

ARQULE INC

FORM DEF 14A (Proxy Statement (definitive))

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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

Filed by a Party other than the Registrant

Check the appropriate box:

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

ArQule, Inc.

(Name of Registrant as Specified In Its Charter)

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

Payment of Filing Fee (Check the appropriate box):

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

 - (4) Proposed maximum aggregate value of transaction:

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(1) Amount Previously Paid:

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

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(4) Date Filed:

ARQULE, INC.

NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

TO BE HELD MAY 13, 2010

To Our Stockholders,

Our 2010 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 13, 2010 for the following purposes:

1. To elect Michael. D. Loberg and Nancy A. Simonian as directors to hold office for a term of three years and until their respective successors are elected and qualified;
2. To approve an amendment 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 1,500,000 from 11,000,000 to 12,500,000 shares of common stock; and
3. To ratify the selection of PricewaterhouseCoopers LLP, an independent registered public accounting firm, to audit our financial statements for the year ending December 31, 2010.

Only stockholders of record at the close of business on March 26, 2010 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,

A handwritten signature in black ink, appearing to read 'Peter S. Lawrence', written over a horizontal line.

Peter S. Lawrence
President and Chief Operating Officer

Woburn, Massachusetts

Dated: April 12, 2010

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 2010 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 13, 2010 and any adjournment or postponement of the meeting. This proxy statement and accompanying proxy card are first being sent or given to stockholders on or about April 12, 2010.

The principal business expected to be transacted at the meeting, as more fully described below, will be the election of directors, the approval of an amendment to our Amended and Restated 1994 Equity Incentive 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, 2010.

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. We have retained the Proxy Advisory Group, LLC to aid in the solicitation of proxies by mail, telephone, facsimile, e-mail and personal solicitation. For these services we will pay the Proxy Advisory Group, LLC a fee of \$18,000 plus reimbursement of certain specified out-of-pocket expenses. 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 26, 2010 will be entitled to vote at the meeting. On that date, we had outstanding 44,729,014 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, and 3. The Company is not aware of any matter that will be brought before the annual meeting (other than procedural matters) that is 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 13, 2010:

This Proxy Statement and the ArQule, Inc. 2009 Annual Report on Form 10-K for the year ended December 31, 2009 are available at www.proxyvote.com.

PROPOSAL 1—ELECTION OF DIRECTORS

Our By-laws provide that the number of directors is established by our Board of Directors. For 2010, 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 2013, and until their respective successors are elected and qualified.

Michael D. Loberg and Nancy A. Simonian, 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 2013 Annual Meeting

Michael D. Loberg, Ph.D. (Age: 62) 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. Since 2004, Dr. Loberg has been a director of Kereos, Inc., a developer of targeted molecular imaging agents and therapeutics. Until May 2009 when he did not stand for reelection, he was 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: 49) 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.

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

Continuing Incumbent Directors with Terms Expiring at the 2011 Annual Meeting

Ronald M. Lindsay, Ph.D. (Age: 62) 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: 49) Dr. Messenger has been a director since January 2005. He chairs the Company's Compensation, Nominating and Governance Committee and is a member of its Audit Committee. From 1991 to 1994, Dr. Messenger was Vice President of Marketing and Sales for Advanced Metabolic Systems. 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: 63) 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 Geron Corporation, Xoma Ltd., and West Pharmaceutical Services, Inc., and Chairman of the Board of Exact Sciences, Inc. Until its sale in September 2009, Mr. Zenner was a director of CuraGen Corporation. He has a B.S./B.A. from Creighton University and an M.B.A. from Fairleigh Dickinson University.

Continuing Incumbent Directors with Terms Expiring at the 2012 Annual Meeting

Timothy C. Barabe (Age: 57) Mr. Barabe has been a director since November 2001. Mr. Barabe is currently Executive Senior Vice President and Chief Financial Officer of Affymetrix, Inc. Previously, from July 2006 until March 2010, he was Senior Vice President and Chief Financial Officer of Human Genome Sciences, Inc. He was with Regent Medical Limited, a U.K.-based, privately owned, surgical supply company, where he was Chief Financial Officer from 2004-2006. 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. 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: 49) 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 Università Degli Studi Di Napoli in Naples, Italy.

CORPORATE GOVERNANCE

Corporate Governance Guidelines

At ArQule, we value honesty, integrity, and fairness in our dealings with our fellow employees, our stockholders, our collaborators and our communities. In addition to meeting both the letter and the spirit of regulations and rules adopted by the 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 2009. 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 reflecting 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. Additionally, while the Compensation, Nominating and Governance Committee does not have a formal diversity policy, it carefully considers diversity of background, professional experience, and business culture in evaluating candidates for Board membership. The Company does not require members of the Board (or our executive officers) to purchase or hold a minimum number of shares of our Common Stock.

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

The following table summarizes the specific qualifications, attributes, skills and experience described above that each individual director contributes to the Board. An "X" in the chart below indicates that an item is a specific reason that the director has been appointed to serve on the Company's Board. **The lack of an "X" for a particular qualification does not mean that the director does not possess that qualification or skill.** Rather, an "X" indicates a specific area of focus or expertise of a director on which the Board currently relies.

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

(1) Member of Audit Committee

(2) Member of Compensation, Nominating & Governance Committee

(3) Member of Science Committee

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.

The Board's Role in Risk Oversight

The role of our Board of Directors in our Company's risk oversight process includes receiving regular reports from management on areas of material risk to our Company, including operational, financial, legal and regulatory, and strategic and reputational risks. The full Board (or the appropriate committee in the case of risks that are under the purview of a particular committee) receives these reports from the member of management responsible for the function from which the risk arises so that it can understand and assess our ongoing risk identification, risk management and risk mitigation strategies. When a committee receives a report regarding a previously unidentified risk, the chairman of the relevant committee reports on the discussion to the full Board. This enables the Board and its committees to coordinate the risk oversight role and consult with management about implementation of appropriate risk management and mitigation measures. Our Board also administers its risk oversight function through the required approval by the Board (or a committee of the Board) of significant transactions and other material decisions, and regular periodic reports from our company's independent registered public accounting firm and other outside consultants regarding various areas of potential risk, including, among others, those relating to our internal controls and financial reporting. As part of its charter, the Audit Committee discusses with management and our independent registered public

accounting firm significant risks and exposures and the steps management has taken to minimize those risks.

