 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 members of the Board of Directors. Recommendations and decisions made by the Compensation Committee are reported

to the full Board of Directors for approval or ratification, as appropriate.

The Compensation Committee's Process

General

The Compensation Committee sets the mix of elements of executive compensation including base salary, annual performance-based bonuses and stock options 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 individual and corporate performance and financial returns to stockholders.

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. With the assistance of our Vice President of Human Development, the Compensation Committee reviews selected data from the Radford Biotechnology Survey produced by Radford Surveys & Consulting, a human resources consulting firm ("Radford"), and other compensation data the Compensation Committee deems relevant. In 2008, Radford consultants provided guidance to the Compensation Committee with respect to appropriate companies for comparison and provided it with relevant market data and alternatives to consider when making compensation decisions for our named executive officers and other key employees.

The Radford Biotechnology Survey aggregates compensation data from hundreds of biopharmaceutical companies including both public and private firms of varying sizes, stages of development and geographic locations. We extract data from the Radford Survey that relate to public companies with characteristics the Compensation Committee believes are relevant to those of the Company. Some of the individual biotechnology companies whose published executive compensation data the Compensation Committee has used for comparison purposes are Ariad Pharmaceuticals, Inc.; Array BioPharma Inc.; Exelixis, Inc.; Infinity Pharmaceuticals, Inc.; Onyx Pharmaceuticals, Inc.; and OSI Pharmaceuticals, Inc. In addition, when the Compensation Committee on occasion deems it appropriate, compensation data for companies outside the biotechnology industry are also reviewed.

In past years, the Compensation Committee directly analyzed the compensation data described above to compare the Company's compensation packages to compensation levels in our industry and benchmark the fairness and competitiveness of the total compensation the Company offers. In 2008, at the direction of the Compensation Committee, we engaged a compensation consulting firm, 3D Leadership Group, to perform a comprehensive analysis of how salary, bonus and stock-based compensation of each of our employees compared to the corresponding compensation data supplied by Radford. The conclusion of the consultants was that levels of compensation for all of our employees, including our named executive officers, was consistent overall with the benchmark described below that is used by the Compensation Committee.

Benchmarking

In general terms, as a basis for its recommendations, 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. 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 senior executive management that vary substantially from the median based on factors such as industry experience, scope of responsibility, knowledge, and unique qualifications.

Elements of Compensation

Base Salary

Salary levels are considered annually as part of our performance review process, but also in the cases of 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 2008 and certain prior years are also reported in the Summary Compensation Table on page 19.

The following table shows changes in the annualized base salaries of our named executive officers from 2007 to 2008:

N In the In W	2007 Annualized Base	2008 Annualized Base	%	0
Name and Principal Position	Salary (\$) N/A	Salary (\$)	Increase	Comment Description of the Comment
Paolo Pucci, CEO	N/A	450,000	N/A	Base salary negotiated in
				employment agreement.
Peter S. Lawrence, COO	360,000	375,000	4.2	Base salary negotiated in amended employment agreement. Promotion to President and Chief Operating Officer with increased responsibilities.
Dr. Brian. Schwartz, CMO	N/A	325,000	N/A	Base salary negotiated in employment agreement.
Dr. Thomas C.K. Chan, CSO	275,000	286,000	4.0	Merit increase with additional responsibilities. Additional increase to \$309,000 negotiated in employment agreement related to promotion to Chief Scientific Officer in November 2008.
Dr. Stephen A. Hill	467,900	475,000	1.5	General corporate increase.
Dr. Nigel J. Rulewski	325,000	325,000		

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 Board of Directors 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 degree of responsibility of the named executive officer for achievement of specific individual goals, and the amount of the named executive officer's target bonus.

The following is a summary description of the corporate goals for 2008 used to determine performance-based bonuses:

Discovery

Validate our kinase inhibition platform technology by demonstrating activity of platform compounds in a number of oncology and non-oncology targets by a specified date.

File an investigational new drug application for an internally developed compound with the FDA by a specified date. C-Met Program-ARO 197

Achieve planned recruitment goal for clinical trial in microphthalmia transcription factor-associated tumors with interim study data available by a specified date.

Achieve planned recruitment goal for clinical trial in pancreatic cancer by a specified date.

Achieve planned recruitment goal for clinical trial in non-small cell lung cancer by a specified date.

E2F-1 Program

File an investigational new drug application with the FDA for ARQ 761 by a specified date.

Business Development

Establish a collaboration for commercial development of ARQ 197 outside of the Asian territory with a specified minimum upfront payment and retention of a specified percentage of the United States market.

Establish a collaboration for early stage development of compounds from our kinase inhibition platform with specified financial goals.

Financial

End 2008 with a cash balance sufficient to fund our business through a specified period.

Following the recommendations of the Compensation Committee, our Board of Directors determined that, on a weighted basis and given a reduction in anticipated stock-based awards for all our employees, our overall level of performance warranted payment of bonuses at 100% of the bonus targets. This determination reflected results with respect to the Discovery, Business Development and Finance goals that exceeded planned performance, results with respect to the E2F-1 program goal that

met expectations and results with respect to the C-Met program that were less than planned. The following table shows percentages of target and actual bonuses paid to our named executive officers.

Name and Principal Position	2008 Bonus Target (% of Base Salary)	2008 Bonus Actual (% of Base Salary)	Comment
Paolo Pucci, CEO	N/A	•	Bonus amount set by terms of
,			employment agreement.
Peter S. Lawrence, COO			Bonus target set by terms of
	40%	40%	amended employment agreement.
Dr. Brian. Schwartz, CMO			Bonus target set by terms of
	35%	35%	employment agreement and
			payment pro-rated for period of
			employment during 2008.
Dr. Thomas C.K. Chan,			Bonus target set by Compensation
CSO	25%	25%	Committee in accordance with
			annual standard process.
Dr. Stephen A. Hill			Bonus target set by terms of
	50%	50%	employment agreement and
			payment pro-rated for period of
			employment during 2008.
Dr. Nigel J. Rulewski	250	256	Bonus target set by terms of
	35%	35%	employment and separation
			agreements and payment pro-rated
			for period of employment during
			2008.

The amounts of cash bonus awards made to our named executive officers are also reported in the Summary Compensation Table on page 19.

Stock-based Awards

We grant stock options and/or shares of restricted stock to the named executive officers under our Amended and Restated 1994 Equity Incentive Plan. It is our current policy to grant stock options with an exercise price 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. Stock option grants and restricted stock awards are designed to encourage the creation of stockholder value over the long term since the full benefits of the options and restricted stock cannot be realized unless stock price appreciation is achieved, and, once achieved, is maintained and increased. Accordingly, stock option grants and restricted stock awards align the interests of executive officers and employees with those of stockholders. In determining the amount of these grants and awards, we evaluate the executive's job level, promotions, responsibilities he or she will assume in the upcoming year, and responsibilities in prior years. In addition, we take into account the size of the executive's grants and awards in the past and market data relating to compensation. After consideration of all of these factors, in January 2009 for performance during 2008, we awarded Mr. Pucci 67,500 shares of restricted stock (an amount prorated for the period he was employed by the Company during the year); Mr. Lawrence, 75,000 shares of restricted stock; Dr. Schwartz, 11,700 shares of restricted stock (an amount prorated for the period he was employed by the Company during the year); and Dr. Chan, 20,000 shares of restricted stock. Dr. Hill and Dr. Rulewski did not receive any stock-based award for 2008. Other stock-based awards made to Mr. Pucci, Dr. Schwartz and Dr. Chan are described in the summaries of their employment agreements beginning on page 20.

The Compensation Committee generally recommends annual stock option awards at a meeting in January prior to the first meeting of the Board of Directors in the calendar year. At that meeting

(usually in the third week of January), the Board acts upon the recommendations of the Compensation Committee. The effective date for such grants is the date of such meeting of the full Board.

Employment Agreements

ArQule generally enters into employment agreements with 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, Dr. Schwartz, and Dr. Chan have, and Dr. Hill and Dr. Rulewski had, such agreements. Additional information regarding these agreements is set forth on page 20 in the "Employment Agreements" section and page 26 in the "Potential Payments Upon Termination or Change in Control" section.

Other Elements of Compensation and Perquisites

We provide our named executive officers with certain benefits and perquisites. The value of such benefits and perquisites provided in 2008 was less than \$10,000 for each named executive officer. We provided these benefits on the same terms as those applicable to all of our other employees. 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 of 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 in Control

The employment agreements of Mr. Pucci, Mr. Lawrence, Dr. Schwartz, and Dr. Chan 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 options in certain circumstances following the occurrence of a change in control of the Company. We believe that it is generally appropriate to vest option awards to key employees in a change in 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 in control benefits provided to Mr. Pucci, Mr. Lawrence, Dr. Schwartz, and Dr. Chan under their employment agreements, see "Potential Payments Upon Termination or Change of Control" on page 26.

Tax Considerations

Section 409A of the Tax Code is a relatively new federal tax provision. If an executive is entitled to nonqualified deferred compensation benefits that are subject to Section 409A, 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 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 intend to consider future changes to the Amended and Restated 1994 Equity Incentive Plan and other benefit plans. The Compensation Committee believes that none of the Company's named executive officers received compensation in 2008 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 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

18

EXECUTIVE COMPENSATION

The tables 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 Scientific Officer and Chief Medical Officer (the "named executive officers") for the fiscal years ended December 31, 2008, 2007 and 2006.

SUMMARY COMPENSATION TABLE

The following table summarizes total compensation earned during the fiscal years ended December 31, 2008, 2007 and 2006 by each of our named executive officers:

		Salary		Stock Awards	Option	Non-Equity Incentive Plan Compensation	All Other Compensation	
Name and Principal Position	Year	(\$) (1)	Bonus (\$)	(\$) (2)	Awards (\$) (3)	(\$) (4)	(\$) (5)	Total (\$)
Paolo Pucci(6) Chief Executive Officer	2008	250,962	200,000	322,798	413,739	225,000	20,754	1,433,253
Dr. Stephen A. Hill(7) President and Chief Executive Officer	2008 2007 2006	118,775 466,516 448,256			1,405,502 1,274,695 465,391	58,488 240,968 231,700	672 7,230 4,928	1,583,437 1,989,409 1,150,275
Peter S. Lawrence(8) President, Chief Operating Officer, General Counsel and Secretary	2008 2007 2006	373,846 359,980 258,922			605,801 402,722 238,893	150,000 144,000 97,200	7,428 7,230 3,420	1,137,075 913,932 598,435
Dr. Brian. Schwartz(9) Chief Medical Officer and Senior Vice President	2008	150,000			44,944	47,400	5,596	248,000
Dr. Nigel J. Rulewski(10) Chief Medical Officer	2008 2007 2006	223,906 325,000 136,250			175,367 228,958 92,798	75,840 65,000 49,000	422,727 7,230 720	897,840 626,188 278,768
Dr. Thomas C. K. Chan(11) Chief Scientific Officer and Senior Vice President	2008	287,808			137,090	73,267	528	498,693

- (1)

 The amounts in this column include compensation earned but deferred at the election of the named executive officer, such as salary deferrals under the Company's retirement savings plan established under Section 401(k) of the Tax Code.
- (2)

 Reflects the dollar amount recognized for financial reporting purposes during the year for Mr. Pucci's restricted stock award in accordance with FAS 123(R). Assumptions used in the calculation of this amount are included in Note 2 to the Company's audited financial statements for the year ended December 31, 2008, included in the Company's 2008 Annual Report on Form 10-K.
- Reflects the dollar amount recognized for financial reporting purposes during the year in accordance with FAS 123(R) and thus includes amounts from awards granted during the year and prior years. Assumptions used in the calculation of this amount are included in Note 2 to the Company's audited financial statements for the year ended December 31, 2008, included in the Company's Annual Report on Form 10-K filed with the SEC on March 6, 2009 ("2008 Annual Report on Form 10-K"). Additional information regarding stock options issued to the named executive officers is provided in the tables "Outstanding Equity Awards at Fiscal Year-End" on page 24.
- (4)

 Represents bonus amounts earned under our annual incentive program for 2008 and paid in the first quarter of 2009. Additional information regarding the annual incentive program is provided in the "Compensation Discussion and Analysis" Performance-Based Bonuses" beginning on page 12.
- In 2008, for each named executive officer, the amount includes the Company's contributions to a 401(k) plan account for the executive of \$6,900 and payment of group term life insurance premiums of \$528, pro-rated for 2008 appointments. Reimbursed temporary housing and living expenses of

\$17,211 for Mr. Pucci and \$3,404 for Dr. Schwartz are included in all other compensation.

