ARQULE INC Form SC 13D/A September 21, 2009

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

SCHEDULE 13D (Rule 13d-101)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO § 240.13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT TO § 240.13d-2(a)

(Amendment No. 4)1

ArQule, Inc.

(Name of Issuer)

Common Stock (Title of Class of Securities)

04269E107 (CUSIP Number)

Elizabeth Delaney BVF Partners L.P. 900 North Michigan Avenue Suite 1100 Chicago, Illinois 60611 (312) 506-6500

(Name, Address and Telephone Number of Person

Authorized to Receive Notices and Communications)

September 17, 2009 (Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of $\S\S 240.13d-1(e)$, 240.13d-1(f) or 240.13d-1(g), check the following box x.

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See § 240.13d-7 for other parties to whom copies are to be sent.

¹ 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 disclosures provided in a prior cover page.

The information required on 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).

1	NAME OF REPORTING PERSON						
2	Biotechnology Value Fund, L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY						
3	SEC OSE ON	2.1					
4	SOURCE OF I	FUNDS					
5	WC CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS " IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)						
6	CITIZENSHIP	OR PLACE OF	ORGANIZATION				
NUMBER OF SHARES	Delaware	7	SOLE VOTING POWER				
BENEFICIALLY OWNED BY EACH	8		0 SHARED VOTING POWER				
REPORTING PERSON WITH		9	2,045,373 SOLE DISPOSITIVE POWER				
		10	0 SHARED DISPOSITIVE POWE	R			
11	AGGREGATE	AMOUNT BEN	2,045,373 EFICIALLY OWNED BY EACH	REPORTING PERSON			
12	2,045,373 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) o EXCLUDES CERTAIN SHARES						
13	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(11)			
14	4.6% TYPE OF REPORTING PERSON						
	PN						

1	NAME OF RE	PORTING PERS	ON			
2	Biotechnology Value Fund II, L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY					
3	SEC OSE ON	J.1				
4	SOURCE OF I	FUNDS				
5	WC CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS " IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)					
6	CITIZENSHIP	OR PLACE OF	ORGANIZATION			
NUMBER OF SHARES	Delaware	7	SOLE VOTING POWER			
BENEFICIALLY OWNED BY EACH	8		0 SHARED VOTING POWER			
REPORTING PERSON WITH						
		10	0 SHARED DISPOSITIVE POWE	ER		
11	AGGREGATE	E AMOUNT BEN	1,421,900 EFICIALLY OWNED BY EACH	I REPORTING PERSON		
12	1,421,900 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) o EXCLUDES CERTAIN SHARES					
13	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(11)		
14	3.2% TYPE OF REPORTING PERSON					
	PN					
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1	NAME OF REPORTING PERSON							
2	BVF Investments, L.L.C. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY							
3	SEC OSE ONE							
4	SOURCE OF F	SOURCE OF FUNDS						
5	WC CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS '' IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)							
6	CITIZENSHIP OR PLACE OF ORGANIZATION							
NUMBER OF SHARES	Delaware	7	SOLE VOTING POWER					
BENEFICIALLY OWNED BY EACH		8	0 SHARED VOTING POWER					
REPORTING PERSON WITH		9	5,096,800 SOLE DISPOSITIVE POWER					
			0 SHARED DISPOSITIVE POWE	R				
11	AGGREGATE		5,096,800 EFICIALLY OWNED BY EACH	REPORTING PERSON				
12	5,096,800 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) o EXCLUDES CERTAIN SHARES							
13	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(11)				
14	11.4% TYPE OF REPORTING PERSON							
	OO							
4								

1	NAME OF RE	PORTING PERS	ON					
2	Investment 10, L.L.C. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY							
4	SOURCE OF I	SOURCE OF FUNDS						
5	WC CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS " IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)							
6	CITIZENSHIP OR PLACE OF ORGANIZATION							
NUMBER OF SHARES	Illinois	7	SOLE VOTING POWER					
BENEFICIALLY OWNED BY EACH	8		0 SHARED VOTING POWER					
REPORTING PERSON WITH		9	528,000 SOLE DISPOSITIVE POWER					
		10	0 SHARED DISPOSITIVE POWE	CR.				
11	AGGREGATE	E AMOUNT BEN	528,000 EFICIALLY OWNED BY EACH	REPORTING PERSON				
12	528,000 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) o EXCLUDES CERTAIN SHARES							
13	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(11)				
14	1.2% TYPE OF REPORTING PERSON							
	OO							
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1	NAME OF RE	NAME OF REPORTING PERSON					
2	BVF Partners L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY						
4	SOURCE OF I	FUNDS					
5	OO CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS " IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)						
6	CITIZENSHIP	OR PLACE OF	ORGANIZATION				
NUMBER OF SHARES	Delaware	7	SOLE VOTING POWER				
BENEFICIALLY OWNED BY EACH	8		0 SHARED VOTING POWER				
REPORTING PERSON WITH							
		10	0 SHARED DISPOSITIVE POWE	R			
11	AGGREGATE	AMOUNT BEN	9,092,073 EFICIALLY OWNED BY EACH	REPORTING PERSON			
12	9,092,073 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) o EXCLUDES CERTAIN SHARES						
13	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)						
14	20.4% TYPE OF REPORTING PERSON						
	PN, HC						