Communications with Directors

We do not have a formal process for communication by stockholders 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 21, 2010, 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 2009 served as an officer, former officer, or employee of the Company or had a relationship disclosable under our policies. Further, during 2009, 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 seven meetings during 2009. 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 2009, all our directors attended our annual meeting. We also do not have a formal policy regarding the separation of our Board Chairman and Chief Executive Officer positions. At this time, the positions are currently separate, as the Board believes this structure to be in the best interests of the Company and our stockholders.

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 2009, the members of the Audit Committee were Mr. Barabe (Chairman), Dr. Messenger, and Mr. Zenner. The Audit Committee met five times in 2009. 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 30.

Compensation, Nominating and Governance Committee

In 2009, 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 2009.

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 20.

Science Committee

In 2009, the members of the Science Committee were Dr. Lindsay (Chairman), Dr. Loberg and Dr. Simonian. The Science Committee met three times during 2009.

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 2009. Any director who is also an employee of the Company is not compensated for his or her service as a director. During 2009 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.

<u>Name</u>	<u>Fees Earned or Paid in Cash (\$)</u>	<u>Option Awards(1) (\$)</u>	<u>Total (\$)</u>
Timothy C. Barabe(2)	\$ 48,500	\$ 23,009	\$ 71,509
Ronald M. Lindsay, Ph.D.	44,000	23,009	67,009
Michael D Loberg, Ph.D.(3)	40,000	23,009	63,009
William G. Messenger, D. Min.	50,000	23,009	73,009
Nancy A. Simonian, MD	32,000	23,009	55,009
Patrick J. Zenner	57,000	34,514	91,514

- (1) This column reflects the aggregate grant date fair value for all option awards granted during 2009. 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, 2009, included in the Company's Annual Report on Form 10-K filed with the SEC on March 2, 2010 ("2009 Annual Report on Form 10-K"). As of December 31, 2009, 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, 66,000; Dr. Lindsay, 50,000; Dr. Loberg, 50,000; Dr. Messenger, 55,000; Dr. Simonian, 50,000; and Mr. Zenner, 82,500.
- (2) Mr. Barabe elected to have a portion of his fees for service as a director in the amount of \$29,068 paid to him in the form of 7,058 shares of our Common Stock in accordance with our 2005 Director Stock Compensation Plan. The number of shares was determined on the date of the payment of director fees based on the closing market price for a share on that date.
- (3) Mr. Loberg elected to have a portion of his fees for service as a director in the amount of \$19,958 paid to him in the form of 4,760 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.

On January 21, 2010, pursuant to the Company's Bylaws, the Directors set cash compensation for their services. 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. Commencing with the Company's 2010 Annual Meeting of Stockholders, the annual retainer for each such director will be increased from \$15,000 to \$20,000. Each non-employee director will continue to receive \$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 (subject to the limitation that a director will only be paid for one meeting per day). In addition to the base compensation for directors, chairs of committees receive additional compensation. The director serving as Chairman of the Board of Directors (currently, Mr. Zenner) will continue to receive an additional \$15,000 annual retainer; the director serving as Chairman of the Audit Committee (currently, Mr. Barabe) will receive \$15,000, an increase of \$2,500 from the current year's amount, the director serving as Chairman of the Compensation, Nominating and Governance Committee (currently, Dr. Messenger) will continue to receive an additional \$10,000 annual retainer; and the director serving as Chairman of the Science Committee (currently, Dr. Lindsay) will receive an additional \$15,000 annual retainer, an increase of \$5,000 from last year's amount.

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 terms of the Plan, on January 21, 2010, the Directors voted to amend the plan to increase the number of shares subject to options granted to directors. See Appendix B.

Currently, 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. Commencing with the Company's 2010 Annual Meeting of Stockholders, the purchase option granted upon initial election will be increased to 30,000 shares of Common Stock. This initial option will become exercisable as to 10,000 shares on the date of the Company's next annual meeting following the date of grant and as to 10,000 shares on the date of each of the next two annual meetings.

Also, at each annual meeting of stockholders, each eligible director (other than the Chairman) serving as a member of the board 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). Commencing with the Company's 2010 Annual Meeting of Stockholders, the purchase option granted to each eligible director will be increased to 15,000 shares of Common Stock.

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. These options 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.

In addition, at each annual meeting of stockholders, the eligible director serving as Chairman of the Board prior to and immediately after such annual meeting 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). Commencing with the Company's 2010 Annual Meeting of Stockholders, the purchase option granted to the Chairman will be increased to 25,000 shares of Common Stock.

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 2009 Mr. Barabe and Dr. Loberg received a portion of their director fees in the amount of \$29,068 and \$19,958, 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.

The following table provides information concerning compensation to be paid by the Company to its non-employee directors commencing with the Company's 2010 Annual Meeting of Stockholders.

	<u>Annual Retainer Fee</u>	<u>Daily Meeting Attendance Fees(1)</u>	<u>Company Stock Options</u>	
			<u>Upon Election/Appointment</u>	<u>At each Annual Meeting</u>
Non-Employee Director (not serving as Chairman in any capacity)	\$20,000(2)	<ul style="list-style-type: none"> \$2,000 per Board of Directors meeting attended \$1,000 per Board of Directors committee meeting attended 	30,000 exercisable in three equal tranches at each of the next three annual meetings(3)	15,000 exercisable immediately(4)
Chairman of Board of Directors	\$15,000(5)	<ul style="list-style-type: none"> \$2,000 per Board of Directors meeting attended \$1,000 per Board of Directors committee meeting attended 	25,000 exercisable in three equal tranches at each of the next three annual meetings(1)	25,000 exercisable immediately(6)
Chairman of Audit Committee	\$15,000(7)	<ul style="list-style-type: none"> \$2,000 per Board of Directors meeting attended \$1,000 per Board of Directors committee meeting attended 	N/A	N/A
Chairman of Compensation, Nominating and Governance Committee	\$10,000(8)	<ul style="list-style-type: none"> \$2,000 per Board of Directors meeting attended \$1,000 per Board of Directors committee meeting attended 	N/A	N/A
Chairman of Science Committee	\$15,000(9)	<ul style="list-style-type: none"> \$2,000 per Board of Directors meeting attended \$1,000 per Board of Directors committee meeting attended 	N/A	N/A

(1) Unchanged from 2009.

(2) An increase of \$5,000 from 2009.

(3) An increase of 10,000 shares from 2009.

(4) An increase of 5,000 shares from 2009.

(5) In addition to the base retainer for Directors (\$20,000), for a total of \$35,000.

