

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, \$.01 par value

(Title of Class of Securities)

00004269E1

(CUSIP Number)

*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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CUSIP No. 00004269E1

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1 NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Atlas Venture Fund II, L.P.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware Limited Partnership

5 SOLE VOTING POWER
NUMBER OF SHARES 0 shares

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH 1,355,738 shares

REPORTING
PERSON
WITH

7 SOLE DISPOSITIVE POWER
0 shares

8 SHARED DISPOSITIVE POWER
1,355,738 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
1,355,738 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*
[]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
13.8%

12 TYPE OF REPORTING PERSON*
PN

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CUSIP No. 00004269E1

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1 NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON
Atlas Venture Associates II, L.P.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION
Delaware Limited Partnership

5 SOLE VOTING POWER
NUMBER OF SHARES 0 shares

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH 1,355,738 shares

7 SOLE DISPOSITIVE POWER
REPORTING PERSON WITH 0 shares

8 SHARED DISPOSITIVE POWER
1,355,738 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
1,355,738 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

[]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
13.8%

12 TYPE OF REPORTING PERSON*

PN

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CUSIP No. 00004269E1

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1 NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Christopher J. Spray

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

5 SOLE VOTING POWER
NUMBER OF SHARES 0 shares

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH 931,558 shares

7 SOLE DISPOSITIVE POWER
REPORTING PERSON 0 shares
WITH

8 SHARED DISPOSITIVE POWER
931,558 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
931,558 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

[]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
9.5%

12 TYPE OF REPORTING PERSON*

IN

1 NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Barry Fidelman

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

5 SOLE VOTING POWER
NUMBER OF SHARES 0 shares

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH 931,558 shares

7 SOLE DISPOSITIVE POWER
REPORTING PERSON WITH 0 shares

8 SHARED DISPOSITIVE POWER
931,558 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
931,558 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

[]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
9.5%

12 TYPE OF REPORTING PERSON*

IN

1 NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Allan Ferguson

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

5 SOLE VOTING POWER
NUMBER OF SHARES 0 shares

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH 931,558 shares

7 SOLE DISPOSITIVE POWER
REPORTING PERSON 0 shares
WITH

8 SHARED DISPOSITIVE POWER
931,558 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
931,558 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

[]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
9.5%

12 TYPE OF REPORTING PERSON*

IN

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CUSIP No. 00004269E1

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1 NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON

Jean-Francois Formela

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*

(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION
France

5 SOLE VOTING POWER
NUMBER OF SHARES 0 shares

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH 931,558 shares

7 SOLE DISPOSITIVE POWER
REPORTING PERSON 0 shares
WITH

8 SHARED DISPOSITIVE POWER
931,558 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
931,558 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*
[]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
9.5%

12 TYPE OF REPORTING PERSON*
IN

CUSIP No. 00004269E1

1 NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON
Atlas Venture Europe Fund B.V.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*
(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION
The Netherlands

5 SOLE VOTING POWER
NUMBER OF SHARES 0 shares

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH 1,355,738 shares

REPORTING
PERSON
WITH

7 SOLE DISPOSITIVE POWER
0 shares

8 SHARED DISPOSITIVE POWER
1,355,738 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
1,355,738 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*
[]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
13.8%

12 TYPE OF REPORTING PERSON*
CO

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CUSIP No. 00004269E1

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1 NAME OF REPORTING PERSON
S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON
Atlas InvesteringsGroep N.V.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*
(a) []
(b) []

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION
The Netherlands

5 SOLE VOTING POWER
NUMBER OF SHARES 0 shares

6 SHARED VOTING POWER
BENEFICIALLY OWNED BY EACH 1,355,738 shares

7 SOLE DISPOSITIVE POWER
REPORTING PERSON 0 shares
WITH

8 SHARED DISPOSITIVE POWER
1,355,738 shares

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
1,355,738 shares

10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES*

[]

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
13.8%

12 TYPE OF REPORTING PERSON*

CO

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Schedule 13G

Item 1(a). Name of Issuer: ArQule, Inc.

Item 1(b). Address of Issuer's Principal Executive Offices: 200 Boston Avenue, Medford, Massachusetts 02155

Item 2(a). Names of Persons Filing: Atlas Venture Fund II, L.P., Atlas Venture Associates II, L.P., Christopher J. Spray, Barry Fidelman, Allan Ferguson, Jean-Francois Formela, Atlas Venture Europe Fund B.V. and Atlas InvesteringsGroep N.V.

Atlas Venture Associates II, L.P. is the sole general partner of Atlas Venture Fund II, L.P. Messrs. Spray, Fidelman, Ferguson and Formela are the individual general partners of Atlas Venture Associates II, L.P. Atlas InvesteringsGroep N.V. is the sole shareholder of Atlas Venture Europe Fund B.V.