1	NAME OF REPO	RTING PERSO	ON			
2 3	BVF Inc. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY					
4	SOURCE OF FUN	NDS				
5	OO CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS " IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)					
6	CITIZENSHIP OF	R PLACE OF C	ORGANIZATION			
NUMBER OF SHARES	Delaware 7		SOLE VOTING POWER			
BENEFICIALLY OWNED BY EACH	8		0 SHARED VOTING POWER			
REPORTING PERSON WITH	9		9,092,073 SOLE DISPOSITIVE POWER			
	10		0 SHARED DISPOSITIVE POWE	R		
11	AGGREGATE AI		9,092,073 EFICIALLY OWNED BY EACH	REPORTING PERSON		
12	9,092,073 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) o EXCLUDES CERTAIN SHARES					
13	PERCENT OF CL	LASS REPRES	ENTED BY AMOUNT IN ROW	(11)		
14	20.4% TYPE OF REPORTING PERSON					
	HC, CO					

1	NAME OF REPORTING PERSON						
2	Mark N. Lampert CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY						
4	SOURCE OF FUNDS						
5	OO CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS " IS REQUIRED PURSUANT TO ITEM 2(d) OR 2(e)						
6	CITIZENSHIP	OR PLACE OF	ORGANIZATION				
NUMBER OF SHARES	USA	7	SOLE VOTING POWER				
BENEFICIALLY OWNED BY EACH		8	0 SHARED VOTING POWER				
REPORTING PERSON WITH		9	9,092,073 SOLE DISPOSITIVE POWER				
		10	0 SHARED DISPOSITIVE POWE	ER.			
11	AGGREGATE	AMOUNT BEN	9,092,073 EFICIALLY OWNED BY EACH	REPORTING PERSON			
12	9,092,073 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) o EXCLUDES CERTAIN SHARES						
13	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(11)			
14	20.4% TYPE OF REPORTING PERSON						
	IN						

CUSIP NO. 04269E107

The following constitutes Amendment No. 4 ("Amendment No. 4") to the Schedule 13D filed by the undersigned (the "Schedule 13D"). This Amendment No. 4 amends the Schedule 13D as specifically set forth.

ITEM 2. Identity and Background.

Item 2 is hereby amended and restated to read as follows:

The persons filing this Statement, the persons enumerated in Instruction C of this Statement and, where applicable, their respective places of organization, principal office, general partners, managers, directors, executive officers, controlling persons and certain information regarding each of them, are as follows:

(a) Biotechnology Value Fund, L.P., a Delaware limited partnership ("BVF"), Biotechnology Value Fund II, L.P., a Delaware limited partnership ("BVF2"), BVF Investments, L.L.C., a Delaware limited liability company ("BVLLC"), Investment 10, L.L.C., an Illinois limited liability company ("ILL10"), BVF Partners L.P., a Delaware limited partnership ("Partners") and BVF Inc., a Delaware corporation ("BVF Inc."). Mark N. Lampert, an individual, ("Lampert"), is the sole shareholder, sole director and an officer of BVF Inc.

Each of the foregoing is referred to as a "Reporting Person" and collectively as the "Reporting Persons." Each of the Reporting Persons is party to that certain Joint Filing Agreement, as further described in Item 6. Accordingly, the Reporting Persons are hereby filing a joint Schedule 13D.

- (b) The business address of BVF, BVF2, BVLLC, ILL10 and Partners is 900 North Michigan Avenue, Suite 1100, Chicago, Illinois 60611. The business address of BVF Inc. and Lampert is One Sansome Street, 30th Floor, San Francisco, California 94104.
- (c) Each of BVF, BVF2, BVLLC, ILL10, Partners and BVF Inc. specializes in holding biotechnology stocks for investment purposes. Partners is the general partner of BVF and BVF2, which are investment funds. Partners also is the manager of BVLLC, which is also an investment fund. ILL10 is a managed account, which Partners advises pursuant to an investment management agreement. BVF Inc. is an investment adviser to and general partner of Partners. For Lampert's occupation, please refer to (a) above.
- (d) During the last five years, none of the Reporting Persons has been convicted in a criminal proceeding (excluding traffic violations and similar misdemeanors).
- (e) During the last five years, none of the Reporting Persons has been a party to a civil proceeding of a judicial or administrative body of competent jurisdiction nor, as a result of such proceeding, was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating activities subject to, federal or state securities laws or finding any violation with respect to such laws.
- (f) Lampert is a citizen of the United States of America. For the citizenship of each of BVF, BVF2, BVLLC, ILL10, Partners and BVF Inc., please refer to (a) above.