(6) An increase of 10,000 shares from 2009.

(7) An increase of \$2,500 from 2009. In addition to the base retainer for Directors (\$20,000), for a total of \$35,000.

(8) In addition to the base retainer for Directors (\$20,000), for a total of \$30,000.

(9) An increase of \$5,000 from 2009. In addition to the base retainer for Directors (\$20,000), for a total of \$35,000.

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

Objectives:

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

Key compensation elements:

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

Each of these elements is described in more detail below.

The Role of the Compensation Committee

The members of the Compensation Committee are currently Michael D. Loberg, 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 peer group data and additional selected data from the Radford Life Sciences Executive Survey produced by Radford Surveys & Consulting, a division of Aon Consulting ("Radford"). In 2009, the Compensation Committee retained Radford to review Board compensation and executive compensation. Radford does not provide other consulting services to either the Board or the Company. Radford consultants reviewed our selection of a peer group of companies and provided additional relevant market data to the Compensation Committee. Our peer group of companies is comprised of non-commercial, life sciences companies in phase II or phase III clinical trials that Radford deemed to be most comparable to us in market capitalization and head count. For 2009, the peer group companies consisted of the following companies:

Allos Therapeutics	Micromet
Alnylam Pharmaceuticals	Novavax
Ariad Pharmaceuticals	Rigel Pharmaceuticals
Array BioPharma	Sangamo BioSciences
BioCyst Pharmaceuticals	SuperGen
Cytokinetics	Targacept
Dyax	VIVUS
Geron	XenoPort
Infinity Pharmaceuticals	
Maxygen	

In addition, the Committee supplemented the peer group survey data with broader competitive market data from the Radford Global Life Sciences Executive Survey. Radford derived the data from non-commercial, public life sciences companies with between 50 and 350 employees. The overall market composite considered by the Compensation Committee was represented 50 percent by the peer group and 50 percent by the broader market reference group.

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 2009 and certain prior years are also reported in the Summary Compensation Table on page 21.

The following table shows changes in the annualized base salaries of our named executive officers from 2008 to 2009:

<u>Name and Principal Position</u>	<u>2008 Annualized Base Salary (\$)</u>	<u>2009 Annualized Base Salary (\$)</u>	<u>% Increase</u>	<u>Comment</u>
Paolo Pucci, CEO	450,000	450,000	—	Base salary negotiated in employment agreement.
Peter S. Lawrence, COO	375,000	384,000	2.5	Base salary negotiated in and adjusted per amended employment agreement.
Dr. Brian Schwartz, CMO	325,000	332,000	2.0	Base salary negotiated in and adjusted per employment agreement.
Dr. Thomas C.K. Chan, CSO	286,000	325,000	13.6	2009 base salary negotiated in employment agreement.

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 primary corporate goals for 2009 used to determine performance-based bonuses:

C-Met Program-ARQ 197

- Complete enrollment for clinical trial in c-Met sarcomas by a specified date.
- Complete enrollment for clinical trial in non-small cell lung cancer by a specified date.
- Complete enrollment in Phase 1 monotherapy trial in hepatocellular carcinoma and initiate Phase 2 monotherapy trial in this indication by specified dates.

Discovery

- Continue to validate our kinase inhibition platform technology leading to continued financial support from our collaboration partner.
- Substantially complete pre-clinical development including pre-clinical toxicology on a new product candidate by a specified date.

Business Development

- Consummate a new collaboration during 2009 with specified financial goals.

Financial

- End 2009 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, our overall level of performance warranted payment of bonuses at 90% of the bonus targets. This determination reflected results with respect to the C-Met program, Discovery program and Finance goals that exceeded planned performance and results with respect to the Business Development program that were less than planned. The following table shows percentages of target and actual bonuses paid to our named executive officers.

<u>Name and Principal Position</u>	<u>2009 Bonus Target (% of Base Salary)</u>	<u>2009 Bonus Actual (% of Base Salary)</u>	<u>Comment</u>
Paolo Pucci, CEO	50%	45%	Target bonus set by terms of employment agreement. Actual Bonus 90% of target.
Peter S. Lawrence, COO	40%	36%	Target bonus set by terms of amended employment agreement. Actual bonus 90% of target.
Dr. Brian Schwartz, CMO	35%	32%	Target bonus set by terms of employment agreement. Actual bonus 90% of target.
Dr. Thomas C.K. Chan, CSO	30%	27%	Target bonus set by terms of employment agreement. Actual bonus 90% of target.

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, as well as corporate and individual performance, in January 2010 for 2009, we awarded Mr. Pucci an option to purchase 225,000 shares of our Common Stock; Mr. Lawrence, an option to purchase 130,000 shares of our Common Stock; Dr. Schwartz, an option to purchase 90,000 shares of our Common Stock; and Dr. Chan, an option to purchase 90,000 shares of our Common Stock.

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 such agreements. Additional information regarding these agreements is set forth on page 20 in the "Employment Agreements" section and page 26 in the "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 2009 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 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 "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 2009 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

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, 2009, 2008 and 2007.

SUMMARY COMPENSATION TABLE

The following table summarizes total compensation earned during the fiscal years ended December 31, 2009, 2008 and 2007 by each of our named executive officers:

Name and Principal Position	Year	Salary	Bonus	Stock	Option	Non-Equity	All Other	Total
		(\$)		Awards	Awards	Incentive Plan	Compensation	
		(1)	(\$)	(2)	(3)	(4)	(5)	(\$)
Paolo Pucci	2009	450,000	—	238,950	—	202,500	11,890	903,340
Chief Executive Officer	2008	250,962	200,000	493,750	1,039,550	225,000	20,754	2,230,016
Peter S. Lawrence	2009	383,654	—	265,500	—	138,375	7,890	795,419
President, Chief	2008	373,846	—	—	518,020	150,000	7,428	1,049,294
Operating Officer, General Counsel and Secretary	2007	359,980	—	—	590,765	144,000	7,230	1,101,975
Dr. Brian Schwartz	2009	331,120	—	41,418	—	104,463	7,673	484,674
Chief Medical Officer and Senior Vice President	2008	150,000	—	—	387,700	47,400	5,956	591,056
Dr. Thomas C. K. Chan	2009	323,769	—	70,800	—	87,750	540	482,859
Chief Scientific Officer and Senior Vice President	2008	287,808	—	—	288,815	73,267	528	650,418

- (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) This column reflects the aggregate grant date fair value for all stock awards granted during the fiscal 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, 2009, included in the Company's Annual Report on Form 10-K filed with the SEC on March 2, 2010 ("2010 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".
- (3) This column reflects the aggregate grant date fair value for all option awards granted during the fiscal 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, 2009, included in the Company's Annual Report on Form 10-K filed with the SEC on March 2, 2010 ("2010 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".
- (4) Represents bonus amounts earned under our annual incentive program for 2009 and paid in the first quarter of 2010. Additional information regarding the annual incentive program is provided in the "Compensation Discussion and Analysis—Performance-Based Bonuses" beginning on page 16.
- (5) In 2009, for each named executive officer, the amount includes the Company's contributions to a 401(k) plan account for the executive and payment of group term life insurance premiums. Reimbursed temporary housing and living expenses of \$17,211 in 2008 and \$4,000 in 2009 for Mr. Pucci are included in all other compensation.