- On June 9, 2008, Mr. Pucci was appointed as our Chief Executive Officer and is a director of the Company. His salary for 2008 is a pro-rated amount reflecting the portion of the year during which he was employed by the Company. He received a signing bonus of \$200,000 which, on August 19, 2008, he elected to apply to the purchase of shares of Common Stock.
- (7)
 Dr. Hill served as our President and Chief Executive Officer and a director of the Company until his resignation on March 31, 2008.
- On October 4, 2007, Mr. Lawrence was appointed as our Executive Vice President and Chief Operating Officer. As part of his duties, he directs our financial and accounting functions and is responsible for our financial reporting obligations. On April 11, 2008, Mr. Lawrence was appointed as our President. His salary and non-equity incentive plan compensation for 2006 are pro-rated amounts reflecting the portion of the year during which he was employed by the Company.
- (9)
 On July 9, 2008, Dr. Schwartz was appointed as our Chief Medical Officer. His salary and non-equity incentive plan compensation for 2008 are pro-rated amounts reflecting the portion of the year during which he was employed by the Company.
- Dr. Rulewski served as our Chief Medical Officer until his resignation on July 22, 2008. In accordance with Dr. Rulewski's July 22, 2008 separation agreement, in February 2009 he was paid a lump sum separation payment consisting of one year's salary in the amount of \$325,000 and the average of his prior two years bonus in the amount of \$91,000. His salary and non-equity incentive plan compensation for 2006 and 2008 are pro-rated amounts reflecting the portions of those years during which he was employed by the Company.
- (11)
 Dr. Chan was appointed as our Chief Scientific Officer on November 21, 2008.

EMPLOYMENT AGREEMENTS

The Company is party to employment agreements with three of its named executive officers. A summary of the material terms of these agreements follows below. For information regarding the post-employment and change in control benefits provided by these agreements, see "Potential Payments Upon Termination or Change in Control" on page 26.

Employment Agreement with Paolo Pucci

On April 15, 2008, we entered into an employment agreement with Paolo Pucci. Mr. Pucci's agreement provides that the Company will employ him as its Chief Executive Officer effective June 9, 2008, at an initial annual base salary of \$450,000. 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 50% of his base salary. The award of a bonus is in the discretion of the Company's Board of Directors based on Company and individual performance. For 2008, Mr. Pucci received a guaranteed bonus of \$225,000. Upon commencement of his employment with the Company, Mr. Pucci became entitled to receive a \$200,000 signing bonus. Mr. Pucci will also receive reimbursement for up to \$100,000 in relocation expenses.

In addition, on his date of employment, the Company granted Mr. Pucci stock options entitling him to purchase 500,000 shares of Common Stock pursuant to the ArQule, Inc. Amended and Restated 1994 Equity Incentive Plan. The options will be exercisable as to 25% of the shares commencing on his date of employment and as to 25% of the shares annually thereafter. Finally, on his date of employment, Mr. Pucci received 125,000 restricted shares of Common Stock, 50% vesting free of restrictions on the date of his employment and the remaining 50% one year later.

In lieu of receiving his signing bonus in cash and with the approval of the Board of Directors of the Company, including the independent members of its Compensation, Nominating and Governance Committee, Mr. Pucci decided to apply the signing bonus referred to above to the purchase of shares of Common Stock. On August 19, 2008, after deduction of withholding taxes, Mr. Pucci used the net amount of the bonus, \$136,496, as payment to the Company for 37,706 shares of Common Stock at a price per share of \$3.62.

Employment Agreement with Peter S. Lawrence

On April 13, 2006, we entered into an employment agreement with Peter S. Lawrence. The agreement provides that we will employ Mr. Lawrence as our Executive Vice President, Chief Business Officer, General Counsel, and Secretary at an initial annual base salary of \$360,000. 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 established by the Company and Company and individual performance. In addition, we granted Mr. Lawrence an option to purchase 300,000 shares of Common Stock. The option is exercisable at the rate of 25% annually commencing on April 13, 2007. The exercise price of the option is \$6.20 per share, the closing price of a share of Common Stock on April 12, 2006 as reported by Nasdaq.

On October 4, 2007, in connection with his appointment as our Chief Operating Officer, Mr. Lawrence's employment agreement was amended to provide, among other things, that if Mr. Lawrence ceases to serve as our Chief Operating Officer and is reassigned to his previous position, such reassignment would not be deemed a termination without Cause unless Mr. Lawrence's responsibilities were reduced below his former position as Chief Business Officer. In addition, the amendment provided that Mr. Lawrence would be awarded stock options entitling him to purchase 100,000 shares of Common Stock.

On April 14, 2008, the Company appointed Peter S. Lawrence as its President and Chief Operating Officer. As President, Mr. Lawrence reports to the Chief Executive Officer of the Company, and will be principally responsible for the operational aspects of the Company's business.

In connection with his appointment as President and Chief Operating Officer, Mr. Lawrence's employment agreement was again amended to reflect his new duties and responsibilities and to modify his base salary and his target bonus for 2008. Mr. Lawrence's base salary was increased to \$375,000 per year. In addition, the target amount for his bonus was increased to 40% of his base salary.

Employment Agreement with Brian Schwartz

On June 7, 2008, we entered into an employment agreement with Brian Schwartz. The agreement provides that the Company will employ Dr. Schwartz as its Chief Medical Officer effective July 14, 2008 at an initial annual 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 and Company and individual performance. In addition, we granted Dr. Schwartz an option to purchase 200,000 shares of Common Stock. The option is exercisable at the rate of 25% annually commencing on November 21, 2009. The exercise price of the options is \$3.62 per share, the closing price of a share of Common Stock on July 14, 2008 as reported by Nasdaq.

Employment Agreement with Thomas C. K. Chan

On November 21, 2008, we entered into an employment agreement with Thomas C. K. Chan. The agreement provides that the Company will employ Dr. Chan as its Chief Scientific Officer at an initial annual base salary of \$309,000. The base salary is subject to annual review and upward or downward adjustment by the Company. Dr. Chan is also eligible to receive a discretionary annual cash bonus based on a target amount of 30% of base salary and Company and individual performance. In addition, we granted Dr. Chan an option to purchase 100,000 shares of Common Stock. The option is exercisable at the rate of 25% annually commencing on July 14, 2009. The exercise price of the options is \$2.86 per share, the closing price of a share of Common Stock on November 21, 2008 as reported by Nasdaq.

Employment Agreement with Dr. Stephen A. Hill

In January 2004, we entered into an employment agreement with Dr. Stephen A. Hill that superseded and replaced an earlier agreement signed in April 1999. The later agreement provided that we would employ him as our President and Chief Executive Officer during the term of the agreement at an initial annual base salary of \$412,000. The base salary was subject to annual review and upward adjustment by the Board of Directors. Dr. Hill was also eligible to receive a discretionary annual cash bonus based on a target amount established by the Company and Company and individual performance.

On October 4, 2007, Dr. Hill's employment agreement was amended to provide, in circumstances where Dr. Hill's employment is terminated for any reason other than Cause (as defined herein on page 26), for continued vesting of existing stock options granted to Dr. Hill according to the schedule set forth in each separate option, and to extend the period for exercise of each option until the earlier of the tenth anniversary of its date of its grant, or June 30, 2011.

In addition, the amendment imposed a notice requirement for termination without Cause and provided that Dr. Hill, in lieu of severance payments due under his employment agreement, would continue to receive his base salary during the notice period and be eligible, at the discretion of our Board of Directors, to receive an annual cash bonus. The amendment also limited the business activities competitive with us that Dr. Hill may engage in during the calendar year following his termination.

Effective January 7, 2008, his agreement was again modified to provide that Dr. Hill would continue to serve as our President and Chief Executive Officer and a director of the Company until March 31, 2008, at which time he would resign from those positions, and that he would be eligible to receive the payments and benefits provided for in his employment agreement, as amended, under certain specified circumstances. Those circumstances are described in further detail on page 28 in the "Potential Payments upon Termination or Change in Control" section. Following his resignation on March 31, 2008, Dr. Hill became employed with another company on April 1, 2008. Consequently, no payments were payable to him under his employment agreement, as amended; however, pursuant to the amended agreement his options will continue to vest according to the schedule set forth in each option and will remain fully exercisable until the sooner of the tenth anniversary of the date of grant of the option, or June 30, 2011.

Employment Agreement with Dr. Nigel J. Rulewski

On August 1, 2006, we entered into an employment agreement with Nigel J. Rulewski, M.B., B.S., D.R.C.O.G., D.C.H. The agreement provided that the Company would employ Dr. Rulewski as its Chief Medical Officer at an initial annual base salary of \$325,000. The base salary was subject to annual review and upward adjustment by the Company. Dr. Rulewski was also eligible to receive a discretionary annual cash bonus based on a target amount of 35% and determined by the Company and individual performance. In addition, we granted Dr. Rulewski an option to purchase 200,000 shares of Common Stock. The option was exercisable at the rate of 25% annually commencing on August 1, 2007. The exercise price of the options was \$5.16 per share, the closing price of a share of Common Stock on July 31, 2006 as reported by Nasdaq.

Dr. Rulewski served as our Chief Medical Officer until his resignation on July 22, 2008. He remained employed by the Company until August 29, 2008, assisting with transitional matters. In accordance with Dr. Rulewski's July 22, 2008 separation agreement, in February 2009 he was paid a lump sum separation payment consisting of one year's salary in the amount of \$325,000 and the average of his prior two years bonus in the amount of \$91,000.

GRANTS OF PLAN-BASED AWARDS FOR FISCAL YEAR 2008

The following table sets forth certain information with respect to awards granted during the fiscal year ended December 31, 2008 to our named executive officers under our equity and non-equity incentive plans.

		Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1)			All Other Stock Awards: Number of Shares of Stock	All Other Option Awards: Number of Securities Underlying	Base Price of Option	Grant Date Fair Value of Stock and Option
Name	Grant Date	Threshold (\$)	Target (\$)	Maximum (\$)	or Units (#)	Options (#)	Awards(2) (\$)	Awards(3) (\$)
Paolo Pucci(4)	N/A 6/9/2008 6/9/2008	225,000	225,000	337,500	125,000	500,000	3.95	1,039,550 493,750
Dr. Stephen A. Hill	N/A		58,488	87,732				
Peter S. Lawrence	N/A 1/17/2008		150,000	225,000		200,000	4.75	518,020
Dr. Nigel J. Rulewski	N/A 1/17/2008					50,000	4.75	129,505
Dr. Brian Schwartz	N/A 7/14/2008		113,750	170,625		200,000	3.62	387,700
Dr. Thomas C.K. Chan	N/A 1/17/2008 11/21/2008		92,700	139,050		50,000 100,000	4.75 2.86	129,505 159,310

⁽¹⁾The threshold amount under the cash bonus program is zero, except for Mr. Pucci who was guaranteed a bonus of \$225,000 in 2008. The target amount is based on the individual's current salary. The target represents 50% of Mr. Pucci's base salary, 40%, 35% and 30% of the base salaries of Mr. Lawrence, Dr. Schwartz and Dr. Chan respectively. The maximum amount is 150% of the target amount.

⁽²⁾Options granted under our Amended and Restated 1994 Equity Incentive Plan during 2008 had an exercise price equal to the closing price of our Common Stock reported by Nasdaq on the date of grant.

⁽³⁾For stock option awards, the dollar amount reflects the amount recognizable for financial reporting purposes in accordance with FAS 123(R).

Assumptions used in the calculation of these amounts are included in Note 2 to our audited financial statements included in our 2008 Annual Report on Form 10-K. For stock awards, the dollar amount is calculated as the number of shares of stock awarded times the market price of on the date of award.

⁽⁴⁾On June 9, 2008, Mr. Pucci was awarded 500,000 stock options 25% of which vested immediately with the remaining options vesting ratably over the next three annual anniversary dates. On June 9, 2008, Mr. Pucci was also awarded 125,000 shares of restricted stock, 50% of which vested immediately and the remaining shares vest one year later.

OUTSTANDING EQUITY AWARDS AT 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, 2008:

		Option A	wards		Stock Awards			
Name Paolo Pucci(2)	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#)(1) Unexercisable 375,000	Option Exercise Price (\$) \$ 3.95	Option Expiration Date 6/9/2018	Number of Shares or Units Of Stock that Have Not Vested	Market Valu Shares or Uni Stock that Have Not Vestee	ts of	
1 4010 1 4001(2)	120,000	272,000	Ψ 5.75	0,7,2010	62,500	\$ 24	6,875	
Dr. Stephen A. Hill(3) Peter S. Lawrence	320,000 40,000 80,000 40,000 60,000 150,000 93,750 75,000 37,500	31,250 75,000 112,500 150,000 37,500	4.63 20.06 10.00 13.62 3.08 5.36 6.31 5.73 6.16	4/1/2009 3/16/2010 3/22/2011 6/30/2011 6/30/2011 6/30/2011 6/30/2011 6/30/2011 4/13/2016 1/16/2017				
	25,000	75,000	7.56	10/4/2017				
		200,000	4.75	1/17/2018				
Dr. Brian Schwartz Dr. Nigel J. Rulewski(4)	150,000 12,500	200,000	3.62 5.16 6.16	7/14/2018 2/26/2010 2/26/2010				
Dr. Thomas C.K. Chan	37,500 12,500	12,500 37,500 50,000 100,000	6.93 6.16 4.75 2.86	12/1/2015 1/16/2017 1/17/2018 11/21/2018				

⁽¹⁾ Except as otherwise noted, each option vests at the rate of one-fourth of the underlying shares annually beginning on the anniversary of the date of grant.

In accordance with Mr. Pucci's employment 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 vest on the anniversary of the date of grant for the following three years. On June 9, 2008, Mr. Pucci was also awarded 125,000 shares of restricted stock 50% of which vested immediately and the remaining shares vest one year later.

In accordance with the amendments to Dr. Hill's employment agreement effective as of October 4, 2007 and January 7, 2008, respectively, each of his options is fully exercisable until the earlier of the tenth anniversary of its date of grant, or June 30, 2011.

⁽⁴⁾ In accordance with Dr. Rulewski's separation agreement dated July 22, 2008, 162,500 of his vested options were amended to extend their expiration date to February 26, 2010.

OPTION EXERCISES AND STOCK VESTED IN FISCAL YEAR 2008.

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.

	Option	Awards	Stock Awa	rds
	Number of Securities Acquired on	Value Realized Upon Exercise	Number of Shares Acquired	Value Realized on Vesting
Name	Exercise	(\$)	on Vesting	(\$)
Paolo Pucci(1	1)		62,500	\$ 246,875

(1) On June 9, 2008, Mr. Pucci was awarded 125,000 shares of restricted stock, 50% of which vested immediately and the remaining shares vest one year later. The fair market value of the Company's stock was \$3.95 on the date the shares vested.

PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL

The Company is party to employment agreements with three of its named executive officers. Each of the employment agreements provides for the payment of severance and change in control benefits. The following discussion and table provide information about the severance and change in control provisions of these employment agreements, and are qualified by reference to the full text of the agreements, each of which is on file with the SEC.

The following terms are used in the discussion below:

"Change in 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, rights in intellectual property or, in the case of Dr. Hill, noncompetition.

Termination "without Cause" means any of the following:

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.

26

Employment Agreement with Paolo Pucci

Mr. Pucci's agreement provides for continued employment for a four-year period. 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. Termination of Mr. Pucci's employment by reason of scheduled expiration of his employment agreement will not be considered as termination without Cause. If a Change in Control occurs, and the Company subsequently terminates Mr. Pucci's employment without Cause within a specified period, 100% of his unvested stock options and restricted stock will become immediately exercisable or vested free of restrictions without regard to the original vesting schedule.

Employment Agreement with Peter S. Lawrence

Mr. Lawrence's employment agreement provides that, in the event that his employment 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 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, upon a change in control of the Company, all of any then unvested options held by Mr. Lawrence will become immediately exercisable upon the occurrence of a Change in Control.

Employment Agreement with Brian Schwartz

Dr. Schwartz's employment agreement provides that, in the event that his employment 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. If Dr. Schwartz's employment is terminated without Cause within one year after a change in control of the Company, in addition to the severance benefits described above, 100% of 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 Thomas C. K. Chan

Dr. Chan's employment agreement provides that, in the event that his employment 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 twelve-month period following the date of termination, the cost of continuing the benefits that Dr. Chan is entitled to receive under his employment agreement at the level in effect as of the termination date. If Dr. Chan's employment is terminated without Cause within one year after a change in control of the Company, in addition to the severance benefits described above, 100% of 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 Dr. Stephen A. Hill

Dr. Hill's employment agreement, as amended October 4, 2007, provided that the Company may terminate his employment without Cause upon not less than 52 weeks' prior written notice. To the extent that Dr. Hill did not obtain other employment or consulting work during the 52-week notice period, he would continue during such period to receive his base salary, be eligible to receive an annual cash bonus based on the achievement of Company performance goals and be eligible to receive health and other employee benefits to which he is entitled under the terms of the employment agreement. Further, in the event that Dr. Hill's employment is terminated for any reason other than for Cause, any stock options that he has received over the course of his employment with the Company would continue to vest according to the schedule set forth in each option, without regard to his employment status. In addition, each option would remain fully exercisable until the sooner of (i) the tenth anniversary of the date of grant of that option, or (ii) June 30, 2011. During the 52-week notice period, Dr. Hill would not be required to report to work but would be required to be available for activities on behalf of the Company upon request of the Board.

In the event that Dr. Hill's employment was terminated without Cause within one year following a change in control, and he had not already accepted new employment or consulting work prior to the change in control, Dr. Hill would be entitled to a lump sum severance payment equal to two times his annual base salary as of the date of termination, plus an amount that was two times the average of the annual performance bonuses that he received in the preceding two years. In addition, the Company would pay, for the 12-month period following the date of termination, the cost of continuing the benefits that Dr. Hill was entitled to receive under his employment agreement at the level in effect as of the termination date. However, if any portion of Dr. Hill's severance payments or any other payment or benefit to be received by him would be subject to the excise tax imposed on "excess parachute payments" under Section 4999 of the Tax Code, then the aggregate amount of those payments and benefits would be reduced to the extent necessary so that no portion of the total amount would be subject to the excise tax. Dr. Hill was entitled to specify which component(s) of the total amount will be reduced in order to avoid imposition of the excise tax.

On January 7, 2008, his agreement was again modified to provide that Dr. Hill would continue to serve as our President and Chief Executive Officer and a director until March 31, 2008, at which time he would resign from those positions. Because Dr. Hill became employed with another company on April 1, 2008, no payments or benefits were paid or became payable to him under his employment agreement, as amended.

Employment Agreement with Dr. Nigel J. Rulewski

Dr. Rulewski's employment agreement provided that, in the event that his employment was terminated without Cause, he would be 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 executed would become immediately exercisable on the termination date, and the

Company would pay, for the 12-month period following the date of termination, the cost of continuing the benefits that Dr. Rulewski was entitled to receive under his employment agreement at the level in effect as of the termination date. If Dr. Rulewski's employment was terminated without Cause within one year after a change in control of the Company, in addition to the severance benefits described above, 100% of any then unvested stock options would become immediately exercisable without regard to the original vesting schedule.

Dr. Rulewski served as our Chief Medical Officer until his resignation on July 22, 2008. In accordance with Dr. Rulewski's July 22, 2008 separation agreement, in February 2009 he was paid a lump sum separation payment consisting of one year's salary in the amount of \$325,000 and the average of his prior two years bonuses in the amount of \$91,000.

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL

The following table sets forth information with respect to compensation that would have been payable to Mr. Pucci, Mr. Lawrence, Dr. Schwartz and Dr. Chan if the named executive officer's employment had been terminated without Cause as of December 31, 2008 immediately following a change in control of the Company:

Name	Cash Payment(1) (\$)	Equity Acceleration(2) (\$)		efits and uisites(3) (\$)	Total (\$)
Paolo Pucci	\$1,350,000	\$	365,000	\$ 22,873	\$1,737,873
Peter S. Lawrence	525,000			22,973	547,973
Dr. Brian Schwartz	438,750		120,000	22,374	581,124
Dr. Tom C.K. Chan	401,700		136,000	22,241	559,941

- 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, 2008, plus a bonus payment equal to two times 50% of his annual salary. For each of Mr. Lawrence, Dr. Schwartz and Dr. Chan, the cash payment is calculated as the sum of the executive's annual salary as of December 31, 2008, plus a bonus payment equal to the average of the executive's 2007 and 2008 bonuses, or 35% of annual salary for Dr. Schwartz who has been employed for less than two years.
- (2) Reflects the aggregate intrinsic value of unvested stock options as of December 31, 2008. Aggregate intrinsic value represents the value for only those options which have an exercise price less than the market value of our stock on December 31, 2008.
- (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, 2008.

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table provides information as of December 31, 2008 regarding compensation plans (including individual compensation arrangements) under which our equity securities are authorized for issuance.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Number of securities to be issued upon exercise of outstanding options, warrants and Weighted-average exercise price of outstanding options, warrants and		(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))	
Equity compensation plans approved	5 600 502	ф	5.00	1 240 225	
by security holders	5,600,583	\$	5.99	1,348,335	
Equity compensation plans not approved by security holders					
Total	5,600,583	\$	5.99	1,348,335	
	, ,			, ,	
	30				

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, 2008;
- (ii) discussed with our independent registered public accounting firm, PricewaterhouseCoopers LLP, an independent registered public accounting firm, the matters required to be discussed by Statement on Auditing Standards No. 61, *Communication with Audit Committees*;
- (iii)
 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;
- (iv) discussed with PricewaterhouseCoopers LLP the firm's independence; and
- (v) 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, 2008 for filing with the SEC.

