

ARQULE INC
Form SC 13G
July 15, 2008

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

SCHEDULE 13G

**Under the Securities Exchange Act of 1934
(Amendment No. _____)***

ARQULE, INC.
(Name of Issuer)

Common Stock, par value \$0.01 per share
(Title of Class of Securities)

04269E107
(CUSIP Number)

July 7, 2008
(Date of Event Which Requires Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

- Rule 13d-1(b)
- Rule 13d-1(c)
- Rule 13d-1(d)

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be filed for the purpose of Section 18 of the Securities Exchange Act of 1934 (*Act*) or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

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NAMES OF REPORTING PERSONS.

I.R.S. Identification Nos. of above persons (entities only).

1.

RA Capital Management, LLC

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2.

(a)

(b)

SEC USE ONLY

3.

CITIZENSHIP OR PLACE OF ORGANIZATION

4.

Massachusetts

SOLE VOTING POWER

5.

NUMBER OF

2,215,375

SHARES

SHARED VOTING POWER

BENEFICIALLY **6.**

OWNED BY

0

EACH
REPORTING
PERSON

7.

SOLE DISPOSITIVE POWER

2,215,375

WITH

8.

SHARED DISPOSITIVE POWER

0

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

9.

2,215,375

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

o

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

5.1%

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IA

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NAMES OF REPORTING PERSONS.

I.R.S. Identification Nos. of above persons (entities only).

1.

Richard H. Aldrich

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2.

(a)

(b)

SEC USE ONLY

3.

CITIZENSHIP OR PLACE OF ORGANIZATION

4.

United States

SOLE VOTING POWER

5.

NUMBER OF **0**

SHARED VOTING POWER

6.

SHARES BENEFICIALLY OWNED BY **2,215,375**

SOLE DISPOSITIVE POWER

7.

EACH REPORTING PERSON **0**

SHARED DISPOSITIVE POWER

8.

WITH **2,215,375**

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

9.

2,215,375

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

o

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

5.1%

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IN

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NAMES OF REPORTING PERSONS.

I.R.S. Identification Nos. of above persons (entities only).

1.

Peter Kolchinsky

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2.

(a)

(b)

SEC USE ONLY

3.

CITIZENSHIP OR PLACE OF ORGANIZATION

4.

United States

SOLE VOTING POWER

5.

NUMBER OF **0**

SHARED VOTING POWER

6.

SHARES BENEFICIALLY OWNED BY **2,215,375**

SOLE DISPOSITIVE POWER

7.

EACH REPORTING PERSON **0**

SHARED DISPOSITIVE POWER

8.

WITH **2,215,375**

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

9.

2,215,375

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

o

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

5.1%

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

IN

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NAMES OF REPORTING PERSONS.

I.R.S. Identification Nos. of above persons (entities only).

1.

RA Capital Biotech Fund, L.P.

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2.

(a)

(b)

SEC USE ONLY

3.

CITIZENSHIP OR PLACE OF ORGANIZATION

4.

Delaware

SOLE VOTING POWER

5.

NUMBER OF

2,189,257

SHARES

SHARED VOTING POWER

BENEFICIALLY **6.**

OWNED BY

0

EACH
REPORTING
PERSON

7.

SOLE DISPOSITIVE POWER

2,189,257

WITH

8.

SHARED DISPOSITIVE POWER

0

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

9.

2,189,257

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

o

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

5.0%

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

PN

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NAMES OF REPORTING PERSONS.

I.R.S. Identification Nos. of above persons (entities only).

1.

RA Capital Biotech Fund II, L.P.

CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (SEE INSTRUCTIONS)

2.

(a)

(b)

SEC USE ONLY

3.

CITIZENSHIP OR PLACE OF ORGANIZATION

4.

Delaware

SOLE VOTING POWER

5.

NUMBER OF

26,118

SHARES

SHARED VOTING POWER

BENEFICIALLY **6.**

OWNED BY

0

EACH
REPORTING
PERSON

7.

SOLE DISPOSITIVE POWER

26,118

WITH

8.

SHARED DISPOSITIVE POWER

0

AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

9.

26,118

10. CHECK IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES (SEE INSTRUCTIONS)

o

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)

0.1%

12. TYPE OF REPORTING PERSON (SEE INSTRUCTIONS)

PN

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Item 1.(a) **Name of Issuer:** ArQule, Inc. (the Issuer).(b) **Address of the Issuer's Principal Executive Offices:** 19 Presidential Way, Woburn, MA 01801.**Item 2.**

(a) **Name of Person Filing:** This joint statement on Schedule 13G is being filed by Richard H. Aldrich, Peter Kolchinsky, RA Capital Management, LLC, RA Capital Biotech Fund, L.P. and RA Capital Biotech Fund II, L.P., who are collectively referred to herein as the Reporting Persons. Mr. Aldrich and Mr. Kolchinsky (together, the Managers) are the managers of RA Capital Management, LLC (Capital), which is the sole general partner of each of RA Capital Biotech Fund, L.P. (Fund I) and RA Capital Biotech Fund II, L.P. (Fund II). The Reporting Persons have entered into a Joint Filing Agreement, dated as of the date hereof, a copy of which is filed with this Schedule 13G as Exhibit 1 (which is incorporated herein by reference), pursuant to which the Reporting Persons have agreed to file this statement jointly in accordance with the provisions of Rule 13d-1(k) under the Act.