EMPLOYMENT AGREEMENTS

The Company is party to employment agreements with four 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 "Payments Upon Termination or Change in Control" on page 26.

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.

Employment Agreement with Peter S. Lawrence

Mr. Lawrence's agreement, as amended, provides that we will employ Mr. Lawrence President and Chief Operating Officer at an initial base salary of \$375,000 per year. The base salary is subject to annual review and upward adjustment by the Company. Mr. Lawrence is also eligible to receive a discretionary annual cash bonus based on a target amount of 40% of his base salary. The award of a bonus is in the discretion of the Company's Board of Directors based on Company and individual performance.

Employment Agreement with Brian Schwartz

Dr. Schwartz's agreement provides that the Company will employ Dr. Schwartz as its Chief Medical Officer 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. The award of a bonus is in the discretion of the Company's Board of Directors based on Company and individual performance.

Employment Agreement with Thomas C. K. Chan

Dr. Chan's 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. The award of a bonus is in the discretion of the Company's Board of Directors based on Company and individual performance.

GRANTS OF PLAN-BASED AWARDS FOR FISCAL YEAR 2009

The following table sets forth certain information with respect to awards granted during the fiscal year ended December 31, 2009 to our named executive officers under our equity and non-equity incentive plans.

Name	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards(1)			All Other Stock Awards: Number of Shares of Stock or Units (#) (2)	All Other Option Awards: Number of Securities Underlying Options (#)	Exercise or Base Price of Option Awards (\$)	Grant Date Fair Value of Stock and Option Awards(3) (\$)
		Threshold (\$)	Target (\$)	Maximum (\$)				
Paolo Pucci	N/A 1/20/2009	—	225,000	337,500	67,500	—	238,950	
Peter S. Lawrence	N/A 1/20/2009	—	153,750	230,625	75,000	—	265,500	
Dr. Brian Schwartz	N/A 1/20/2009	—	116,071	174,106	11,700	—	41,418	
Dr. Thomas C.K. Chan	N/A 1/20/2009	—	97,500	146,250	20,000	—	70,800	

- (1) The threshold amount under the cash bonus program is zero. The target amount is based on the individual's current salary. The target represents 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) All Other Stock Awards consist of restricted shares of stock granted under our Amended and Restated 1994 Equity Incentive Plan during 2009.
- (3) The dollar amount for restricted stock grants is calculated as the number of restricted shares of stock granted times the market price on the date of award.

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, 2009:

Name	Option Awards			Option Expiration Date	Stock Awards	
	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#)(1) Unexercisable	Option Exercise Price (\$)		Number of Shares or Units of Stock that Have Not Vested	Market Value of Shares or Units of Stock that Have Not Vested (3)
Paolo Pucci (2)	250,000	250,000	\$ 3.95	6/9/2018	67,500	\$ 238,950
Peter S. Lawrence	225,000 25,000 50,000 50,000	75,000 25,000 50,000 150,000	6.20 6.16 7.56 4.75	4/13/2016 1/16/2017 10/4/2017 1/17/2018	75,000	\$ 265,500
Dr. Brian Schwartz	50,000	150,000	3.62	7/14/2018	11,700	\$ 41,418
Dr. Thomas C.K. Chan	50,000 25,000 12,500 25,000	25,000 37,500 75,000	6.93 6.16 4.75 2.86	12/1/2015 1/16/2017 1/17/2018 11/21/2018	20,000	\$ 70,800

- (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.
- (2) In accordance with Mr. Pucci's employment agreement dated as of April 15, 2008, Mr. Pucci was granted an option to purchase 500,000 shares of the Company's Common Stock, of which 125,000 vested on June 9, 2008, and 125,000 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 vested on June 9, 2009.
- (3) Market Value is calculated as the number of shares of non vested stock awarded times the market price on the date of award.

OPTION EXERCISES AND STOCK VESTED IN FISCAL YEAR 2009.

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.

<u>Name</u>	<u>Option Awards</u>		<u>Stock Awards</u>	
	<u>Number of Securities Acquired on Exercise</u>	<u>Value Realized Upon Exercise (\$)</u>	<u>Number of Shares Acquired on Vesting</u>	<u>Value Realized on Vesting (\$)</u>
Paolo Pucci(1)	—	—	62,500	\$ 341,875

- (1) On June 9, 2008, Mr. Pucci was awarded 125,000 shares of restricted stock, 50% of which vested immediately and the remaining shares vested on June 9, 2008. The fair market value of the Company's stock was \$5.47 on the date the shares vested.

PAYMENTS UPON TERMINATION OR CHANGE IN CONTROL

The Company is party to employment agreements with four 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.

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.

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.

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, 2009 immediately following a change in control of the Company:

Name	Cash Payment(1) (\$)	Equity Acceleration(2) (\$)	Benefits and Perquisites(3) (\$)	Total (\$)
Paolo Pucci	\$ 1,327,500	—	\$ 21,003	\$ 1,348,503
Peter S. Lawrence	538,125	—	20,224	558,349
Dr. Brian Schwartz	447,700	10,500	20,007	478,207
Dr. Tom C.K. Chan	422,500	62,250	13,278	498,028

- (1) For Mr. Pucci, the cash payment is calculated as the sum of an amount equal to two times his annual salary as of December 31, 2009, plus a bonus payment equal to the sum of the 2008 and 2009 bonus. 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, 2009, plus a bonus payment equal to 40%, 35% and 30%, respectively, of annual salary.
- (2) Reflects the aggregate intrinsic value of unvested stock options as of December 31, 2009. 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, 2009.
- (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, 2009.