By the Audit Committee,

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

PROPOSAL 2 AMENDMENTS TO OUR AMENDED AND RESTATED 1994 EQUITY INCENTIVE PLAN

General

We are asking our stockholders to approve amendments to our Amended and Restated 1994 Equity Incentive Plan, referred to as the Equity Plan, to:

increase the aggregate number of shares of Common Stock that may be issued under the plan by 1,400,000 shares, from 9,600,000 to 11,000,000 shares;

clarify the scope of employees eligible to receive Awards under the Equity Plan;

update sections of the Equity Plan relating to Incentive Stock Options to impose a limit on the number of shares that may be issued as Incentive Stock Options and to ensure compliance with changes to the Tax Code; and

make certain other editorial changes.

The following summary of the material terms of the Equity Plan, as proposed to be amended, is qualified by reference to the full text of the Equity Plan. A copy of the Equity Plan showing the proposed amendments is attached to this Proxy Statement as Appendix A. You may also request and obtain a copy by writing to:

ArQule, Inc.
19 Presidential Way
Woburn, MA 01801
Attn.: William B. Boni
Vice President, Investor Relations/Corporate Communications.

Unless otherwise specified, capitalized terms used in this discussion have the meanings assigned to them in the Equity Plan.

The purpose of the Equity Plan is to attract and retain key employees and consultants and to provide an incentive for these persons to achieve long-range performance goals. The Equity Plan currently permits us to authorize the granting of "Awards" to our employees and consultants in any of the following forms:

options to purchase shares of the Company's Common Stock, which may be nonstatutory stock options or incentive stock options under the Tax Code;

stock appreciation rights, which give the holder the right to receive the difference between the fair market value per share the Company's Common Stock on the date of exercise over the grant price;

performance shares upon the attainment of specified performance goals;

restricted stock, which is subject to restrictions on transferability and subject to forfeiture on terms set by the Compensation Committee:

stock units, which represent the right to receive shares of the Company's Common Stock in the future, subject to terms, restrictions, conditions, performance criteria, vesting requirements and payment rules as set by the Compensation Committee;

other stock-based awards in the discretion of the Compensation Committee, including convertible preferred stock, convertible debentures, exchangeable securities and Common Stock awards or options.

To date, we have granted only incentive stock options, non-statutory stock options and restricted stock under the Equity Plan. Currently, we plan to issue only stock options and restricted stock under the Equity Plan but wish to retain the flexibility to make Awards in other forms.

On January 20, 2008, our Board of Directors voted to amend the Equity Plan, subject to stockholder approval, in order to increase the aggregate number of shares of Common Stock that may be issued under the plan by 1,400,000 shares from 9,600,000 to 11,000,000 shares. If the stockholders approve the proposed amendment, Awards may be granted under the Equity Plan for up to 11,000,000 shares of Common Stock, subject to adjustment for stock splits and similar capital changes. On January 20, 2008, the Compensation Committee also approved the other amendments to the Equity Plan described above and reflected in Appendix A.

As of March 27, 2009, options to purchase an aggregate of 15,022,885 shares of Common Stock have been granted. Pursuant to the Equity Plan, 1,192,285 restricted shares of Common Stock have been awarded, of which 70,227 restricted shares have been cancelled, 586,952 shares have been issued as restrictions lapsed and 535,106 shares remain reserved for issuance if and when restrictions lapse. Options to purchase 6,849,770 shares have been cancelled, options to purchase 3,014,904 shares have been exercised, and options to purchase 5,158,211 shares remained outstanding, leaving 336,614 shares currently available for issuance of new options or restricted shares under the Equity Plan. The closing price of our Common Stock as reported by Nasdaq on March 27, 2009 was \$4.39.

The Company does not believe that the proposed amendments to the Equity Plan would have affected the number or types of Awards that were awarded for performance in 2008. Future grants are not presently determinable, and it is not possible to predict the benefits or amounts that will be received by or allocated to particular individuals or groups for 2009. However, if the amendments are not approved the total amount of options awarded may be curtailed. All shares available for grant under the Equity Plan can be used for Awards in the form of options, restricted stock, stock appreciation rights, performance shares, stock units, and other rights having a Common Stock element.

Administration and Eligibility

The selection of persons who receive Awards under the Equity Plan and the sizes and types of Awards are generally determined by the Compensation Committee. All of the Company's employees are eligible to participate in the Equity Plan. As of March 27, 2009, the Company had 108 employees. Consultants of the Company or any affiliate, who are capable of contributing significantly to the successful performance of the Company, are also eligible to participate in the Equity Plan, but only for Awards other than incentive stock options.

Options under the Equity Plan are granted at the discretion of the Compensation Committee typically, with ratification of the Compensation Committee's actions by the Board of Directors. The Compensation Committee determines the recipients and establishes the terms and conditions of each Award. In the case of stock options, the terms and conditions include the exercise price, the form of payment of the exercise price, the number of shares subject to the option, and the dates at which the option becomes exercisable. However, the exercise price of any incentive stock option granted under the Equity Plan may not be less than the fair market value of the Common Stock on the date of grant and the term of any such option cannot be greater than 10 years. The Compensation Committee determines the exercise price of any non-statutory stock option. In the case of restricted stock, the terms and conditions include the restrictions on ownership and the dates upon which the restrictions lapse.

Subject to certain limitations, the Compensation Committee may delegate to one or more of our executive officers the power to make Awards to participants who are not subject to Section 16 of the Exchange Act or "covered employees" for purposes of Section 162(m) of the Tax Code. In January

2008, the Compensation Committee granted such authority to Dr. Hill and Mr. Lawrence. In June 2008, it granted the authority to Mr. Pucci and Mr. Lawrence.

Federal Income Tax Considerations

The following discussion briefly summarizes certain federal income tax consequences of Awards under the Equity Plan and does not attempt to describe all possible federal or any foreign, state, local, or other tax consequences related to Awards or tax consequences based upon particular circumstances.

Incentive Stock Options. Generally, a participant who is granted an incentive stock option will not recognize income on the grant or exercise of the option. However, the difference between the exercise price and the fair market value of the stock on the date of exercise is an adjustment item for purposes of the alternative minimum tax. If a participant does not exercise an incentive stock option within certain specified periods after termination of employment, the participant will recognize ordinary income on the exercise of the incentive stock option in the same manner as on the exercise of a non-statutory stock option, as described below.

Non-statutory Stock Options. A participant generally is not required to recognize income on the grant of a non-statutory stock option. Generally, ordinary income is instead required to be recognized on the date the non-statutory stock option is exercised. In general, the amount of ordinary income required to be recognized is the excess, if any, of the fair market value of the shares of Common Stock on the date of exercise over the exercise price.

Restricted Stock. Unless a participant who is granted shares of restricted stock makes an election under Section 83(b) of the Tax Code as described below, the participant generally is not required to recognize ordinary income on the award of restricted stock. Instead, on the date that the restrictions lapse (i.e. the shares become transferable or no longer subject to a substantial risk of forfeiture), the participant will be required to recognize ordinary income in an amount equal to the excess, if any, of the fair market value of the shares of restricted stock on such date over the amount, if any, paid for such shares. If a participant makes a Section 83(b) election to recognize ordinary income on the date the shares of restricted stock are awarded, the amount of ordinary income required to be recognized is an amount equal to the excess, if any, of the fair market value of the shares on the date of award over the amount, if any, paid for such shares. In such case, the participant will not be required to recognize additional ordinary income when the restrictions lapse.

Stock Appreciation Rights, Performance Shares, Stock Units and Other Stock Based Awards. A participant generally is not required to recognize income on the grant of a stock appreciation right, an award of performance shares, an award of stock units, or any other stock based award. Generally, ordinary income is instead required to be recognized upon the issuance of shares and/or cash pursuant to the terms of the award. In general, the amount of ordinary income required to be recognized is the excess, if any, of the amount of cash and the fair market value of any shares received, over the amount, if any, paid for the Award.

Gain or Loss on Sale or Exchange of Shares. In general, gain or loss from the sale or exchange of shares of Common Stock granted or awarded under the Equity Plan will be treated as capital gain or loss, if the shares are held as capital assets at the time of the sale or exchange. However, if certain holding period requirements are not satisfied at the time of a sale or exchange of shares of Common Stock acquired upon exercise of an incentive stock option (a "disqualifying disposition"), a participant generally will be required to recognize ordinary income upon such disposition.

Deductibility by Company. The Company generally is not allowed a deduction in connection with the grant or exercise of an incentive stock option. However, if a participant is required to recognize ordinary income as a result of a disqualifying disposition, the Company generally will be entitled to a

deduction equal to the amount of ordinary income so recognized. In general, for a non-statutory stock option (including an incentive stock option that is treated as a non-statutory stock option, as described above), a restricted stock award, a stock appreciation right, a performance shares award, a stock units award, or any other stock-based award, the Company will be allowed to deduct the amount of ordinary income recognized by the participant, provided certain income tax reporting requirements are satisfied.

Performance-Based Compensation. Subject to certain exceptions, Section 162(m) of the Tax Code disallows federal income tax deductions for compensation paid by a publicly-held corporation to certain executives to the extent the amount paid to an executive exceeds \$1 million for the taxable year. The Equity Plan has been designed to allow the grant of awards that qualify under an exception to the deduction limit of Section 162(m) for "performance-based compensation."

Tax Rules Affecting Nonqualified Deferred Compensation Plans. Section 409A of the Tax Code imposes tax rules that apply to "nonqualified deferred compensation plans." Failure to comply with, or to qualify for an exemption from, the rules with respect to an award could result in significant adverse tax results to the award recipient including immediate taxation upon vesting, an additional income tax of 20 percent of the amount of income so recognized, plus a tax in the nature of interest. The Equity Plan is intended to comply with, or qualify for an exemption from, Section 409A of the Tax Code to the extent applicable.

Parachute Payments. Where payments to certain persons that are contingent on a change in control exceed limits specified in the Tax Code, the person generally is liable for a 20 percent excise tax on, and the corporation or other entity making the payment generally is not entitled to any deduction for, a specified portion of such payments. Any award under which vesting is accelerated by a change in control of the Company, would be relevant in determining whether the excise tax and deduction disallowance rules would be triggered.

Vote Required

The affirmative vote of a majority of the total votes cast by the stockholders present at the meeting, in person or by proxy, and entitled to vote on this proposal is needed to approve the amendments to the Equity Plan. 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. Broker non-votes will not be treated as votes cast and will have no effect on the outcome of the vote on this proposal. Abstentions will be treated as a vote against this proposal.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THIS PROPOSAL.

PROPOSAL 3 APPROVAL OF AN AMENDMENT TO OUR AMENDED AND RESTATED 1996 EMPLOYEE STOCK PURCHASE PLAN

General

We are soliciting approval of an amendment to our Amended and Restated 1996 Employee Stock Purchase Plan (the "Purchase Plan") to increase the number of shares of Common Stock available for purchase by participants in such plan from 1,600,000 to 2,000,000 shares of Common Stock.

On January 20, 2009, our Board of Directors voted to amend the Purchase Plan, subject to stockholder approval, to increase the number of shares of Common Stock available for purchase by participants in such plan from 1,600,000 to 2,000,000 shares of Common Stock. If the proposed amendment is approved, the Purchase Plan would authorize the grant of rights to purchase a maximum of 2,000,000 shares of Common Stock, subject to adjustment for stock splits and similar capital changes, to eligible employees.