ITEM 3. Source and Amount of Funds or Other Consideration

Item 3 is hereby amended and restated to read as follows:

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Partners, in its capacity as (i) general partner of BVF, has purchased on behalf of such limited partnership an aggregate number of 2,045,373 shares of Common Stock for an aggregate consideration of \$7,907,376, (ii) general partner of BVF2, has purchased on behalf of such limited partnership an aggregate number of 1,421,900 shares of Common Stock for an aggregate consideration of \$5,603,972, (iii) manager of BVLLC, has purchased on behalf of such limited liability company an aggregate number of 5,096,800 shares of Common Stock for an aggregate consideration of \$19,996,065, and (iv) investment adviser to ILL10, purchased on behalf of such limited liability company an aggregate of 528,000 shares of Common Stock for an aggregate consideration of \$2,006,960. Each of BVF, BVF2, BVLLC and ILL10 purchased the shares of Common Stock held by it using its own working capital. No borrowed funds were used to purchase the Common Stock other than any borrowed funds used for working capital purposes in the ordinary course of business.

ITEM 5. Interest in Securities of the Issuer

Item 5 is hereby amended and restated to read as follows:

The Reporting Persons' percentage ownership of Common Stock is based on 44,675,365 shares of Common Stock outstanding, as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on August 7, 2009.

(a) As of the close of business on September 18, 2009, BVF beneficially owned 2,045,373 shares of Common Stock, BVF2 beneficially owned 1,421,900 shares Common Stock, BVLLC beneficially owned 5,096,800 shares of Common Stock, and ILL10 beneficially owned 528,000 shares of Common Stock, representing percentage ownership of approximately 4.6%, 3.2%, 11.4%, 1.2%, respectively.

Each of Partners, BVF Inc. and Lampert may be deemed to beneficially own 9,092,073 shares of Common Stock, representing percentage ownership of approximately 20.4%.

- (b) Each of BVF, BVF2, BVLLC and ILL10 shares with Partners voting and dispositive power over the Common Stock each such entity beneficially owns. Partners, BVF Inc. and Lampert share voting and dispositive power over the 9,092,073 shares of Common Stock they may be deemed beneficially to own with BVF, BVF2 and BVLLC, and ILL10.
- (c) Trades of Common Stock within the last 60 days have been made by the following Reporting Persons:

Date of	Type of	Price Per						Type of
Transaction	Securities	Share	BVF	ILL10	BVF2	BVLLC	Exchange	Transaction
09/17/2009	Common	5.2500	920,000	320,000	660,000	2,100,000	NASDAQ	SALE
	Stock							

- (d) No person other than the Reporting Persons is known to have the right to receive, or the power to direct the receipt of dividends from, or proceeds from the sale of, such shares of the Common Stock.
- (e) N/A.

ITEM 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer

Item 6 is hereby amended to add the following:

CUSIP NO. 04269E107

On September 21, 2009, the Reporting Persons entered into a Joint Filing Agreement in which the Reporting Persons agreed to the joint filing on behalf of each of them of statements on Schedule 13D, with respect to securities of the Issuer, to the extent required by applicable law. A copy of this agreement is attached hereto as Exhibit A hereto and is incorporated herein by reference.

Pursuant to the operating agreement of BVLLC, Partners is authorized, among other things, to invest the contributed capital of Samana Capital, L.P., the majority member of BVLLC, in the shares of Common Stock and other securities of the issuer and to vote, exercise or convert and dispose of each security, and is entitled to receive fees based on assets under management and, subject to certain exceptions, allocations based on realized and unrealized gains on such assets.

ITEM 7. Material to be filed as Exhibits

Item 7 is hereby amended to include the following exhibits:

Exhibit 99.1 Joint Filing Agreement by and among 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., BVF Inc. and Mark N. Lampert, dated September 21, 2009.

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.

Dated: September 21, 2009

BIOTECHNOLOGY VALUE FUND, L.P.*

By: BVF Partners L.P., its general partner

By: BVF Inc., its general partner

By: /s/ Mark N. Lampert

Mark N. Lampert

President

BIOTECHNOLOGY VALUE FUND II, L.P.*

By: BVF Partners L.P., its general partner

By: BVF Inc., its general partner

By: /s/ Mark N.

Lampert

Mark N. Lampert

President

BVF INVESTMENTS, L.L.C.*

By: BVF Partners L.P., its manager

By: BVF Inc., its general partner

By: /s/ Mark N.

Lampert

Mark N. Lampert

President

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INVESTMENT 10, L.L.C.*

By: BVF Partners L.P., its investment

manager

By: BVF Inc., its general partner

By: /s/ Mark N.

Lampert

Mark N. Lampert

President

BVF PARTNERS L.P. *

By: BVF Inc., its general partner

By: /s/ Mark N. Lampert

Mark N. Lampert

President

BVF INC.*

By: /s/ Mark N. Lampert

Mark N. Lampert

President

/s/ Mark N. Lampert Mark N. Lampert

^{*}The Reporting Person disclaims beneficial ownership of the shares of Common Stock except to the extent of his or its pecuniary interest therein.