SECURITIES AUTHORIZED FOR ISSUANCE UNDER EQUITY COMPENSATION PLANS

The following table provides information as of December 31, 2009 regarding compensation plans (including individual compensation arrangements) under which our equity securities are authorized for issuance.

<u>Plan Category</u>	(a)	(b)	(c)(1)
	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders	5,215,189	\$ 6.04	2,949,805
Equity compensation plans not approved by security holders	—	—	—
Total	5,215,189	\$ 6.04	2,949,805

- (1) Column "(c)" includes 547,985 shares available for issuance under the ArQule, Inc. Amended and Restated 1996 Employee Stock Purchase Plan, 2,160,320 available for issuance under the ArQule, Inc. Amended and Restated 1994 Equity Incentive Plan and 241,500 available for issuance under the ArQule, Inc. Amended and Restated 1996 Director Stock Option Plan.

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:

- (i) reviewed and discussed with management the Company's audited financial statements for the fiscal year ended December 31, 2009;
- (ii) discussed with our independent registered public accounting firm, PricewaterhouseCoopers LLP, an independent registered public accounting firm, matters required to be discussed by Statement on Auditing Standards No. 61, as amended (AICPA, *Professional Standards*, Vol. 1, AU section 380), as adopted by the Public Company Accounting Oversight Board in Rule 3200T;
- (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, 2009 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 an amendment 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 1,500,000 shares, from 11,000,000 to 12,500,000 shares;

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 March 11, 2010, 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 1,500,000 shares from 11,000,000 shares to 12,500,000 shares. If the stockholders approve the proposed amendment, Awards may be granted under the Equity Plan for up

to 12,500,000 shares of Common Stock, subject to adjustment for stock splits and similar capital changes.

As of March 26, 2010, options to purchase an aggregate of 16,248,495 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 86,052 restricted shares have been cancelled, 769,269 shares have been issued as restrictions lapsed and 336,964 shares remain reserved for issuance if and when restrictions lapse. Options to purchase 7,446,120 shares have been cancelled, options to purchase 3,063,545 shares have been exercised, and options to purchase 5,738,830 shares remained outstanding, leaving 1,188,592 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 26, 2010 was \$3.41.

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 2009. 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 2010. 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 26, 2010, 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 2010, the Compensation Committee granted such 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—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 2009 and 2008:

	<u>2009</u>	<u>2008</u>
Audit Fees	\$ 400,000	\$ 475,000
Audit-Related Fees	—	23,000
Tax Fees	—	—
All Other Fees	—	—
Total	<u>\$ 400,000</u>	<u>\$ 498,000</u>

"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 2009 and 2008.

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 is no amount due to or from a related party as of December 31, 2009 and there was no revenue from a related party in 2009.

SHARE OWNERSHIP OF CERTAIN BENEFICIAL OWNERS

The following table and footnotes set forth certain information regarding the beneficial ownership of the Company's Common Stock by persons known by us to be beneficial owners of more than 5% of our Common Stock. We had approximately 44,729,014 shares of Common Stock outstanding on March 26, 2010.

<u>Name</u>	<u>Common Stock Owned</u>	<u>Options to Purchase Common Stock</u>	<u>Total Stock and Stock-based Holdings</u>	<u>Percent of Class</u>
Biotechnology Value Fund, L.P.(1) 900 North Michigan Avenue, Suite 1100 Chicago, IL 60611	9,092,073	—	9,092,073	20.33%
Pfizer Inc(2) 235 East 42nd Street New York, New York 10017	3,273,679	—	3,273,679	7.32%
BlackRock, Inc.(3) 55 East 52 nd Street New York, NY 10055	3,187,762	—	3,187,762	7.14%

- (1) 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 September 21, 2009 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.
- (2) 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 26, 2010.
- (3) These shares are beneficially owned by BlackRock, Inc. based on the Schedule 13G it filed with the SEC on January 29, 2010. On December 1, 2009 Blackrock, Inc. completed its acquisition of Barclays Global Investors from Barclays Bank PLC. As a result, substantially all of the Barclays Global Investors, NA. entities are now included as subsidiaries of BlackRock, Inc. for purposes of Schedule 13G filings. 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 26, 2010 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 26, 2010. Those options are deemed to be outstanding for computing the percentage of the person or group holding such options, but are not deemed outstanding for computing the percentage of any other person or group.

Directors, Nominees and Named Executive Officers(1)	Common Stock Owned	Options to Purchase Common Stock	Total Stock and Stock-based Holdings	Percent of Class
Timothy C. Barabe(2)	30,894	66,000	96,894	*
Ronald M. Lindsay	20,000	50,000	70,000	*
Michael D. Loberg	63,492	50,000	113,492	*
William G. Messenger	1,500	55,000	56,500	*
Nancy A. Simonian	—	50,000	50,000	*
Patrick J. Zenner	26,900	82,500	109,400	*
Thomas C. K. Chan	3,102	137,500	140,602	*
Peter S. Lawrence	21,634	487,500	509,134	1.1%
Paolo Pucci	158,812	250,000	408,812	*
Brian Schwartz	15,325	50,000	65,325	*
All current directors and named executive officers as a group (10 persons)	341,659	1,278,500	1,620,159	3.6%

* 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 26, 2010.
- (2) Mr. Barabe disclaims any direct, indirect or beneficial ownership of 420 shares of Common Stock owned by his spouse.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Our executive officers and directors 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 2009, 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 timely file a report on Form 4 for Dr. Schwartz relating to an open market stock purchase transaction; (ii) we did not timely file reports on Form 4 for Messrs. Pucci and Weiskopf relating to income tax withholding on the vesting of

restricted stock, and (iii). we did not timely file reports on Form 4 for Messrs. Lawrence, Pucci, and Weiskopf and Drs. Chan and Schwartz relating to grants of restricted stock. The required filings were made immediately after discovery of the errors.

STOCKHOLDER PROPOSALS

If you wish to bring business before the 2011 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, 2010, provided that the 2011 Annual Meeting of Stockholders is within 30 days of May 13, 2010 (December 15, 2010 being the date 120 days before the anniversary of the date the 2010 proxy statement was mailed to stockholders).

If you intend to bring such a proposal at the 2011 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, 2011 (the date 75 days before the anniversary of the 2010 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, 2009, as filed with the SEC on March 2, 2010, 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.