The following summary of the material terms of the Purchase Plan, as amended, is qualified by reference to the full text of the Purchase Plan (attached as Appendix B). You may also obtain a copy by writing to:

ArQule, Inc.
19 Presidential Way
Woburn, MA 01801
Attn.: William B. Boni
Vice President, Investor Relations/Corporate Communications.

Unless otherwise specified, capitalized terms used in this discussion have the meanings assigned to them in the Purchase Plan.

As of March 27, 2009, approximately 108 employees were eligible to participate in the Purchase Plan and 1,260,104 shares had been purchased under the Purchase Plan since its inception. The closing price of our Common Stock as reported by Nasdaq on March 27, 2009 was \$4.39.

The Compensation, Nominating and Governance Committee determines, in its discretion, the frequency and duration of Offerings (as defined below) under the Purchase Plan, while the number of shares purchased is generally determined by both the number of rights to purchase shares granted by the Board of Directors, the number of participants and the number of shares the participants wish to purchase. Such future grants are not presently determinable, and it is not possible to predict the benefits or amounts that will be received by or allocated to particular individuals or groups in 2009.

The Company believes that the proposed amendment to the Purchase Plan would not have affected the number of rights to purchase Common Stock that were granted under the Purchase Plan in 2008. However, if the amendment is not approved, the total amount of rights granted in the future may be curtailed, particularly if the number of employees increases.

Administration and Eligibility

The Purchase Plan is intended to qualify as an "employee stock purchase plan" under Section 423 of the Tax Code. The Compensation, Nominating and Governance Committee, in its discretion, grants rights to purchase shares of Common Stock under the Purchase Plan pursuant to one or more offerings ("Offerings"). The Compensation, Nominating and Governance Committee determines the frequency and duration of individual Offerings under the Purchase Plan and the date(s) when stock may be purchased. All of our full-time employees are eligible to participate in the Purchase Plan. For purposes of the preceding sentence, "full-time employees" are defined as employees who work at least 20 hours a week and have been employed with us for at least five months in the calendar year in which an Offering occurs or in the calendar year immediately preceding such year. Eligible employees participate

voluntarily and may withdraw from any Offering at any time before stock is purchased. Participation terminates automatically upon termination of employment for any reason.

The purchase price per share of Common Stock in an Offering, unless the Compensation, Nominating and Governance Committee determines a higher price, is 85% of the lower of the fair market value of Common Stock on the first day of an Offering period or on the last day of such offering period, i.e. the date the shares are purchased. The purchase price may be paid through regular payroll deductions, lump sum cash payments or a combination of both, as determined by the Compensation, Nominating and Governance Committee.

In accordance with Section 423 of the Tax Code, no employee may participate in an offering under the Purchase Plan if, immediately after the right to acquire shares of Common Stock in the offering is granted, the employee would own 5% or more of the voting stock or value of the Company (including Common Stock that may be purchased through subscriptions under the Purchase Plan or any other options), nor may an employee buy more than \$25,000 worth of stock (determined by the fair market value of the Common Stock at the time the right to purchase the Common Stock is granted) through the Purchase Plan in any calendar year. In addition, each employee's purchases under the Purchase Plan in any calendar year cannot exceed 15% of the employee's annual rate of compensation. The Purchase Plan may be amended or terminated at any time by the Board of Directors, subject to any necessary approval by stockholders.

Federal Income Tax Considerations

General.

The following discussion briefly summarizes certain federal income tax consequences of participation in the Purchase Plan and does not attempt to describe all possible federal or any foreign, state, local or other tax consequences of such participation or tax consequences based upon particular circumstances. Moreover, statutory provisions are technical and subject to change, as are their interpretations, and their application may vary in individual circumstances.

Tax Consequences to Participants.

The Purchase Plan is intended to qualify as an "employee stock purchase plan" under Section 423 of the Tax Code. A participant under the Purchase Plan will be taxed on amounts withheld for the purchase of shares as if such amounts were actually received by the participant. No other income with respect to the shares purchased under the Purchase Plan will be recognized until disposition of such shares or the participant's death. The tax consequences upon disposition generally depend on the period that the purchased shares are held prior to disposition.

If a participant disposes of shares purchased under the Purchase Plan more than two years after the commencement date of the Offering and more than one year after the date on which the shares are purchased or in the event of such participant's death, the participant will recognize ordinary income upon the disposition of such shares equal to the lesser of (i) the amount by which the fair market value of such shares on the Offering commencement date exceeded the actual purchase price paid by the participant for such shares and (ii) the amount by which the fair market value of such shares at the time of disposition exceeded the actual purchase price paid by the participant for such shares. In addition, the participant will generally recognize capital gain (or loss) in the year of disposition equal to the amount by which proceeds from the disposition of the shares exceed (or are less than) than the sum of the actual purchase price and the amount of ordinary income recognized by the participant.

If a participant disposes of shares purchased under the Purchase Plan prior to the end of the holding period described above (a "disqualifying disposition"), he or she will be required to recognize, in the year of the disqualifying disposition, ordinary income equal to the excess of the fair market value

of the shares on the date of purchase over the actual purchase price of such shares. In addition, the participant will generally recognize capital gain (or loss) equal to the amount by which proceeds from the disposition of the shares exceed (or are less than) the fair market value of the shares on the date of purchase.

Tax Consequences to the Company.

The Company will not be allowed a deduction for federal income tax purposes if a participant holds shares purchased under the Purchase Plan for the prescribed holding period described above or dies while holding the shares. However, if a participant makes a disqualifying disposition, the Company will generally be entitled to a deduction for federal income tax purposes equal to the amount recognized as ordinary income by the participant upon such disposition, except to the extent such deduction is limited by applicable provisions of the Tax Code.

Vote Required

The affirmative vote of a majority of the total votes cast by the stockholders present at the meeting, in person or by proxy, and entitled to vote on this proposal is necessary for approval of the amendment to the Purchase Plan. If you submit a proxy without direction as to a vote on this matter, the proxy will be voted "FOR" the proposal. Abstentions will have the effect of a vote against this proposal. Broker non-votes will not be treated as votes cast and will have no effect on the outcome of the vote on this proposal.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THIS PROPOSAL.

38

PROPOSAL 4 RATIFICATION OF THE SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We are asking our stockholders to ratify the selection by our Audit Committee of PricewaterhouseCoopers LLP, an independent registered public accounting firm, to audit our financial statements for the fiscal year ending December 31, 2009. PricewaterhouseCoopers LLP has audited our financial statements since our inception.

The Audit Committee of our Board of Directors selected PricewaterhouseCoopers LLP to audit our financial statements for the year ending December 31, 2009. We expect that representatives of PricewaterhouseCoopers LLP will attend our 2009 Annual Meeting of Stockholders 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 summarizes fees for services provided by PricewaterhouseCoopers LLP to us in 2008 and 2007:

	2008	2007
Audit Fees	\$475,000	\$502,000
Audit-Related Fees	23,000	53,000
Tax Fees		
All Other Fees		
Total	\$498,000	\$555,000

"Audit Fees" are fees for the audit of our consolidated 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 and other services normally associated with statutory and regulatory filings or engagements.

"Audit-Related Fees" are fees for assurance and related services that are reasonably related to the performance of the audit and the review of ArQule's financial statements and which are not reported under "Audit Fees." In 2008, these services related to consultations with respect to the implementation of new accounting standards and to accounting for a business collaboration.

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 2008 and 2007.

Vote Required

The affirmative vote of a majority of the total votes cast by the stockholders present at the 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. Broker non-votes will not be treated as votes cast and will have no effect on the outcome of the vote on this proposal. Abstentions will be treated as votes against this proposal.

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THIS PROPOSAL.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

There are no amounts due to or from a related party as of December 31, 2008 and there was no revenue from a related party in 2008. In January 2007, we entered into a \$5.0 million, eight-month sponsored research agreement with the newly established Boston Biomedical, Inc. ("BBI"), an independent corporation led by Chiang J. Li, our former chief scientific officer. As of December 31, 2008, our responsibilities under this agreement have been fulfilled, and no further payments are due to BBI from us.

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 as of March 27, 2009 by persons known by us to be beneficial owners of more than 5% of our Common Stock. We had approximately 44,557,477 shares of Common Stock outstanding on March 27, 2009.

Common Stock Owned	Options to Purchase Common Stock	Total Stock and Stock-based Holdings	Percent of Class
13,092,073		13,092,073	29.65%
3,273,679		3,273,679	7.35%
3,018,208		3,018,208	6.84%
	Stock Owned 13,092,073 3,273,679	Common Stock Owned 13,092,073	Common Stock Owned Owned Purchase Common Stock Holdings and Stock-based Holdings 13,092,073 13,092,073

- These shares are beneficially owned by a group consisting of Biotechnology Value Fund, L.P., Biotechnology Value Fund II, L.P., BVF Investments, L.L.C., Investment 10, L.L.C., BVF Partners L.P. and BVF Inc., based on the Schedule 13D/A filed with the SEC on November 26, 2008 by Biotechnology Value Fund, L.P. Pursuant to the operating agreement of BVF Investments, L.L.C., BVF Partners L.P. is authorized, among other things, to invest the funds of Ziff Asset Management, L.P., the majority member of BVF Investments, L.L.C., in shares of the Common Stock beneficially owned by BVF Investments, L.L.C. and to vote and exercise dispositive power over those shares of Common Stock BVF Partners L.P. and BVF Inc. share voting and dispositive power over shares of Common Stock beneficially owned by Biotechnology Value Fund, L.P., Biotechnology Value Fund II, BVF Investments, L.L.C., and Investment 10, L.L.C., on whose behalf BVF Partners L.P. acts as an investment manager and, accordingly, BVF Partners L.P. and BVF Inc. have beneficial ownership of all of the shares of Common Stock owned by such parties. The percentage of ownership is calculated as of the filing date of the Schedule 13D/A.
- These shares (issued to Pfizer Holdings Europe, Latouche House, International Financial Services Centre, Dublin 1, Ireland, a subsidiary of Pfizer Inc) are beneficially owned by Pfizer Inc based on the Schedule 13D filed with the SEC on February 14, 2006 by Pfizer Inc. The percentage of ownership is calculated as of March 27, 2009.
- These shares are beneficially owned by a group consisting of Barclays Global Investors, NA., Barclays Global Fund Advisors, Barclays Global Investors, Ltd., Barclays Global Investors Japan Limited, Barclays Global Investors Canada Limited, Barclays Global Investors Australia Limited, and Barclays Global Investors (Deutschland) AG, based on the Schedule 13G filed with the SEC on February 5, 2009 by Barclays Global Investors, NA. The percentage of ownership is calculated as of the filing date of the Schedule 13G.

SHARE OWNERSHIP OF MANAGEMENT

The following table and footnotes set forth certain information regarding the beneficial ownership of the Company's Common Stock as of March 27, 2009 by (i) our directors and nominees for election as director, (ii) our named executive officers, and (iii) all current directors and named executive officers and as a group. Shares of Common Stock underlying options includes shares for which options are currently exercisable or will become exercisable within 60 days after March 27, 2009. 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. The address for individuals for whom an address is not otherwise indicated is 19 Presidential Way, Woburn MA 01801-5140.

