ARQULE INC Form SC 13G April 02, 2010

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

SCHEDULE 13G (Rule 13d-102)

# INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULES 13d-1(b), (c), AND (d) AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13d-2(b)

(Amendment No. )1

ArQule, Inc. (Name of Issuer)

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

04269E107 (CUSIP Number)

March 31, 2010 (Date of Event Which Requires Filing of this Statement)

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

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

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).

<sup>1</sup> 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.

# CUSIP NO. 04269E107

1

2 3			BOX IF A MEMBER OF A	(a) x (b) o
4	CITIZENSHIP	OR PLACE OF	ORGANIZATION	
NUMBER OF SHARES	Delaware	5	SOLE VOTING POWER	
BENEFICIALLY OWNED BY EACH		6	0 shares SHARED VOTING POWER	
REPORTING PERSON WITH		7	1,128,373 SOLE DISPOSITIVE POWER	
		8	0 shares SHARED DISPOSITIVE POWE	R
9	AGGREGATE	AMOUNT BEN	1,128,373 EFICIALLY OWNED BY EACH	REPORTING PERSON
10		IF THE AGGREC ERTAIN SHARE	GATE AMOUNT IN ROW (9)	
11	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(9)
12	2.5% TYPE OF REP	ORTING PERSC	ON	
	PN			
2				

# CUSIP NO. 04269E107

1

-	1,11,12 01 112	0111111012110		
2	Biotechnology Value Fund II, L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A  (a) x			
3	GROUP (b) o SEC USE ONLY			
4	CITIZENSHIP	OR PLACE OF O	ORGANIZATION	
NUMBER OF SHARES	Delaware	5	SOLE VOTING POWER	
BENEFICIALLY OWNED BY EACH	•	6	0 shares SHARED VOTING POWER	
REPORTING PERSON WITH		7	786,900 SOLE DISPOSITIVE POWER	
		8	0 shares SHARED DISPOSITIVE POWE	R
9	AGGREGATE	AMOUNT BEN	786,900 EFICIALLY OWNED BY EACH	REPORTING PERSON
10		IF THE AGGREC ERTAIN SHARE	GATE AMOUNT IN ROW (9)	
11	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(9)
12	1.8% TYPE OF REP	ORTING PERSC	DN	
	PN			
3				

# CUSIP NO. 04269E107

1	NAME OF REI	PORTING PERS	ON	
2	BVF Investments, L.L.C. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o			
3	SEC USE ONL	Υ		
4	CITIZENSHIP	OR PLACE OF O	ORGANIZATION	
	Delaware			
NUMBER OF SHARES		5	SOLE VOTING POWER	
BENEFICIALLY			0 shares	
OWNED BY		6	SHARED VOTING POWER	
EACH				
REPORTING			2,895,800	
PERSON WITH		7	SOLE DISPOSITIVE POWER	
		8	0 shares SHARED DISPOSITIVE POWE	R
			2,895,800	
9	AGGREGATE	AMOUNT BEN	EFICIALLY OWNED BY EACH	REPORTING PERSON
	2,895,800			
10		ETHE AGGREC	GATE AMOUNT IN ROW (9)	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES			
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
10	6.5%	ODENIC PEDGO		
12	TYPE OF REP	ORTING PERSC	ON .	
	00			
4				

#### CUSIP NO. 04269E107

1	NAME OF RE	PORTING PERS	ON	
2	Investment 10, L.L.C. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) x (b) o			
3	SEC USE ONL	ĽΥ		
4	CITIZENSHIP OR PLACE OF ORGANIZATION			
	Illinois			
NUMBER OF SHARES	IIIIIOIS	5	SOLE VOTING POWER	
BENEFICIALLY	•		0 shares	
OWNED BY		6	SHARED VOTING POWER	
EACH				
REPORTING			300,000	
PERSON WITH		7	SOLE DISPOSITIVE POWER	
			0.1	
		8	0 shares SHARED DISPOSITIVE POWE	D
		0	SHARED DISPOSITIVE FOWE	K
			300,000	
9	AGGREGATE	AMOUNT BEN	EFICIALLY OWNED BY EACH	REPORTING PERSON
	300,000			
10	· · · · · · · · · · · · · · · · · · ·	IF THE AGGREO	GATE AMOUNT IN ROW (9)	
		ERTAIN SHARE	· ·	
11	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(9)
	I 41 10/			
12	Less than 1%	ORTING PERSC	NNI	
12	TIPE OF KEP	OKTING PERSC	ON.	
	00			
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5				

