

Registration No. 333-_____

WASHINGTON, D.C. 20549

THE SECURITIES ACT OF 1933

(Exact name of registrant as specified in its charter)

Delaware	04-3221586
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification Number)

**One Wall Street
Burlington, Massachusetts 01803
(781) 994-0300**

(Address of Principal Executive Offices; Zip Code)

ArQule, Inc. 2018 Employee Stock Purchase Plan

(Full title of the plan)

PAOLO PUCCI
Chief Executive Officer
ArQule, Inc.
One Wall Street
Burlington, Massachusetts 01803
(781) 994-0300

(Telephone number, including area code, of agent for service)

Copies to:

PETER S. LAWRENCE
President and Chief Operating Officer
ArQule, Inc.
One Wall Street

Burlington, Massachusetts 01803
(781) 994-0300

RICHARD E. BALTZ
Arnold & Porter

601 Massachusetts Ave., N.W.
Washington, D.C. 20001

(202) 942-5124

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

	Accelerated filer	x
Large accelerated filer	o	
Non-accelerated filer	o	Smaller reporting company x
		Emerging growth company o

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. "

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered⁽¹⁾	Proposed Maximum Offering Price Per Share⁽²⁾	Proposed Maximum Aggregate Offering Price⁽²⁾	Amount of Registration Fee⁽²⁾
Common Stock, par value \$0.01 per share	500,000	\$3.45	\$1,725,000	\$209.07

Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the “Securities Act”), this Registration Statement shall also cover any additional shares of the registrant’s common stock that become issuable under the (1)registrant’s 2018 Employee Stock Purchase Plan (the “Plan”), by reason of any stock dividend, stock split, recapitalization or any similar transaction effected without the receipt of consideration that results in an increase in the number of the registrant’s outstanding shares of common stock.

Estimated pursuant to Rule 457(h) of the Securities Act, solely for purposes of calculating the registration fee, (2)which is the average of the high and low sales price of the registrant’s common stock as reported on the Nasdaq Global Market on November 27, 2018.

PART I

The information called for in Part 1 of Form S-8 is not being filed with or included in this Registration Statement on Form S-8 (by incorporation, by reference or otherwise) in accordance with the provisions of the Securities Act of 1933, as amended (the "Securities Act").

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents, which have been filed by the Registrant with the Commission pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are hereby incorporated by reference herein, and shall be deemed to be part of, this Registration Statement:

Our Annual Report on Form 10-K for the year ended December 31, 2017 filed with the Commission on March 5, 2018;

Our Current Reports on Form 8-K filed with the Commission on February 7, 2018, February 22, 2018, April 17, 2018, May 10, 2018 and July 13, 2018;

Our Quarterly Report on Form 10-Q for the quarters ending March 31, 2018, June 30, 2018 and September 30, 2018 filed with the Commission on May 7, 2018, August 1, 2018, and October 31, 2018, respectively; and

The description of our common stock contained in our Registration Statement on Form 8-A, filed with the SEC on September 25, 1996, including any amendment or report filed for the purpose of updating such description.

All other documents filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, subsequent to the date of the filing of this Registration Statement and prior to the filing of a post-effective amendment that indicates that all securities registered hereunder have been sold, or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of the filing of such documents. Any statement contained in a document incorporated or deemed to be

incorporated by reference herein shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any subsequently filed document that also is deemed to be incorporated by reference herein modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement. Under no circumstances will any information filed under Items 2.02 or 7.01 of Form 8-K, and exhibits furnished on such form that relate to such items, be deemed incorporated herein by reference unless such Form 8-K expressly provides for the contrary.

Item 4. Description of Securities.

Not Applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the Delaware General Corporation Law (“DGCL”), permits, under certain circumstances, the indemnification of any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving in a similar capacity for another enterprise at the request of the corporation. To the extent that a present or former director or officer of the corporation has been successful in defending any such proceeding, the DGCL provides that he shall be indemnified against expenses (including attorneys’ fees), actually and reasonably incurred by him in connection therewith. With respect to a proceeding by or in the right of the corporation, such person may be indemnified against expenses (including attorneys’ fees), actually and reasonably incurred, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation. The DGCL provides, however, that indemnification shall not be permitted in such a proceeding if such person is adjudged liable to the corporation unless, and only to the extent that, the court, upon application, determines that he is entitled to indemnification under the circumstances. With respect to proceedings other than those brought by or in the right of the corporation, notwithstanding the outcome of such a proceeding, such person may be indemnified against judgments, fines and amounts paid in settlement, as well as expenses, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action, had no reason to believe his conduct was unlawful. Except with respect to mandatory indemnification of expenses to successful defendants as described in the preceding paragraph or pursuant to a court order, the indemnification described in this paragraph may be made only upon a determination in each specific case (1) by majority vote of the directors that are not parties to the proceeding, even though less than a quorum, or (2) by a committee of the directors that are not a party to the proceeding who have been appointed by a majority vote of directors who are not party to the proceeding, even though less than a quorum, or (3) if there are no such directors, or if such directors so direct, by independent legal counsel in a written opinion, or (4) by the stockholders.