	Common Stock	Options to Purchase Common	Total Stock and Stock-based	Percent
Directors, Nominees and Named Executive Officers(1)	Owned	Stock	Holdings	of Class
Timothy C. Barabe(2)	23,690	56,000	79,690	*
Ronald M. Lindsay	20,000	40,000	60,000	*
Michael D. Loberg	58,473	33,333	91,806	*
William G. Messenger	1,500	45,000	46,500	*
Nancy A. Simonian		40,000	40,000	*
Patrick J. Zenner	20,000	67,500	87,500	*
Thomas C. K. Chan		75,000	75,000	*
Stephen A. Hill	15,268	1,002,500	1,017,768	2.3%
Peter S. Lawrence	10,000	325,000	335,000	*
Paolo Pucci	94,706	125,000	219,706	*
Nigel J. Rulewski	1,498	162,500	163,998	*
Brian Schwartz	10,000		10,000	*
All current directors and named executive officers as				
a group (10 persons)	255,135	1,971,833	2,226,968	5.1%

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 27, 2009.
- Mr. Barabe disclaims any direct, indirect or beneficial ownership of 420 shares of Common Stock owned by his spouse and 2,000 shares of Common Stock owned by his adult children.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Our executive officers and directors 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 our executive officers and directors 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 2008, our executive officers and directors complied with all applicable Section 16(a) filing requirements with the exceptions described below.

We file reports required under Section 16(a) on behalf of our directors pursuant to powers of attorney. As a result of administrative errors, (i) we did not file a report on Form 4 for Dr. Schwartz relating to an open market stock purchase transaction within two business days of its occurrence, as required; and (ii) we did not file a report on Form 4 for Mr. Pucci relating to satisfaction of income tax liability on an award of restricted stock by withholding by the Company of a portion of the shares awarded within two business days of its occurrence, as required. The required filings were made immediately after discovery of the errors.

STOCKHOLDER PROPOSALS

If you wish to bring business before the 2010 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 15, 2009, provided that the 2010 Annual Meeting of Stockholders is within 30 days of May 14, 2009 (December 15, 2009 being the date 120 days before the anniversary of the date the 2009 proxy statement was mailed to stockholders).

If you intend to bring such a proposal at the 2010 Annual Meeting outside the SEC's stockholder proposal rules, or wish to propose a director nomination at the 2010 Annual Meeting, you must provide written notice to ArQule of such proposal or nomination by March 1, 2010 (the date 75 days before the anniversary of the 2009 Annual Meeting).

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

Peter S. Lawrence
President and Chief Operating Officer
ArQule, Inc.
19 Presidential Way
Woburn, Massachusetts, 01801

OTHER MATTERS

Our Board of Directors 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, 2008, as filed with the SEC on March 6, 2009, 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:

William B. Boni
Vice President, Investor Relations/Corporate Communications
ArQule, Inc.
19 Presidential Way
Woburn, Massachusetts 01801

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 materials.

Appendix A

ARQULE, INC. Amended and Restated 1994 Equity Incentive Plan

Section 1. Purpose

The purpose of the Plan is to attract and retain key employees and consultants of the Company and its Affiliates, to provide an incentive for them to achieve long-range performance goals, and to enable them to participate in the long-term growth of the Company. Independent contractors and leased employees of the Company shall not be eligible to participate in the Plan notwithstanding that they may be deemed to be "common law" employees of the Company for other purposes.

Section 2. Definitions

"Affiliate" means any business entity that directly, or indirectly through one or more intermediaries, controls, is controlled by or is under common control with the Company. For purposes hereof, "Control" (and with correlative meanings, the terms "controlled by" and "under common control with") shall mean the possession of the power to direct or cause the direction of the management and policies of the Company, whether through the ownership of voting stock, by contract or otherwise. In the case of a corporation "control" shall mean, among other things, the direct or indirect ownership of more than fifty percent (50%) of its outstanding voting stock. In the case of an Incentive Stock Option, the term "Affiliate" shall not only include anyeach entity which is not either a "parent corporation" or a "subsidiary corporation," both as defined in Section 424 of the Code, with respect to the Company (and any entity which becomes such a "parent corporation" or "subsidiary corporation" after the adoption of the Plan).

"Award" means any Option, Stock Appreciation Right, Performance Share, Restricted Stock, Stock Unit or Other Stock-Based Award awarded under the Plan or any Award previously granted under the 1994 Equity Incentive Plan of the Company or the Amended and Restated 1994 Equity Incentive Plan of the Company as in effect prior to date this Plan was adopted by the Board of Directors.

"Board" means the Board of Directors of the Company.

"Code" means the Internal Revenue Code of 1986, as amended from time to time, and any successor to such Code.

"Committee" means a committee of not fewer than two members of the Board appointed by the Board to administer the Plan. If a Committee is authorized to grant Options to a Reporting Person or a "covered employee" within the meaning of Section 162(m) of the Code, each member shall be a "non-employee director" or the equivalent within the meaning of Rule 16b-3 under the Securities Exchange Act of 1934 and an "outside director" or the equivalent within the meaning of Section 162(m) of the Code, respectively. Until such committee is appointed, "Committee" means the Board.

"Common Stock" or "Stock" means the Common Stock, \$0.01 par value, of the Company.

"Company" means ArQule, Inc.

"Designated Beneficiary" means the beneficiary designated by a Participant, in a manner determined by the Committee, to receive amounts due or exercise rights of the Participant in the event of the Participant's death. In the absence of an effective designation of a beneficiary by a Participant, "Designated Beneficiary" shall mean (i) the Participant's estate, if such amounts or rights are, under

applicable law, deemed to be part of the Participant's estate, or (ii) such person who acquired the right to receive amounts due or exercise rights of the Participant by bequest or inheritance.

"Effective Date" means October 28, 1994.

"Fair Market Value" means, with respect to Common Stock or any other property, the fair market value of such property as determined by the Committee in good faith or in the manner established by the Committee from time to time.(1)

(1)
On January 16, 2007, the Board determined that the Fair Market Value of a share of Common Stock shall be its closing price on the NASDAQ National Market on the date an Award is made.

"Incentive Stock Option" means an option to purchase shares of Common Stock awarded to a Participant under Section 6 that is intended to meet the requirements of Section 422 of the Code or any successor provision and is designated by the Committee as such.

"Nonstatutory Stock Option" means an option to purchase shares of Common Stock awarded to a Participant under Section 6 that is not intended to be an Incentive Stock Option.

"Option" means an Incentive Stock Option or a Nonstatutory Stock Option.

"Other Stock-Based Award" means an Award, other than an Option, Stock Appreciation Right, Performance Share, Restricted Stock or Stock Unit, having a Common Stock element and awarded to a Participant under Section 11.

"Participant" means, subject to Section 4 hereof, a person selected by the Committee to receive an Award under the Plan.

"Performance Cycle" or "Cycle" means the period of time selected by the Committee during which performance is measured for the purpose of determining the extent to which an award of Performance Shares has been earned.

"Performance Shares" mean shares of Common Stock, which may be earned by the achievement of performance goals, awarded to a Participant under Section 8.

"Reporting Person" means a person subject to Section 16 of the Securities Exchange Act of 1934 or any successor provision.

"Restricted Period" means the period of time selected by the Committee during which an Award may be forfeited to the Company pursuant to the terms and conditions of such Award.

"Restricted Stock" means shares of Common Stock subject to forfeiture awarded to a Participant under Section 9.

"Stock Appreciation Right" or "SAR" means a right to receive any excess in value of shares of Common Stock over the exercise price awarded to a Participant under Section 7.

"Stock Unit" means an award of Common Stock or units that are valued in whole or in part by reference to, or otherwise based on, the value of Common Stock, awarded to a Participant under Section 10.

"Ten-Percent Stockholder" shall mean a Participant who, at the time of grant of an Incentive Stock Option, owns, applying Section 424(d) of the Code, stock possessing more than ten percent of the total combined voting power of all classes of stock of the Company or a "parent corporation" or "subsidiary corporation" (both as defined in Section 424 of the Code) with respect to the Company.

Section 3. Administration

The Plan shall be administered by the Committee. The Committee shall have authority and discretion to adopt, alter and repeal such administrative rules, guidelines and practices governing the

operation of the Plan as it shall from time to time consider advisable, to interpret the provisions of the Plan, subject to the provisions of the Plan, to grant Awards to Participants and determine the terms of all such Awards, to determine the identity of a Participant's Designated Beneficiary and to determine the identity of a Participant's (or Designated Beneficiary's) legal representative in the event such person becomes legally disabled. The Committee's decisions shall be final and binding. To the extent permitted by applicable law, the Committee may delegate to one or more executive officers of the Company the power to make Awards to Participants who are not Reporting Persons or covered employees and all determinations under the Plan with respect thereto, provided that the Committee shall fix the maximum amount of such Awards for all such Participants and a maximum for any one Participant.

Section 4. Eligibility

All employees (but excluding any independent contractor or leased employee who is deemed to be a "common law" employee of the Company or any Affiliate) and, in the case of Awards other than Incentive Stock Options, any consultant of the Company or any Affiliate, capable of contributing significantly to the successful performance of the Company, other than a person who has irrevocably elected not to be eligible, are eligible to be Participants in the Plan.

Section 5. Stock Available for Awards

- Subject to adjustment under subSection (b), Awards subsection (b), the maximum number of shares of Common Stock that may be madeissued under the Plan <a href="for up to 9,600,000 is 11,000,000 shares of Common Stock. If any Award in respect of shares of Common Stock expires or is terminated unexercised or is forfeited without the Participant having had the benefits of ownership (other than voting rights), the shares subject to such Award, to the extent of such expiration, termination or forfeiture, shall again be available for award under the Plan. Common Stock issued through the assumption or substitution of outstanding grants from an acquired company shall not reduce the shares available for Awards under the Plan to the extent permitted under Section 422 of the Code. Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.
- In the event that the Committee determines that any stock dividend, extraordinary cash dividend, creation of a class of equity securities, recapitalization, reorganization, merger, consolidation, split-up, spin-off, combination, exchange of shares, warrants or rights offering to purchase Common Stock at a price substantially below fair market value, or other similar transaction affects the Common Stock such that an adjustment is required or desirable in order to preserve the benefits or potential benefits intended to be made available under the Plan, then the Committee (subject, in the case of Incentive Stock Options, to any limitation required under the Code) may in its discretion equitably adjust any or all of, or provide substitution for, (i) the number and kind of shares in respect of which Awards may be made under the Plan, (ii) the number and kind of shares subject to outstanding Awards, and (iii) the award, exercise or conversion price with respect to any of the foregoing, and if considered appropriate, the Committee may make provision for a cash payment with respect to an outstanding Award, provided that the number of shares subject to any Award shall always be a whole number.