# CUSIP NO. 04269E107

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2 3	BVF Partners I CHECK THE A GROUP SEC USE ONL	APPROPRIATE I	BOX IF A MEMBER OF A	(a) x (b) o
4	CITIZENSHIP	OR PLACE OF	ORGANIZATION	
NUMBER OF SHARES	Delaware	5	SOLE VOTING POWER	
BENEFICIALLY OWNED BY EACH	7	6	0 shares SHARED VOTING POWER	
REPORTING PERSON WITH		7	5,111,073 SOLE DISPOSITIVE POWER	
		8	0 shares SHARED DISPOSITIVE POWE	ER
9	AGGREGATE	AMOUNT BEN	5,111,073 EFICIALLY OWNED BY EACH	REPORTING PERSON
10		IF THE AGGREGERTAIN SHARI	GATE AMOUNT IN ROW (9) ES	
11	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(9)
12	11.4% TYPE OF REP	ORTING PERSO	ON	
	PN, IA			
6				

# CUSIP NO. 04269E107

1

2 3 4	GROUP SEC USE ONL	.Y	BOX IF A MEMBER OF A  ORGANIZATION	(a) x (b) o
	<b>5</b> .1			
NUMBER OF SHARES	Delaware	5	SOLE VOTING POWER	
BENEFICIALLY OWNED BY		6	0 shares SHARED VOTING POWER	
EACH REPORTING PERSON WITH		7	5,111,073 SOLE DISPOSITIVE POWER	
		8	0 shares SHARED DISPOSITIVE POWE	ER
9	AGGREGATE	AMOUNT BEN	5,111,073 EFICIALLY OWNED BY EACH	I REPORTING PERSON
10		IF THE AGGREGERTAIN SHARI	GATE AMOUNT IN ROW (9) ES	
11	PERCENT OF	CLASS REPRES	SENTED BY AMOUNT IN ROW	(9)
12	11.4% TYPE OF REP	ORTING PERSO	)N	
	СО			
7				

# CUSIP NO. 04269E107

1

2 3 4	Mark N. Lampert CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP SEC USE ONLY  CITIZENSHIP OR PLACE OF ORGANIZATION		
NUMBER OF	United States 5	SOLE VOTING POWER	
SHARES BENEFICIALLY OWNED BY	6	0 shares SHARED VOTING POWER	
EACH REPORTING PERSON WITH	7	5,111,073 SOLE DISPOSITIVE POWER	
	8	0 shares SHARED DISPOSITIVE POWE	R
9	AGGREGATE AMOUNT BEN	5,111,073 EFICIALLY OWNED BY EACH	REPORTING PERSON
10	5,111,073 CHECK BOX IF THE AGGREE EXCLUDES CERTAIN SHARI	* /	
11	PERCENT OF CLASS REPRES	SENTED BY AMOUNT IN ROW	(9)
12	11.4% TYPE OF REPORTING PERSO	ON	
	IN		
8			

CUSIP NO. 04269E107

Item 1(a). Name of Issuer:

ArQule, Inc., a Delaware corporation (the "Issuer").

Item 1(b). Address of Issuer's Principal Executive Offices:

19 Presidential Way Woburn, MA, 01801

Item 2(a). Name of Person Filing

Item 2(b). Address of Principal Business Office or, if None, Residence

Item 2(c). Citizenship

Biotechnology Value Fund, L.P. ("BVF") 900 North Michigan Avenue, Suite 1100 Chicago, Illinois 60611

Chicago, Illinois 60611 Citizenship: Delaware

Biotechnology Value Fund II, L.P. ("BVF2") 900 North Michigan Avenue, Suite 1100 Chicago, Illinois 60611 Citizenship: Delaware

BVF Investments, L.L.C. ("BVLLC") 900 North Michigan Avenue, Suite 1100 Chicago, Illinois 60611 Citizenship: Delaware

Investment 10, L.L.C. ("ILL10") 900 North Michigan Avenue, Suite 1100 Chicago, Illinois 60611 Citizenship: Illinois

BVF Partners L.P. ("Partners") 900 North Michigan Avenue, Suite 1100 Chicago, Illinois 60611 Citizenship: Delaware

BVF Inc.

900 North Michigan Avenue, Suite 1100 Chicago, Illinois 60611 Citizenship: Delaware

Mark N. Lampert ("Mr. Lampert") 900 North Michigan Avenue, Suite 1100 Chicago, Illinois 60611 Citizenship: United States

Each of the foregoing is referred to as a "Reporting Person" and collectively as the "Reporting Persons."