Item 2(b). Address of Principal Business Office or, if None, Residence: The address of the principal business office of Atlas Venture Fund II, L.P., Atlas Venture Associates II, L.P. and Messrs. Spray, Fidelman, Ferguson and Formela is Atlas Venture, 222 Berkeley Street, Boston, Massachusetts 02116. The address of the principal business office of Atlas Venture Europe Fund B.V. and Atlas InvesteringsGroep N.V. is Atlas InvesteringsGroep N.V., Naarderpoort 1, 1411 MA Naarden, The Netherlands.

Item 2(c). Citizenship: Atlas Venture Fund II, L.P. and Atlas Venture Associates II, L.P. are each a limited partnership organized under the laws of the State of Delaware. Messrs. Spray, Fidelman and Ferguson are citizens of the United States. Mr. Formela is a citizen of France. Atlas Venture Europe Fund B.V. and Atlas InvesteringsGroep N.V. are each a corporation organized under the laws of The Netherlands.

Item 2(d). Title of Class of Securities: Common Stock, \$.01 par value.

Item 2(e). CUSIP Number: 00004269E1

Item 3. If this statement is filed pursuant to Rules 13d-1(b), or 13d-2(b), check whether the person filing is a:

(a) [] Broker or Dealer registered under Section 15 of the Securities Exchange Act of 1934 (the "Act").

(b) [] Bank as defined in Section 3(a)(6) of the Act.

(c) [] Insurance Company as defined in Section 3(a)(19) of the Act.

(d) [] Investment Company registered under Section

- (e) [] Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940.
- (f) [] Employee Benefit Plan, Pension Fund which is subject to the provisions of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see Rule 13d-1(b)(1)(ii)(F) of the Act.
- (g) [] Parent Holding Company, in accordance with Rule 13d-1(b)(ii)(G) of the Act.
- (h) [] Group, in accordance with Rule 13d-1(b)(1)(ii)(H) of the Act.

Not Applicable.

Item 4. Ownership.

(a) Amount Beneficially Owned:

Each of Atlas Venture Fund II, L.P., Atlas Venture Associates II, L.P., Atlas Venture Europe Fund B.V. and Atlas InvesteringsGroep N.V. (individually an "Entity" and collectively the "Entities") may be deemed to own beneficially 1,355,738 shares of Common Stock as of December 31, 1996. Each of Messrs. Spray, Fidelman, Ferguson and Formela may be deemed to own beneficially 931,558 shares of Common Stock as of December 31, 1996.

As of December 31, 1996, Atlas Venture Fund II, L.P. is the record owner of 931,558 shares of Common Stock and Atlas Venture Europe Fund B.V. is the record owner of 424,180 shares of Common Stock (referred to as the "Record Shares"). By virtue of the affiliate relationships among the Entities, each Entity may be deemed to own beneficially all of the Record Shares. Hence, each Entity may be deemed to own beneficially 1,355,738 shares of Common Stock. In their capacities as individual general partners of Atlas Venture Associates II, L.P., each of Messrs. Spray, Fidelman, Ferguson and Formela may be deemed to own beneficially 931,558 shares of Common Stock.

(b) Percent of Class:

Atlas Venture Fund II, L.P.	13.8%
Atlas Venture Associates II, L.P.	13.8%
Christopher J. Spray	9.5%
Barry Fidelman	9.5%
Allan Ferguson	9.5%
Jean-Francois Formela	9.5%
Atlas Venture Europe Fund B.V.	13.8%
Atlas InvesteringsGroep N.V.	13.8%

The foregoing percentages are calculated based on the 9,851,487 shares of Common Stock reported to be outstanding in the Prospectus dated October 16, 1996 of ArQule, Inc.

(c) Number of shares as to which such person has:

- (i) sole power to vote or to direct the vote:

0 shares for each reporting person

(ii) shared power to vote or to direct the vote:

Atlas Venture Fund II, L.P.	1,355,738 shares
Atlas Venture Associates II, L.P.	1,355,738 shares
Christopher J. Spray	931,558 shares
Barry Fidelman	931,558 shares
Allan Ferguson	931,558 shares
Jean-Francois Formela	931,558 shares
Atlas Venture Europe Fund B.V.	1,355,738 shares
Atlas InvesteringsGroep N.V.	1,355,738 shares

(iii) sole power to dispose or to direct the dispositions of:

0 shares for each reporting person

(iv) shared power to dispose or to direct the disposition of:

Atlas Venture Fund II, L.P.	1,355,738 shares
Atlas Venture Associates II, L.P.	1,355,738 shares
Christopher J. Spray	931,558 shares
Barry Fidelman	931,558 shares
Allan Ferguson	931,558 shares
Jean-Francois Formela	931,558 shares
Atlas Venture Europe Fund B.V.	1,355,738 shares
Atlas InvesteringsGroep N.V.	1,355,738 shares

Each of the reporting persons expressly disclaims beneficial ownership of any shares of Common Stock of ArQule, Inc., except in the case of (i) Atlas Venture Fund II, L.P. for the 931,558 shares which it holds of record and (ii) Atlas Venture Europe Fund B.V. for the 424,180 shares which it holds of record.