The DGCL permits a corporation to advance expenses incurred by a proposed indemnitee in advance of final disposition of the proceeding, provided that the indemnitee undertakes to repay such advanced expenses if it is ultimately determined that he is not entitled to indemnification. Also, a corporation may purchase insurance on behalf of an indemnitee against any liability asserted against him in his designated capacity, whether or not the corporation itself would be empowered to indemnify him against such liability. ArQule has adopted provisions in its bylaws that provide for indemnification of its officers and directors to the maximum extent permitted under the DGCL. As authorized by the DGCL, ArQule’s Amended and Restated Bylaws limit the liability of directors of ArQule for monetary damages. The effect of this provision is to eliminate the rights of ArQule and its stockholders to recover monetary damages against a director for breach of the fiduciary duty of care as a director except in certain limited situations. This provision does not limit or eliminate the rights of ArQule or any stockholder to seek non-monetary relief such as an injunction or rescission in the event of a breach of a director’s duty of care. This provision will not alter the liability of directors under federal securities laws. ArQule has purchased an insurance policy that purports to insure the officers and directors of ArQule against certain liabilities incurred by them in the discharge of their functions as such officers and directors. The foregoing descriptions are only general summaries. For additional information we refer you to the full text of our Restated Certification of Incorporation, filed as Exhibit 3.1 to our Annual Report on Form 10-K filed on March 2, 2011, Amendment #1 to Restated Certification of Incorporation, filed as Appendix A to our Definitive Proxy Statement filed on March 29, 2018 and our Amended and Restated Bylaws,

filed as Exhibit 3.1 to our Form 8-K filed on January 27, 2014.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

A list of exhibits filed with this Registration Statement is set forth in the Exhibit Index and is incorporated herein by reference.

Item 9. Undertakings.

1. The undersigned Registrant hereby undertakes:

(a) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in this registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that paragraphs (a) (i) and (a)(ii) do not apply if the registration statement is on Form S-8 and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(b) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

(c) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

2. The Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

3. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification

against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized,, in the City of Burlington, Commonwealth of Massachusetts, on November 29, 2018.

ARQULE, INC.

By: /s/ Paolo Pucci
Paolo Pucci
Chief Executive
Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENT that each person whose signature appears below constitutes and appoints each of Paolo Pucci and Peter S. Lawrence as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or and in his or her name, place and stead, in any and all capacities, to sign any or all amendments (including pre-effective and post-effective amendments, exhibits thereto and other documents in connection therewith) to this registration statement on Form S-8 with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, proxies and agents or any of them, or their, his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

SIGNATURE

TITLE

DATE

/s/ Paolo Pucci
Paolo Pucci

Chief Executive Officer and Director November 29, 2018
(Principal Executive Officer)

/s/ Peter S. Lawrence President and Chief Operating Officer November 29, 2018
Peter S. Lawrence (Principal Financial Officer)

/s/Robert J. Weiskopf Chief Financial Officer November 29, 2018
Robert. J. Weiskopf and Treasurer
(Principal Accounting Officer)

/s/ Patrick J. Zenner Director — Chairman of the Board November 29, 2018
Patrick J. Zenner

/s/ Timothy C. Barabe Director November 29, 2018
Timothy C. Barabe

/s/ Susan L. Kelley Director November 29, 2018
Susan L. Kelley

/s/ Ronald M. Lindsay Director November 29, 2018
Ronald M. Lindsay

/s/ Michael D. Loberg Director November 29, 2018
Michael D. Loberg

/s/ William G. Messenger Director November 29, 2018
William G. Messenger

/s/ Ran Nussbaum Director November 29, 2018
Ran Nussbaum

INDEX TO EXHIBITS

<u>Exhibit No.</u>	<u>Description</u>
<u>Exhibit 5</u>	<u>Opinion of Arnold & Porter Kaye Scholer LLP (filed herewith)</u>
<u>Exhibit 23.1</u>	<u>Consent of Arnold & Porter Kaye Scholer LLP (included in Exhibit 5)</u>
<u>Exhibit 23.2</u>	<u>Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm (filed herewith)</u>
<u>Exhibit 24</u>	<u>Powers of Attorney of certain officers and directors of ArQule, Inc. (included on the signature page to this Registration Statement).</u>