Section 6. Stock Options

(a)
Subject to the provisions of the Plan, the Committee may award Incentive Stock Options and Nonstatutory Stock Options and determine the number of shares to be covered by each Option, the option price therefor and the conditions and limitations applicable to the exercise of the Option. The terms and conditions of Incentive Stock Options shall be subject to and comply with Section 422 of the Code or any successor provision and any regulations

thereunder, and no Incentive Stock Option may be granted hereunder more than ten years after May 19, 2004.(2)

- (2)
 This Plan was amended by the Board with subsequent stockholder approval to extend the period during which Incentive Stock Option may be granted to ten years after May 19, 2004, the date of the 2004 Annual Meeting of Stockholders of the Company.
 - (b)

 The Committee shall establish the option price at the time each Option is awarded, which price in the case of an Incentive

 Stock Option shall not be less than 100% (110% in the case of a Ten-Percent Stockholder) of the Fair Market Value of the

 Common Stock on the date of award with respect to Incentive Stock Options. Nonstatutory Stock Options may be granted at such prices as the Committee may determine.
 - Each Option shall be exercisable at such times and subject to such terms and conditions as the Committee may specify in the applicable Award or thereafter, provided, however, that an Incentive Stock Option may not be exercised more than ten years (five years in the case of a Ten-Percent Stockholder) from the date of award. The Committee may impose such conditions with respect to the exercise of Options, including conditions relating to applicable federal or state securities laws, as it considers necessary or advisable.
 - No shares shall be delivered pursuant to any exercise of an Option until payment in full of the option price therefor is received by the Company. Such payment may be made in whole or in part in cash or, (A) to the extent permitted by the Committee at or after the award of the Option, by delivery (i) of a note or (ii) shares of Common Stock owned by the optionee, including, if vested, shares of Restricted Stock, or by (B) to the extent permitted under the terms of the written agreement evidencing the grant of an Option, by (i) retaining shares otherwise issuable pursuant to the Option, in each case valued at their Fair Market Value on the date of delivery or retention, or (ii) such other lawful consideration as the Committee may determine.
 - (e)

 The Committee may provide that, subject to such conditions as it considers appropriate, upon the delivery or retention of shares to the Company in payment of an Option, the Participant automatically be awarded an Option for up to the number of shares so delivered.

Section 7. Stock Appreciation Rights

- Subject to the provisions of the Plan, the Committee may award SARs in tandem with an Option (at or after the award of the Option), or alone and unrelated to an Option. SARs in tandem with an Option shall terminate to the extent that the related Option is exercised, and the related Option shall terminate to the extent that the tandem SARs are exercised. SARs granted in tandem with Options shall have an exercise price not less than the exercise price of the related Option. SARs granted alone and unrelated to an Option may be granted at such exercise prices as the Committee may determine.
- (b)

 An SAR related to an Option, which SAR can only be exercised upon or during limited periods following a change in control of the Company, may entitle the Participant to receive an amount based upon the highest price paid or offered for Common Stock in any transaction relating to the change in control or paid during the thirty-day period immediately preceding the occurrence of the change in control in any transaction reported in the stock market in which the Common Stock is normally traded.

Section 8. Performance Shares

(a)
Subject to the provisions of the Plan, the Committee may award Performance Shares and determine the number of such shares for each Performance Cycle and the duration of each Performance Cycle. There may be more than one Performance Cycle in existence at any one

time, and the duration of Performance Cycles may differ from each other. The payment value of Performance Shares shall be equal to the Fair Market Value of the Common Stock on the date the Performance Shares are earned or, in the discretion of the Committee, on the date the Committee determines that the Performance Shares have been earned.

- (b)

 The Committee shall establish performance goals for each Cycle, for the purpose of determining the extent to which Performance Shares awarded for such Cycle are earned, on the basis of such criteria and to accomplish such objectives as the Committee may from time to time select. During any Cycle, the Committee may adjust the performance goals for such Cycle as it deems equitable in recognition of unusual or non-recurring events affecting the Company, changes in applicable tax laws or accounting principles, or such other factors as the Committee may determine.
- As soon as practicable after the end of a Performance Cycle, the Committee shall determine the number of Performance Shares that have been earned on the basis of performance in relation to the established performance goals. The payment values of earned Performance Shares shall be distributed to the Participant or, if the Participant has died, to the Participant's Designated Beneficiary, as soon as practicable thereafter. The Committee shall determine, at or after the time of award, whether payment values will be settled in whole or in part in cash or other property, including Common Stock or Awards.

Section 9. Restricted Stock

- (a)
 Subject to the provisions of the Plan, the Committee may award shares of Restricted Stock and determine the duration of the Restricted Period during which, and the conditions under which, the shares may be forfeited to the Company and the other terms and conditions of such Awards. Shares of Restricted Stock may be issued for no cash consideration or such minimum consideration as may be required by applicable law.
- Shares of Restricted Stock may not be sold, assigned, transferred, pledged or otherwise encumbered, except as permitted by the Committee, during the Restricted Period. Shares of Restricted Stock shall be evidenced in such manner as the Committee may determine. Any certificates issued in respect of shares of Restricted Stock shall be registered in the name of the Participant and unless otherwise determined by the Committee, deposited by the Participant, together with a stock power endorsed in blank, with the Company. At the expiration of the Restricted Period, the Company shall deliver such certificates to the Participant or if the Participant has died, to the Participant's Designated Beneficiary.

Section 10. Stock Units

- (a) Subject to the provisions of the Plan, the Committee may award Stock Units subject to such terms, restrictions, conditions, performance criteria, vesting requirements and payment rules as the Committee shall determine.
- (b)
 Shares of Common Stock awarded in connection with a Stock Unit Award shall be issued for no cash consideration or such minimum consideration as may be required by applicable law.

Section 11. Other Stock-Based Awards

Subject to the provisions of the Plan, the Committee may make other awards of Common Stock and other awards that are valued in whole or in part by reference to, or are otherwise based on, Common Stock, including without limitation convertible preferred stock, convertible debentures, exchangeable securities and Common Stock awards or options. Other Stock-Based Awards may be granted either alone or in tandem with other Awards granted under the Plan and/or cash awards made outside of the Plan.

(b)

The Committee may establish performance goals, which may be based on performance goals related to book value, subsidiary performance or such other criteria as the Committee may determine, Restricted Periods, Performance Cycles, conversion prices, maturities and security, if any, for any Other Stock-Based Award. Other Stock-Based Awards may be sold to Participants at the face value thereof or any discount therefrom or awarded for no consideration or such minimum consideration as may be required by applicable law.

Section 12. General Provisions Applicable to Awards

- (a)

 Documentation. Each Award under the Plan shall be evidenced by a writing delivered to the Participant specifying the terms and conditions thereof and containing such other terms and conditions not inconsistent with the provisions of the Plan as the Committee considers necessary or advisable to achieve the purposes of the Plan or to comply with applicable tax and regulatory laws and accounting principles.
- (b)

 Committee Discretion. Each type of Award may be made alone, in addition to or in relation to any other type of Award. The terms of each type of Award need not be identical, and the Committee need not treat Participants uniformly. Except as otherwise provided by the Plan or a particular Award, any determination with respect to an Award may be made by the Committee at the time of award or at any time thereafter.
- (c)

 Settlement. The Committee shall determine whether Awards are settled in whole or in part in cash, Common Stock, other securities of the Company, Awards or other property. The Committee may permit a Participant to defer all or any portion of a payment under the Plan, including the crediting of interest on deferred amounts denominated in cash and dividend equivalents on amounts denominated in Common Stock.
- (d)

 Dividends and Cash Awards. In the discretion of the Committee, any Award under the Plan may provide the Participant with (i) dividends or dividend equivalents payable currently or deferred with or without interest, and (ii) cash payments in lieu of or in addition to an Award.
- (e) *Termination of Employment.* The Committee shall determine the effect on an Award of the disability, death, retirement or other termination of employment of a Participant and the extent to which, and the period during which, the Participant's legal representative, guardian or Designated Beneficiary may receive payment of an Award or exercise rights thereunder.
- Change in Control. In order to preserve a Participant's rights under an Award in the event of a change in control of the Company, the Committee in its discretion may, at the time an Award is made or at any time thereafter, take one or more of the following actions: (i) provide for the acceleration of any time period relating to the exercise or realization of the Award, (ii) provide for the purchase of the Award upon the Participant's request for an amount of cash or other property that could have been received upon the exercise or realization of the Award had the Award been currently exercisable or payable, (iii) adjust the terms of the Award in a manner determined by the Committee to reflect the change in control, (iv) cause the Award to be assumed, or new rights substituted therefor, by another entity, or (v) make such other provision as the Committee may consider equitable and in the best interests of the Company.
- Withholding Taxes. The Participant shall pay to the Company, or make provision satisfactory to the Committee for payment of, any taxes required by law to be withheld in respect of Awards under the Plan no later than the date of the event creating the tax liability. The Company's obligation to issue or deliver shares of Common Stock or pay any amount pursuant to any Award shall be subject to the Participant's satisfaction of his or her obligations under the preceding sentence. In the Committee's discretion, such tax obligations may be paid in whole or in part in shares of Common Stock, including shares retained from

the Award creating the tax obligation, valued at their Fair Market Value on the date of delivery. The Company and its Affiliates may, to the extent permitted by law, deduct any such tax obligations from any payment of any kind otherwise due to the Participant.

- (h) Foreign Nationals. Awards may be made to Participants who are foreign nationals or employed outside the United States on such terms and conditions different from those specified in the Plan as the Committee considers necessary or advisable to achieve the purposes of the Plan or to comply with applicable laws.
- (i)

 Amendment of Award. The Committee may amend, modify or terminate any outstanding Award, including substituting therefor another Award of the same or a different type, changing the date of exercise or realization and converting an Incentive Stock Option to a Nonstatutory Stock Option, provided that the Participant's consent to such action shall be required unless the Committee determines that the action, taking into account any related action, would not materially and adversely affect the Participant Notwithstanding the foregoing sentence, unless such action is approved by the Company's stockholders or is an adjustment resulting from the operation of Section 5 (b) of the Plan: (A) no outstanding Option granted under the Plan may be amended to provide an exercise price per share that is lower than the then-current exercise price per share stated in such outstanding Option, and (B) the Committee may not cancel any outstanding Option and grant in substitution therefor new Awards under the Plan covering the same or a different number of shares of Common Stock and having an exercise price per share lower than the then-current exercise price per share of the cancelled Option.
- (j)

 Transferability. In the discretion of the Committee, any Award may be made transferable upon such terms and conditions and to such extent as the Committee determines (which terms and conditions may be waived by the Committee in its discretion), provided that Incentive Stock Options may be transferable only to the extent permitted by the Code. The Committee may in its discretion waive any restriction on transferability.

Section 13. Miscellaneous

- (a)

 No Right To Employment. No person shall have any claim or right to be granted an Award, and the grant of an Award shall not be construed as giving a Participant the right to continued employment. The Company expressly reserves the right at any time to dismiss a Participant free from any liability or claim under the Plan, except as expressly provided in the applicable Award.
- (b)

 No Rights As Stockholder. Subject to the provisions of the applicable Award, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be distributed under the Plan until he or she becomes the holder thereof. A Participant to whom Common Stock is awarded shall be considered the holder of the Stock at the time of the Award except as otherwise provided in the applicable Award.
- (c) *Effective Date.* Subject to the approval of the stockholders of the Company, the Plan shall be effective on the Effective Date. Before such approval, Awards may be made under the Plan expressly subject to such approval.
- (d)

 Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time, subject to any stockholder approval that the Board determines to be necessary or advisable.

(e) Governing Law. The provisions of the Plan shall be governed by and interpreted in accordance with the laws of Delaware.

This Plan was approved by the Board of Directors on October 17, 1994.

This Plan was approved by the stockholders on October 17, 1994.

The Board of Directors amended and restated this Plan on April 8, 1998.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 14, 1998.

The Board of Directors amended and restated this Plan on March 16, 2000.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 18, 2000.

The Board of Directors amended and restated this Plan on March 23, 2001.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 17, 2001.

The Board of Directors amended and restated this Plan on March 21, 2002.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 16, 2002.

The Board of Directors amended and restated this Plan on April 7, 2004.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 19, 2004.

The Board of Directors amended and restated this Plan on April 4, 2005.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 18, 2005.

The Board of Directors authorized the amendment and restatement of this Plan on May 11, 2005, effective September 13, 2005.