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 only include each entity which is 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*

- (a) Subject to adjustment under subsection (b), the maximum number of shares of Common Stock that may be issued under the Plan is 12,500,000 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.
- (b) 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.
 - (c) 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.
 - (d) 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 (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*

- (a) 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.
- (c) 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.
- (b) 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*

- (a) 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.
- (f) *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.
- (g) *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.

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 21, 2008.

These amendments and restatements were submitted to the stockholders for approval at the Annual Meeting of Stockholders on May 14, 2008 but were not approved.

The Board of Directors amended and restated this Plan January 21, 2009.

The amendments and restatements were approved by the stockholders at the Annual Meeting of Stockholders on May 13, 2009.

The Board of Directors amended and restated this Plan March 11, 2010.

ARQULE, INC.
Amended and Restated 1996 Director Stock Option Plan

The purpose of this Amended and Restated 1996 Director Stock Option Plan (the "Plan") of ArQule, Inc. (the "Company") is to attract and retain highly qualified non-employee directors of the Company and to encourage ownership of stock of the Company by such directors so as to provide additional incentives to promote the success of the Company.

1. ADMINISTRATION OF THE PLAN.

Grants of stock options under the Plan shall be automatic as provided in Section 6. However, all questions of interpretation with respect to the Plan and options granted under it shall be determined by the Board of Directors of the Company (the "Board") or by a committee consisting of one or more directors appointed by the Board and such determination shall be final and binding upon all persons having an interest in the Plan.

2. PERSONS ELIGIBLE TO PARTICIPATE IN THE PLAN.

Each director of the Company who is not an employee of the Company or of any subsidiary of the Company shall be eligible to participate in the Plan unless such director irrevocably elects not to participate.

3. SHARES SUBJECT TO THE PLAN.

(a) The aggregate number of shares of the Company's Common Stock, \$0.01 par value ("Common Stock") which may be optioned under this Plan is 750,500 shares. Shares issued under the Plan may consist in whole or in part of authorized but unissued shares or treasury shares.

(b) In the event of a stock dividend, split-up, combination or reclassification of shares, recapitalization or other similar capital change relating to the Company's Common Stock, the maximum aggregate number and kind of shares or securities of the Company as to which options may be granted under this Plan and as to which options then outstanding shall be exercisable, and the option price of such options shall be appropriately adjusted so that the proportionate number of shares or other securities as to which options may be granted and the proportionate interest of holders of outstanding options shall be maintained as before the occurrence of such event.

(c) In the event of a consolidation or merger of the Company with another corporation where the Company's stockholders do not own a majority in interest of the surviving or resulting corporation, or the sale or exchange of all or substantially all of the assets of the Company, or a reorganization or liquidation of the Company, any deferred exercise period shall be automatically accelerated and each holder of an outstanding option shall be entitled to receive upon exercise and payment in accordance with the terms of the option the same shares, securities or property as he would have been entitled to receive upon the occurrence of such event if he had been, immediately prior to such event, the holder of the number of shares of Common Stock purchasable under his or her option; provided, however, that in lieu of the foregoing the Board may upon written notice to each holder of an outstanding option or right under the Plan, provide that such option or right shall terminate on a date not less than 20 days after the date of such notice unless theretofore exercised.

(d) Whenever options under this Plan lapse or terminate or otherwise become unexercisable the shares of Common Stock which were subject to such options may again be subjected to options under this Plan. The Company shall at all times while this Plan is in force reserve such number of shares of Common Stock as will be sufficient to satisfy the requirements of this Plan.

4. NON-STATUTORY STOCK OPTIONS.

All options granted under this Plan shall be non-statutory options not entitled to special tax treatment under Section 422 of the Internal Revenue Code of 1986, as amended (the "Code").

5. FORM OF OPTIONS.

Options granted hereunder shall be in substantially the form of the attached EXHIBIT A or in such other form as the Board or any committee appointed pursuant to Section 1 above may from time to time determine.

6. GRANT OF OPTIONS AND OPTION TERMS

(a) AUTOMATIC GRANT OF OPTIONS. Upon the initial election or appointment of any person as a member of the Board who is an eligible director (whether or not such election is at an annual meeting of stockholders or otherwise), such person shall automatically be granted (i) an option to purchase 30,000 shares of Common Stock (an "Initial Option"). In addition, at each annual meeting of stockholders, each eligible director serving as a member of the Board (other than the Chairman of the Board) prior to and immediately after such annual meeting (whether or not such director was reelected at such meeting) shall automatically be granted an annual option to purchase 15,000 shares of Common Stock (an "Annual Option"); Upon the initial election or appointment of any person who is an eligible director (whether or not such election is at an annual meeting of stockholders or otherwise) as the Chairman of the Board of Directors, such person shall automatically be granted (i) an option to purchase 25,000 shares of Common Stock (the "Initial Chairman Option"). 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 (whether or not such director was reelected at such meeting) shall automatically be granted an annual option to purchase 25,000 shares of Common Stock (the "Annual Chairman Option" and, together with the Initial Chairman Option, (the "Chairman Options"). The Annual Options together with the Initial Options and Chairman Options are sometimes collectively referred to as "Options"). No Options shall be granted hereunder after May 18, 2016.(1)

(b) DATE OF GRANT. The "Date of Grant" for Options granted under this Plan shall be the date of initial election as a director or appointment as Chairman or the date of the annual stockholder meeting at which such Option was granted, as the case may be in accordance with Section 6(a).

(c) OPTION PRICE. The option price for each Option granted under this Plan shall be not be less than 100% of the Fair Market Value of the Company's Common Stock on the Date of Grant. For purposes of this Plan, "Fair Market Value" means, unless otherwise determined by the Board, the closing price for the Company's Common Stock as reported by the NASDAQ Stock Market, Inc. on the Date of Grant; provided, however, that in all events shall Fair Market Value be determined pursuant to a method that complies with Proposed Treasury Regulation §1.409A-1(b)(5) or any successor provision.(2)

(1) This Plan was amended by the Board to extend the period during which Options may be granted to ten years after May 18, 2006, the date of the 2006 Annual Meeting of Stockholders of the Company at which the stockholders approved the amendment.

(2) This section was amended by the Board on January 16, 2007 to make the date of determination of Fair Market Value, the Date of Grant.

(d) TERM OF OPTION. The term of each Option granted under this Plan shall be ten years from the Date of Grant.