(b) **Address of Principal Business Office:** The principal business office of the Reporting Persons with respect to the shares reported hereunder is 800 Bolyston Street, Suite 1500, Boston, MA 02199.

(c) **Citizenship:** Capital is a Massachusetts limited liability company. Each of Fund I and Fund II is a Delaware limited partnership. The Managers are United States citizens.

(d) **Title and Class of Securities:** Common stock, par value \$0.01 per share (Common Stock).

(e) **CUSIP Number:** 04269E107.

Item 3. If this statement is filed pursuant to §§240.13d-1(b) or 240.13d-2(b) or (c), check whether the person filing is a:

Not applicable.

Item 4. Ownership

In the aggregate, the Reporting Persons beneficially own 2,215,375 shares of the Common Stock representing approximately 5.1 % of such class of securities. The beneficial ownership of each Reporting Person is as follows:

- (i) Fund I beneficially owns 2,189,257 shares of Common Stock representing approximately 5.0% of the class,
 - (ii) Fund II beneficially owns 26,118 shares of Common Stock representing approximately 0.1% of the class and
 - (iii) Capital, as the sole general partner of each of Fund I and Fund II, and Mr. Aldrich and Mr. Kolchinsky as the managers of Capital, each beneficially owns 2,215,375 shares of Common Stock of the Issuer representing approximately 5.1% of the class. The percentage of the Common Stock beneficially owned by each Reporting Person is based on a total of 43,832,876 shares of Common Stock of the Issuer
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outstanding as of May 2, 2008, as reported in the Issuer's most recent Form 10-Q for the quarterly period ended March 31, 2008.

Each of Fund I and Fund II has the power to vote and dispose of the shares of Common Stock beneficially owned by such entity (as described above). Capital, as the sole general partner of each of Fund I and Fund II, has the sole authority to vote and dispose of all of the shares of Common Stock reported in this Schedule 13G. The Managers, by virtue of their position as managers of Capital, have the shared authority to vote and dispose of all of the shares of Common Stock reported in this joint statement Schedule 13G.

Item 5. Ownership of Five Percent or Less of a Class

Not applicable.

Item 6. Ownership of More than Five Percent on Behalf of Another Person

Not applicable.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on By the Parent Holding Company or Control Person

Not applicable.

Item 8. Identification and Classification of Members of the Group

Not applicable.

Item 9. Notice of Dissolution of Group

Not applicable.

Item 10. Certification

By signing below I hereby certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

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Signature

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

DATE: July 11, 2008

RA CAPITAL BIOTECH FUND, L.P.

By: RA Capital Management, LLC
General Partner

By: /s/ Richard H. Aldrich
Richard H. Aldrich
Manager

RA CAPITAL BIOTECH FUND II, L.P.

By: RA Capital Management, LLC
General Partner

By: /s/ Richard H. Aldrich
Richard H. Aldrich
Manager

RA CAPITAL MANAGEMENT, LLC

By: /s/ Richard H. Aldrich
Richard H. Aldrich
Manager

RICHARD H. ALDRICH

/s/ Richard H. Aldrich

PETER KOLCHINSKY

/s/ Peter Kolchinsky

Exhibit 1

JOINT FILING AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, the undersigned hereby agrees, as of July 11, 2008, that only one statement containing the information required by Schedule 13G, and each amendment thereto, need be filed with respect to the ownership by each of the undersigned of shares of Common Stock of ArQule, Inc. (the Issuer), and such statement to which this Joint Filing Agreement is attached as Exhibit 1 is filed on behalf of each of the undersigned.

RA CAPITAL BIOTECH FUND, L.P.

By: /s/ Richard H. Aldrich
Richard H. Aldrich, Manager
RA Capital Management, LLC

RA CAPITAL BIOTECH FUND II, L.P.

By: /s/ Richard H. Aldrich
Richard H. Aldrich, Manager
RA Capital Management, LLC

RA CAPITAL MANAGEMENT, LLC

By: /s/ Richard H. Aldrich
Richard H. Aldrich
Manager

RICHARD H. ALDRICH

/s/ Richard H. Aldrich

PETER KOLCHINSKY

/s/ Peter Kolchinsky