CUSIP NO. 04269E107

Item 2(d).			Title of Class of Securities:
Common S	stock, par	value \$0.01 per sh	nare (the "Common Stock")
Item 2(e).			CUSIP Number:
04269E107	7		
Item 3. If T	his State	ment is Filed Pursu	nant to Rule 13d-1(b), or 13d-2(b) or (c), Check Whether the Person Filing is a:
			/x/ Not applicable.
	(a)	//	Broker or dealer registered under Section 15 of the Exchange Act.
	(b)	//	Bank as defined in Section 3(a)(6) of the Exchange Act.
(	(c)	// Inst	urance company as defined in Section 3(a)(19) of the Exchange Act.
(d)	//	Investmen	t company registered under Section 8 of the Investment Company Act.
	(e)	//	An investment adviser in accordance with Rule 13d-1(b)(1)(ii)(E).
(f)	//	An employee ben	efit plan or endowment fund in accordance with Rule 13d-1(b)(1)(ii)(F).
(g)	//	A parent holding	g company or control person in accordance with Rule 13d-1(b)(1)(ii)(G).
(h)	//	A savings asso	ciation as defined in Section 3(b) of the Federal Deposit Insurance Act.
		that is excluded mpany Act.	from the definition of an investment company under Section 3(c)(14) of the
	(j)	//	Group, in accordance with Rule 13d-1(b)(1)(ii)(J).
	_		e 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with se specify the type of institution:
Item 4.			Ownership
		(a)	Amount beneficially owned:
BVF2 bene	eficially	owned 786,900 sh	1, 2010, (i) BVF beneficially owned 1,128,373 shares of Common Stock, (ii) ares of Common Stock, (iii) BVLLC beneficially owned 2,895,800 shares of cially owned 300,000 shares of Common Stock.

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Not Applicable.

Partners, as the general partner of BVF and BVF2, the manager of BVLLC and the investment adviser of ILL10, may be deemed to beneficially own the 5,111,073 shares of Common Stock beneficially owned in the aggregate by BVF, BVF2, BVLLC and ILL10.

BVF Inc., as the general partner of Partners, may be deemed to beneficially own the 5,111,073 shares of Common Stock beneficially owned by Partners.

Mr. Lampert, as a director and officer of BVF Inc., may be deemed to beneficially own the 5,111,073 shares of Common Stock beneficially owned by BVF Inc.

The foregoing should not be construed in and of itself as an admission by any Reporting Person as to beneficial ownership of any shares of Common Stock owned by another Reporting Person. Each of Partners, BVF Inc. and Mr. Lampert disclaims beneficial ownership of the shares of Common Stock beneficially owned by BVF, BVF2, BVLLC and ILL10 and the filing of this statement shall not be construed as an admission that any such person or entity is the beneficial owner of any such securities.

(b) Percent of class:

Based upon 44,726,321 Shares outstanding, which is the total number of Shares outstanding as of February 16, 2010, as reported in the Issuer's annual report on Form 10-K filed with the Securities and Exchange Commission on March 2, 2010. As of the close of business on April 1, 2010, (i) BVF beneficially owned approximately 2.5% of the outstanding shares of Common Stock, (ii) BVF2 beneficially owned approximately 1.8% of the outstanding shares of Common Stock, (iii) BVLLC beneficially owned approximately 6.5% of the outstanding shares of Common Stock, (iv) ILL10 beneficially owned less than 1% of the outstanding shares of Common Stock and (v) each of Partners, BVF Inc. and Mr. Lampert may be deemed to beneficially own approximately 11.4% of the outstanding shares of Common Stock.

(c)	Number of shares as to which such person has:
(i)	Sole power to vote or to direct the vote
See Cover Pages Items 5-9.	
(ii)	Shared power to vote or to direct the vote
See Cover Pages Items 5-9.	
(iii)	Sole power to dispose or to direct the disposition of
See Cover Pages Items 5-9.	
(iv)	Shared power to dispose or to direct the disposition of
See Cover Pages Items 5-9.	
Item 5.	Ownership of Five Percent or Less of a Class.

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

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.

Partners, BVF Inc. and Mr. Lampert share voting and dispositive power over the shares of Common Stock beneficially owned by BVF, BVF2, BVLLC and ILL10.

Item Identification and Classification of the Subsidiary That Acquired the Security Being Reported on by the ParentHolding Company or Control Person.

Not Applicable.

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

See Exhibit 99.1.

Item 9. Notice of Dissolution of Group.

Not Applicable.

Item 10. Certifications.

By signing below each of the undersigned certifies that, to the best of its 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 his knowledge and belief, each of the undersigned certifies that the information set forth in this statement is true, complete and correct.

Dated: April 2, 2010

BIOTECHNOLOGY VALUE FUND, L.P. INVESTMENT 10, L.L.C.

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

> partner manager

BVF Inc., its general partner BVF Inc., its general partner By: By:

/s/ Mark N. Lampert /s/ Mark N. Lampert By: By:

Mark N. Lampert Mark N. Lampert

President President

BIOTECHNOLOGY VALUE FUND II, L.P. BVF PARTNERS L.P.

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

partner

BVF Inc., its general partner /s/ Mark N. Lampert By: By:

Mark N. Lampert

By: /s/ Mark N. Lampert

Mark N. Lampert

President

BVF INVESTMENTS, L.L.C. BVF INC.

BVF Partners L.P., its manager /s/ Mark N. Lampert By: By:

Mark N. Lampert

By: BVF Inc., its general partner

/s/ Mark N. Lampert By: /s/ Mark N. Lampert Mark N. Lampert MARK N. LAMPERT

President