(e) EXERCISABILITY OF OPTIONS. (1) The Initial Options granted under this Plan shall become exercisable with respect to 6,666 shares on the date of the Company's next annual meeting of

stockholders from the Date of Grant and with respect to 6,667 shares on the date of each of the next two annual meetings of stockholders following such annual meeting of stockholders, but in all cases if, and only if, the Option holder is a member of the Board at the opening of business on that date. The Initial Chairman Options granted under this Plan shall become exercisable with respect to 8,334 shares on the date of the Company's next annual meeting of stockholders from the Date of Grant and with respect to 8,333 shares on the date of each of the next two annual meetings of stockholders following such annual meeting of stockholders, but in all cases if, and only if, the Option holder is a member of the Board at the opening of business on that date. (2) The Annual Options and Annual Chairman Options granted under this Plan shall become exercisable with respect to all shares on the Date of Grant.

(f) **GENERAL EXERCISE TERMS.** Directors holding exercisable Options under this Plan who cease to serve as members of the Board may, during their lifetime, exercise the rights they had under such Options at the time they ceased being a director for the full unexpired term of such Option. Any rights that have not yet become exercisable shall terminate upon cessation of membership on the Board. Upon the death of a director, those entitled to do so shall have the right, at any time within twelve months after the date of death, to exercise in whole or in part any rights which were available to the director at the time of his or her death. The rights of the Option holder may be exercised by the holder's guardian or legal representative in the case of disability and by the beneficiary designated by the holder in writing delivered to the Company or, if none has been designated, by the holder's estate or his or her transferee in accordance with this Plan, in the case of death. Options granted under the Plan shall terminate, and no rights thereunder may be exercised, after the expiration of the applicable exercise period. Notwithstanding the foregoing provisions of this section, no rights under any Options may be exercised after the expiration of ten years from their Date of Grant.

(g) **METHOD OF EXERCISE AND PAYMENT.** Options may be exercised only by written notice to the Company at its head office accompanied by payment of the full Option price for the shares of Common Stock as to which they are exercised. The Option price shall be paid in cash or by check or in shares of Common Stock of the Company, or in any combination thereof. Shares of Common Stock surrendered in payment of the Option price shall have been held by the person exercising the Option for at least six months, unless otherwise permitted by the Board. The value of shares delivered in payment of the Option price shall be their fair market value, as determined in accordance with Section 6(c) above, as of the date of exercise. Upon receipt of such notice and payment, the Company shall promptly issue and deliver to the optionee (or other person entitled to exercise the Option) a certificate or certificates for the number of shares as to which the exercise is made.

(h) **NON-TRANSFERABILITY.** Options granted under this Plan shall not be transferable by the holder thereof otherwise than by will or the laws of descent and distribution or as permitted by Rule 16b-3 (or any successor provision) under the Securities Exchange Act of 1934, as amended ("Rule 16b-3").

7. LIMITATION OF RIGHTS.

(a) **NO RIGHT TO CONTINUE AS A DIRECTOR.** Neither the Plan, nor the granting of an Option or any other action taken pursuant to the Plan, shall constitute an agreement or understanding, express or implied, that the Company will retain an Option holder as a director for any period of time or at any particular rate of compensation.

(b) **NO STOCKHOLDERS' RIGHTS FOR OPTIONS.** A director shall have no rights as a stockholder with respect to the shares covered by Options until the date the director exercises such Options and pays the Option price to the Company, and no adjustment will be made for dividends or other rights for which the record date is prior to the date such Option is exercised and paid for.

8. AMENDMENT OR TERMINATION.

The Board may amend or terminate this Plan at any time, provided that, to the extent necessary or desirable to comply with Rule 16b-3, this Plan shall not be amended more than once every six months, other than to comport with changes in the Code, ERISA or the rules thereunder.

9. STOCKHOLDER APPROVAL.

The 1996 Director Stock Option Plan was approved by the stockholders of the Company by an affirmative vote of the holders of a majority of the shares of Common Stock present, or represented and entitled to vote, at the Company's 1997 annual meeting of stockholders and any further amendments hereto shall be subject to stockholder approval to the extent (i) required by law, (ii) required by Nasdaq or stock exchange listing requirements, as determined by the Board of Directors, or (iii) as desirable, as determined by the Board of Directors, to comply with Rule 16b-3. In the event any approval is not obtained, all Options granted under this Plan after such further amendment shall be void and without effect.

10. GOVERNING LAW.

This Plan shall be governed by and interpreted in accordance with the laws of the State of Delaware.

11. COMPLIANCE WITH SECTION 409A OF THE CODE.

Notwithstanding any other provision of this Plan to the contrary, to the extent any grant (or a modification of a grant) of options under this Plan results in the deferral of compensation (for purposes of Section 409A of the Code), the terms and conditions of the grant shall comply with Section 409A of the Code.

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 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 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 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 amended and restated this Plan on March 13, 2006.

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.

Pursuant to Section 13 (d) of the Plan, the Board of Directors amended and restated this Plan on January 21, 2010.

The Board of Directors determined that, in accordance with the terms of the Plan, applicable securities laws and regulations and Nasdaq market rules it was not necessary to obtain the stockholder approval for the amendment and restatement.



Dear Stockholders:

During 2009, ArQule's progress was highlighted by clinical advancements with our lead product candidate, ARQ 197, an orally administered, small molecule inhibitor of the c-Met receptor tyrosine kinase. We have cast a broad net with our clinical trials, which now encompass six indications and four combination regimens that target a kinase with multiple roles in cancerous cell proliferation, tumor spread, new blood vessel formation and drug resistance.

The timely execution of our Phase 2, ARQ 197-erlotinib combination therapy trial in non-small cell lung cancer resulted in the completion of patient enrollment in September 2009, ahead of schedule, and the reporting of data in March, 2010. We enrolled nearly 170 patients in this randomized, placebo-controlled trial, data from which have begun to validate the clinical utility of this combination therapy and demonstrate its clinical benefit in the overall intent-to-treat population and in a major sub-population.

These data represent both a significant potential inflection point for ArQule and a valuable point of reference in determining the clinical path forward for ARQ 197 in an area of high unmet need. The American Cancer Society estimates that 219,000 new cases of lung cancer, approximately 85 percent of which are non-small cell, were diagnosed in 2009, with 159,000 deaths resulting from the disease during the year. Lung cancer is the leading cause of cancer death among both men and women.

The non-small cell lung trial is the first of several that offer the potential for proof-of-principle data with ARQ 197 beginning this year and extending through next. We completed enrollment of approximately 50 patients with a rare group of tumors, c-Met sarcomas (previously referred to as MiT tumors) in a Phase 2, single agent, open label trial in February 2010. Data from this trial will be analyzed in the first half of 2010.