Pursuant to Section 13 (d) of the Plan, the Board determined that it was not necessary or advisable to obtain stockholder approval of the amendment and restatement.

The Board of Directors amended and restated this Plan January 20, 2009.

These amendments and restatements were submitted to the stockholders for approval at the Annual Meeting of Stockholders on May 14, 2008.

Appendix B

ARQULE, INC.

Amended and Restated 1996 Employee Stock Purchase Plan

1. Purpose.

The purpose of this 1996 Employee Stock Purchase Plan (the "Plan") is to provide employees of ArQule, Inc. (the "Company"), and its subsidiaries, who wish to become shareholders of the Company an opportunity to purchase Common Stock of the Company (the "Shares"). The Plan is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Internal Revenue Code of 1986, as amended (the "Code").

2. Eligible Employees.

Subject to the provisions of Sections 7, 8 and 9 below, any individual who is a full-time employee (as defined below) of the Company, or any of the Company's subsidiary corporations (as defined in Section 424(f) of the Code) the employees of which are designated by the Board of Directors as eligible to participate in the Plan, is eligible to participate in any Offering of Shares (as defined in Section 3 below) made by the Company hereunder. Full-time employees shall include all employees who were engaged by the Company or any of its subsidiary corporations, as applicable, as an employee and not as an independent contractor or leased employee and whose customary employment is:

- (a) 20 hours or more per week and
- (b) more than five months

in the calendar year during which said Offering Date occurs or in the calendar year immediately preceding such year. Independent contractors and leased employees of the Company shall not be eligible for participation in the Plan notwithstanding that they may be deemed to be "common law" employees of the Company for other purposes. Notwithstanding anything to the contrary herein, no employee of the Company or any of its subsidiary corporations (as defined in Section 424(f) of the Code) may be excluded from participation in the Plan unless he or she is within a category of employees permitted or required to be excluded from participation pursuant to Section 423 of the Code.

3. Offering.

From time to time, the Company, by action of the Board of Directors, will grant rights to purchase Shares to employees eligible to participate in the Plan pursuant to one or more offerings (each of which is an "Offering") on a date or series of dates (each of which is an "Offering Date") designated for this purpose by the Board of Directors. Each Offering shall be in such form and shall contain such terms and conditions as the Board of Directors shall deem appropriate; provided that, except as otherwise permitted under the Code, all employees who are granted rights to purchase Shares under the Plan shall be entitled to the same rights and privileges under the Plan pursuant to Section 423(b)(5) of the Code.

4. Prices.

The price per share for each grant of rights hereunder shall be the lesser of:

(a) eighty-five percent (85%) of the fair market value of a Share on the Offering Date on which such right was granted; or

B-1

(b) eighty-five percent (85%) of the fair market value of a Share on the date such right is exercised.

At its discretion, the Board of Directors may determine a higher price for a grant of rights.

5. Exercise of Rights and Method of Payment.

- (a) Rights granted under the Plan will be exercisable periodically on specified dates as determined by the Board of Directors.
- (b)

 The method of payment for Shares purchased upon exercise of rights granted hereunder shall be through regular payroll deductions or by lump sum cash payment or both, as determined by the Board of Directors. No interest shall be paid upon payroll deductions unless specifically provided for by the Board of Directors.
- (c)

 Any payments received by the Company from a participating employee and not utilized for the purchase of Shares upon exercise of a right granted hereunder shall be promptly returned to such employee by the Company after termination of the right to which the payment relates.

6. Term of Rights.

The total period from an Offering Date to the last date on which rights granted on that Offering Date are exercisable (the "Offering Period") shall in no event be longer than twenty-seven (27) months. The Board of Directors when it authorizes an Offering may designate one or more exercise periods during the Offering Period. Rights granted on an Offering Date shall be exercisable in full on the Offering Date or in such proportion on the last day of each exercise period as the Board of Directors determines.

7. Shares Subject to the Plan.

No more than two million (2,000,000) Shares may be sold pursuant to rights granted under the Plan. Appropriate adjustments in the above figure, in the number of Shares covered by outstanding rights granted hereunder, in the exercise price of the rights and in the maximum number of Shares, and the limit on such maximum number, which an employee may purchase (pursuant to Section 9 below) shall be made to give effect to any mergers, consolidations, reorganizations, recapitalizations, stock splits, stock dividends or other relevant changes in the capitalization of the Company occurring after the effective date of the Plan, provided that no fractional Shares shall be subject to a right and each right shall be adjusted downward to the nearest full Share. Either authorized and unissued Shares or issued Shares heretofore or hereafter reacquired by the Company may be made subject to rights under the Plan. If for any reason any right under the Plan terminates in whole or in part, Shares subject to such terminated right may again be subjected to a right under the Plan.

8. Limitations on Grants.

- (a)

 No employee shall be granted a right hereunder if such employee, immediately after the right is granted, would own stock or rights to purchase stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Company, or of any "subsidiary corporation" or "parent corporation," both as defined in Section 424 of the Code, in respect of the Company, computed in accordance with Section 423(b)(3) of the Code.
- (b)

 No employee shall be granted a right which permits his right to purchase shares under all employee stock purchase plans of the Company and of any "subsidiary corporation" or "parent corporation," both as defined in Section 424 of the Code, in respect of the Company, to accrue at a rate which exceeds twenty-five thousand dollars (\$25,000) (or such other maximum as may be prescribed from time to time by the Code) of the fair market value of

such Shares (determined at the time such right is granted) for each calendar year in which such right is outstanding at any time in accordance with the provisions of Section 423(b)(8) of the Code.

(c)

No right granted to any participating employee under an Offering, when aggregated with rights granted under any other
Offering still exercisable by the participating employee, shall cover more shares than may be purchased at an exercise price
equal to fifteen percent (15%) of the employee's annual rate of compensation on the date the employee elects to participate
in the Offering or such lesser percentage as the Board of Directors may determine.

9. Limit on Participation.

Participation in an Offering shall be limited to eligible employees who elect to participate in such Offering in the manner, within the time limitations, and subject to limitations on the number of shares available for purchase by an individual employee and in the aggregate by all participating employees established by the Board of Directors, or committee thereof, when it authorizes the Offering.

10. Cancellation of Election to Participate.

An employee who has elected to participate in an Offering may cancel such election as to all (but not part) of the unexercised rights granted under such Offering by giving written notice of such cancellation to the Company before the expiration of any exercise period. Any amounts paid by the employee for the Shares or withheld for the purchase of Shares from the employee's compensation through payroll deductions shall be paid to the employee, without interest, unless otherwise determined by the Board of Directors, upon such cancellation.

11. Termination of Employment.

Upon the termination of employment for any reason, including the death of the employee, before the date on which any rights granted under the Plan are exercisable, all such rights shall immediately terminate and amounts paid by the employee for the Shares or withheld for the purchase of Shares from the employee's compensation through payroll deductions shall be paid to the employee or to the employee's estate, without interest unless otherwise determined by the Board of Directors.

12. Employees' Rights as Shareholders.

No participating employee shall have any rights as a shareholder in the Shares covered by a right granted hereunder until such right has been exercised, full payment has been made for the corresponding Shares and the Share certificate is actually issued.

13. Rights Not Transferable.

Rights under the Plan are not assignable or transferable by a participating employee and are exercisable only by the employee.

14. Amendments to or Discontinuation of the Plan.

The Board of Directors of the Company shall have the right to amend, modify or terminate the Plan at any time without notice; provided, however, that the then existing rights of all participating employees shall not be adversely affected thereby, and provided further that, subject to the provisions of Section 7 above, no such amendment to the Plan shall, without the approval of the shareholders of the Company, increase the total number of Shares which may be offered under the Plan.

15. Effective Date and Approvals.

This Plan became effective on August 14, 1996, the date it was adopted by the Board of Directors. The shareholders of the Company approved the Plan within twelve (12) months of the date of adoption.

The Company's obligation to offer, sell and deliver its Shares under the Plan is subject to (i) the approval of any governmental authority required in connection with the authorized issuance or sale of such Shares, (ii) satisfaction of the listing requirements of any national securities exchange on which the Shares are then listed and (iii) compliance, in the opinion of the Company's counsel with, all applicable federal and state securities and other laws.

16. Term of Plan.

No rights shall be granted under the Plan after May 18, 2016.

17. Administration of the Plan.

The Board of Directors or any committee or person(s) to whom it delegates its authority (the "Administrator") shall administer, interpret and apply all provisions of the Plan as it deems necessary to meet special circumstances not anticipated or covered expressly by the Plan. Nothing contained in this Section shall be deemed to authorize the Administrator to alter or administer the provisions of the Plan in a manner inconsistent with the provisions of Section 423 of the Code.

The Board of Directors amended and restated this Plan on March 23, 2001.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 17, 2001.

The Board of Directors amended and restated this Plan on March 21, 2002.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 16, 2002.

The Compensation Committee of the Board of Directors authorized amendment and restatement of this Plan on March 21, 2002 which changes were made effective as of February 14, 2003 and November 7, 2003. Because of the ministerial nature of the changes, the approval of the stockholders was not required.

The Compensation Committee of the Board of Directors has been redesignated as the Compensation, Nominating and Governance Committee of the Board of Directors.

The Board of Directors amended and restated this Plan on March 14, 2003.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 21, 2003.

The Board of Directors amended and restated this Plan on April 4, 2005.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 18, 2005.

The Board of Directors amended and restated this Plan on September 13, 2005.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 18, 2006.

The Board of Directors amended and restated this Plan on January 16, 2007.

The amendment and restatement was approved by the stockholders at the Annual Meeting of Stockholders on May 18, 2007.

The Board of Directors amended and restated this Plan on January 20, 2009.

The amendment and restatement was submitted to the stockholders for approval at the Annual Meeting of Stockholders on May 14, 2009.

B-5

QuickLinks

ARQULE, INC. NOTICE OF ANNUAL MEETING OF STOCKHOLDERS TO BE HELD MAY 14, 2009

ARQULE, INC.

PROPOSAL 1 ELECTION OF DIRECTORS

Continuing Incumbent Directors with Terms Expiring at the 2010 Annual Meeting

CORPORATE GOVERNANCE

BOARD COMMITTEES AND MEETINGS

DIRECTOR COMPENSATION

COMPENSATION DISCUSSION AND ANALYSIS

COMPENSATION COMMITTEE REPORT

EXECUTIVE COMPENSATION

SUMMARY COMPENSATION TABLE

EMPLOYMENT AGREEMENTS

GRANTS OF PLAN-BASED AWARDS FOR FISCAL YEAR 2008

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

OPTION EXERCISES AND STOCK VESTED IN FISCAL YEAR 2008.

PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL

POTENTIAL PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

REPORT OF THE AUDIT COMMITTEE

PROPOSAL 2 AMENDMENTS TO OUR AMENDED AND RESTATED 1994 EQUITY INCENTIVE PLAN

OUR BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" THIS PROPOSAL.

PROPOSAL 3 APPROVAL OF AN AMENDMENT TO OUR AMENDED AND RESTATED 1996 EMPLOYEE STOCK PURCHASE PLAN

PROPOSAL 4 RATIFICATION OF THE SELECTION OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

SHARE OWNERSHIP OF CERTAIN BENEFICIAL OWNERS

SHARE OWNERSHIP OF MANAGEMENT

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

STOCKHOLDER PROPOSALS

OTHER MATTERS

Appendix A

ARQULE, INC. Amended and Restated 1994 Equity Incentive Plan

Appendix B

ARQULE, INC. Amended and Restated 1996 Employee Stock Purchase Plan