

U.S. SECURITIES AND EXCHANGE COMMISSION
Washington, D. C. 20549

FORM 8-A

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) or 12(g) OF THE
SECURITIES EXCHANGE ACT OF 1934

ARQULE, INC.

(Exact name of Registrant as Specified in its Charter)

DELAWARE

04-3221586

(State of Incorporation or Organization) (I.R.S. Employer Identification No.)

200 BOSTON AVENUE, MEDFORD, MASSACHUSETTS

02155

(Address of Principal Executive Offices)

(Zip Code)

If this Form relates to the registration of a class of debt securities and is effective upon filing pursuant to General Instruction A(c)(1) please check the following box. / /

If this Form relates to the registration of a class of debt securities and is to become effective simultaneously with the effectiveness of a concurrent registration statement under the Securities Act of 1933 pursuant to General Instruction A(c)(2) please check the following box. / /

SECURITIES TO BE REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:

Title of Each Class
to be so Registered

Name of Each Exchange on Which
Each Class is to be Registered

None

None

SECURITIES TO BE REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:

COMMON STOCK, \$0.01 PAR VALUE PER SHARE

(Title of Class)

ITEM 1. DESCRIPTION OF REGISTRANT'S SECURITIES TO BE REGISTERED.

The description of the shares of Common Stock of ArQule, Inc. (the "Registrant") registered hereby is contained under the caption "Description of Capital Stock" on page 40 of the Registrant's Registration Statement on Form S-1 initially filed with the Securities and Exchange Commission on August 29, 1996 and amended on September 24, 1996 (Commission File No. 333-11105), under the Securities Act of 1933, as amended, and is hereby incorporated by reference.

ITEM 2. EXHIBITS.

1. Amended and Restated Certificate of Incorporation of the Registrant, as amended through the date hereof. Filed as Exhibit 3.1 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
2. Form of Certificate of Amendment to the Amended and Restated Certificate of Incorporation as proposed to be filed upon effectiveness of the Registrant's Registration Statement. Filed as Exhibit 3.2 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
3. Form of Amended and Restated Certificate of Incorporation of the Registrant as proposed to be amended concurrently with the closing of this offering. Filed as Exhibit 3.3 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
4. By-laws of the Registrant. Filed as Exhibit 3.4 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
5. Amended and Restated By-Laws of the Registrant as proposed to be amended concurrently with the closing of this offering. Filed as Exhibit 3.5 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
6. Specimen Common Stock Certificate, \$0.01 par value per share, of the Registrant. Filed as Exhibit 4.1 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
7. Specimen Common Stock Purchase Warrant of the Registrant. Filed as Exhibit 4.2 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
8. 1994 Amended and Restated Equity Incentive Plan of the Registrant, as amended through October 17, 1994. Filed as Exhibit 10.1 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
9. 1996 Employee Stock Purchase Plan of the Registrant. Filed as Exhibit 10.2 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
10. 1996 Director Stock Option Plan of the Registrant. Filed as Exhibit 10.3 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.
11. Investors' Rights Agreement among the Registrant and certain Stockholders of the Registrant dated November 2, 1995. Filed as Exhibit 10.5 to the Registrant's Registration Statement on Form S-1 and hereby incorporated by reference.

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SIGNATURE

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized.

ARQULE, INC.

Date: September 24, 1996

By: /s/ Eric B. Gordon

Name: Eric B. Gordon

Title: President and Chief Executive
Officer