We have also begun a safety trial with ARQ 197 and gemcitabine in pancreatic cancer and other gemcitabine-sensitive tumor types, which we expect to complete this year. Pending data analysis, we may move this combination forward into Phase 2. We have also initiated a Phase 1-2 clinical program in hepatocellular carcinoma with ARQ 197 as both single agent and in combination with sorafenib. We are enrolling patients in the Phase 2 portion of the single agent trial, and we are in an advanced stage of testing the safety of the combination therapy trial.

Finally, patient enrollment was initiated earlier this year by our partner, Daiichi Sankyo, in a Phase 2, single agent trial in germ cell tumors and a Phase 1-2 combination therapy trial with irinotecan and cetuximab in colorectal cancer. We are pleased that Daiichi Sankyo has supported the expansion of the clinical program with ARQ 197.

Relative to future possible developments of the ARQ 197 clinical program, under our agreement with Daiichi Sankyo the two companies share equally the costs of Phase 2 and Phase 3 clinical trials with ARQ 197. It is important to note, however, that ArQule's share of Phase 3 costs will be funded solely from milestone and royalty payments. This provision should allow ArQule to manage its financial profile more efficiently, and it should better preserve our ability to advance unpartnered product candidates in our pipeline, based on their respective merits.

Our pipeline consists of ARQ 621, an inhibitor of the Eg5 kinesin motor protein in Phase 1 testing, and pre-clinical programs with inhibitors of the B-RAF kinase and fibroblast growth factor receptor. We believe the Phase 1 trial with ARQ 621 should be concluded in the first half of 2010, following which we will determine if and how we proceed with Phase 2. We also expect to file an investigational new drug application this year with a candidate from one of our two pre-clinical programs.

Our kinase inhibitor discovery collaboration with Daiichi Sankyo is progressing well, leading to Daiichi Sankyo's renewed financial commitment for this year. This collaboration is focused on two targets in the field of oncology. The ArQule Kinase Inhibitor Platform (AKIP™) is the basis of this collaboration, and we may consider additional partnerships that could provide ArQule with the opportunity to apply the capabilities of this proprietary technology to the research field of oncology and beyond.

We ended 2009 with \$117.4 million in net cash and marketable securities. Our net loss for the year decreased to \$36.1 million from \$50.8 million for 2008. We have achieved savings in a number of areas, including consulting and professional fees, energy costs and travel, and we have reduced capital expenditures. We are committed to manage our resources in a highly disciplined fashion, monitoring spending in all aspects of our operations to reduce costs wherever possible without impacting our objectives.

Our initial guidance for 2010 projects a net use of cash ranging between \$43 and \$47 million, a net loss between \$34 and \$38 million and an estimated \$70-\$74 million in cash and marketable securities at the end of the year. These projections take into consideration the full range of our operational priorities.

During the past year, we executed our development objectives while managing our financial resources in a highly disciplined way. We are committed to ensuring that these resources will support our business plan and the achievement of key inflection points through this year and next.

A handwritten signature in black ink, appearing to read 'P. Pucci', with a small comma to the right.

Paolo Pucci
Chief Executive Officer

**ARQULE, INC.
19 PRESIDENTIAL WAY
WOBURN, MA 01801**

VOTE BY INTERNET - www.proxyvote.com

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 12:00 noon Eastern Daylight Saving Time May 12, 2010. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

ELECTRONIC DELIVERY OF FUTURE SHAREHOLDER COMMUNICATIONS

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

VOTE BY PHONE - 1-800-690-6903

Use any touch-tone telephone to transmit your voting instructions up until 12:00 noon Eastern Daylight Saving Time May 12, 2010. Have your proxy card in hand when you call and then follow the instructions.

VOTE BY MAIL

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to ArQule, Inc., c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

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

M23520-493799

KEEP THIS PORTION FOR YOUR RECORDS
DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

ARQULE, INC.		For All	Withhold All	For All Except	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the nominee's names on the line below.
The Board recommends a vote "FOR" each of the nominees for director in Proposal 1 and "FOR" Proposals 2 and 3.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____
Vote On Directors					
1. To elect Michael D. Loberg and Nancy A. Simonian as directors to hold office for a term of three years and until their respective successors are elected and qualified.					
Vote On Proposals					
2. To approve an amendment 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 1,500,000 from 11,000,000 to 12,500,000 shares of common stock.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. To ratify the selection of PricewaterhouseCoopers LLP, an independent registered public accounting firm, to audit our financial statements for the year ending December 31, 2010.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
This proxy, when properly executed, will be voted in the manner directed by the undersigned stockholders. If no such directions are given, this proxy will be voted "FOR" the election of the nominees listed above and "FOR" proposals 2 and 3. In their discretion, the proxies are also authorized to vote upon such other matters as may properly come before the meeting or any adjournment thereof.					
NOTE: Please sign exactly as name appears on stock certificate. When shares are held by joint tenants, both should sign. When signing as attorney, executor, administrator, trustee, or guardian, please give full title as such. If a corporation, please sign in full corporate name by President or other authorized officer. If a partnership, please sign in partnership name by authorized person.					
<input type="text"/>		<input type="text"/>		<input type="text"/>	
Signature [PLEASE SIGN WITHIN BOX]		Date		Signature (Joint Owners)	
<input type="text"/>		<input type="text"/>		<input type="text"/>	
Signature [PLEASE SIGN WITHIN BOX]		Date		Signature (Joint Owners)	

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

M23521-P93799

**THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS
OF
ARQULE, INC.
ANNUAL MEETING OF STOCKHOLDERS
May 13, 2010**

The undersigned stockholder of ArQule, Inc. hereby appoints Peter S. Lawrence and Robert J. Connaughton, Jr., and each of them acting individually as proxies, each with the power to appoint his substitute, and hereby authorizes them to represent and to vote, as designated on the reverse side of this ballot, all of the shares of common stock of ArQule, Inc. that the undersigned is entitled to vote at the Annual Meeting of Stockholders to be held at the offices of ArQule, Inc. at 19 Presidential Way, Woburn, Massachusetts 01801-5140 at 10:00 a.m. Eastern Daylight Saving Time on Thursday, May 13, 2010 and any adjournment or postponement thereof.

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

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

CONTINUED AND TO BE SIGNED ON REVERSE SIDE.

QuickLinks

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