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.

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Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.

Not Applicable.

Item 8. Identification and Classification of Members of the Group.

Not Applicable. The reporting persons expressly disclaim membership in a "group" as defined in Rule 13d-1(b)(ii)(H).

Item 9. Notice of Dissolution of Group.

Not Applicable.

Item 10. Certification.

Not Applicable. This statement on Schedule 13G is not filed pursuant to Rule 13d-1(b).

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SIGNATURES

After reasonable inquiry and to the best of our knowledge and belief, we certify that the information set forth in this statement is true, complete and correct. We also hereby agree to file this statement jointly pursuant to the Agreement listed on Exhibit 1 hereto.

Dated: February 7, 1997

ATLAS VENTURE FUND II, L.P.

ATLAS INVESTERINGS GROEP N.V.

By: Atlas Venture Associates II, L.P.

By: *

By: *

Christopher J. Spray,
General Partner

ATLAS VENTURE ASSOCIATES II, L.P.

By: *

Christopher J. Spray,
General Partner

ATLAS VENTURE EUROPE FUND B.V.

By: Atlas InvesteringsGroep N.V.

By: *

Michiel de Haan,
Managing Director

Michiel de Haan,
Managing Director

*

Christopher J. Spray

*

Barry Fidelman

*

Allan Ferguson

*

Jean-Francois Formela

* The undersigned attorney-in-fact, by signing her name below, does hereby sign this statement on behalf of the above indicated filers pursuant to Powers of Attorney filed hereto as Exhibit 2.

/s/ Jeanne Larkin Henry

Jeanne Larkin Henry
Attorney-in-fact

AGREEMENT

Pursuant to Rule 13d-1(f)(1) under the Securities Exchange Act of 1934, the undersigned hereby agree that only one statement containing the information required by Schedule 13G need be filed with respect to the ownership by each of the undersigned of shares of Common Stock of ArQule, Inc.

This agreement may be executed in any number of counterparts, each of which shall be deemed an original.

EXECUTED this 7th day of February, 1997.

ATLAS VENTURE FUND II, L.P.

By: Atlas Venture Associates II, L.P.

By: *

Christopher J. Spray,
General Partner

ATLAS VENTURE ASSOCIATES II, L.P.

By: *

Christopher J. Spray,
General Partner

ATLAS VENTURE EUROPE FUND B.V.

By: Atlas InvesteringsGroep N.V.

By: *

Michiel de Haan,
Managing Director

ATLAS INVESTERINGS GROEP N.V.

By: *

Michael de Haan,
Managing Director

*

Christopher J. Spray

*

Barry Fidelman

*

Allan Ferguson

*

Jean-Francois Formela

* The undersigned attorney-in-fact, by signing her name below, does hereby sign this statement on behalf of the above indicated filers pursuant to Powers of Attorney filed hereto as Exhibit 2.

/s/ Jeanne Larkin Henry

Jeanne Larkin Henry
Attorney-in-fact

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints each and any of Christopher J. Spray and Jeanne Larkin Henry his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities (until revoked in writing) to sign any and all instruments, certificates and documents required to be executed on behalf of himself individually or on behalf of each or any of Atlas Venture Fund, L.P., Atlas Venture Associates, L.P., Atlas Venture Partners III, B.V., Atlas Venture Fund II, L.P., Atlas Venture Associates II, L.P., Atlas Venture Europe Fund B.V., Atlas InvesteringsGroep N.V., and Atlas Venture Beheer II B.V. pursuant to sections 13 and 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and any and all regulations promulgated thereunder, and to file the same, with all exhibits thereto, and any other documents in connection therewith, with the Securities and Exchange Commission, and with any other entity when and if such is mandated by the Exchange Act or by the By-laws of the National Association of Securities Dealers, granting unto

Commonwealth of Massachusetts)
) ss:
County of Suffolk)

On this 31st day of January, 1997, before me personally came Allan R. Ferguson, known to me to be the person described and who executed the foregoing instrument that he acknowledged that he executed the same.

[Notary Seal]

/s/ Elizabeth A. LeBlanc

Notary Public

My commission expires: July 3, 1998

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IN WITNESS WHEREOF, this Power of Attorney has been signed as of the 31st day of January, 1997.

/s/ Jean-Francois Formela

Jean-Francois Formela

Commonwealth of Massachusetts)
) ss:
County of Suffolk)

On this 31st day of January, 1997, before me personally came Jean-Francois Formela, known to me to be the person described and who executed the foregoing instrument that he acknowledged that he executed the same.

[Notary Seal]

/s/ Elizabeth A. LeBlanc

Notary Public

My commission expires: July 3, 1998

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