REPLIGEN CORP Form SC 13G/A February 12, 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. 6)1

Repligen Corporation (Name of Issuer)

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

759916109 (CUSIP Number)

December 31, 2009 (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).

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 the disclosures provided in a prior cover page.

1	NAME OF REPORTING PERSON		
2 3	Biotechnology Value Fund, L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION		
NUMBER OF	Delaware 5	SOLE VOTING POWER	
SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	6	0 shares SHARED VOTING POWER	
	7	508,750 SOLE DISPOSITIVE POWER	
	8	0 shares SHARED DISPOSITIVE POW	ER
9	AGGREGATE AMOUN	508,750 NT BENEFICIALLY OWNED BY EAC	H REPORTING PERSON
10	508,750 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
12	1.7% TYPE OF REPORTING PERSON		
	PN		
2			

1	NAME OF REPORTING PERSON		
2	Biotechnology Value Fund II, L.P. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY		
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	314,400 SOLE DISPOSITIVE POWER	
	8	0 shares SHARED DISPOSITIVE POWE	ER.
9	AGGREGATE AMOUNT BE	314,400 NEFICIALLY OWNED BY EACH	REPORTING PERSON
10	314,400 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
12	1.0% TYPE OF REPORTING PERSON		
3	PN		

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		
4	CITIZENSHIP OR PLACE OF ORGANIZATION		
NUMBER OF	Delaware 5	SOLE VOTING POWER	
SHARES BENEFICIALLY OWNED BY EACH	6	0 shares SHARED VOTING POWER	
REPORTING PERSON WITH	7	1,092,700 SOLE DISPOSITIVE POWER	
	8	0 shares SHARED DISPOSITIVE POWE	R
9	AGGREGATE AMOUNT BEN	1,092,700 EFICIALLY OWNED BY EACH	REPORTING PERSON
10	1,092,700 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
12	3.6% TYPE OF REPORTING PERSON		
	00		
4			

1	NAME OF REPORTING PERSON		
2 3	Investment 10, L.L.C. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION		
NUMBER OF SHARES	Illinois 5	SOLE VOTING POWER	
BENEFICIALLY OWNED BY EACH	6	0 shares SHARED VOTING POWER	
REPORTING PERSON WITH	7	123,100 SOLE DISPOSITIVE POWER	
	8	0 shares SHARED DISPOSITIVE POWE	ER
9	AGGREGATE AMOUNT	123,100 BENEFICIALLY OWNED BY EACH	I REPORTING PERSON
10	123,100 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
12	Less than 1% TYPE OF REPORTING PERSON		
	00		
5			

1	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	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	2,038,950 SOLE DISPOSITIVE POWER	
	8	0 shares SHARED DISPOSITIVE POWE	ER
9	AGGREGATE AMOUN	2,038,950 NT BENEFICIALLY OWNED BY EACH	H REPORTING PERSON
10	2,038,950 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
12	6.6% TYPE OF REPORTING PERSON		
	PN, IA		
6			

1	NAME OF REPORTING I	PERSON	
2 3	BVF Inc. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (b) o SEC USE ONLY		
4	CITIZENSHIP OR PLACE OF ORGANIZATION		
	Delaware		
NUMBER OF SHARES	5	SOLE VOTING POWER	
BENEFICIALLY OWNED BY EACH	6	0 shares SHARED VOTING POWER	
REPORTING		2,038,950	
PERSON WITH	7	SOLE DISPOSITIVE POWER	
	8	0 shares SHARED DISPOSITIVE POWE	UR.
9	AGGREGATE AMOUNT	2,038,950 BENEFICIALLY OWNED BY EACH	REPORTING PERSON
10	2,038,950 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES		
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)		
12	6.6% TYPE OF REPORTING PERSON		
	CO		
7			

NAME OF REPORTING PERSON

CUSIP NO. 759916109

8				
	IN			
12	6.6% TYPE OF REPORTING PERSON			
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)			
10	2,038,950 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) " EXCLUDES CERTAIN SHARES			
9	AGGREGATE	AMOUNT BEN	2,038,950 EFICIALLY OWNED BY EACH	REPORTING PERSON
		8	0 shares SHARED DISPOSITIVE POWE	R
REPORTING PERSON WITH		7	2,038,950 SOLE DISPOSITIVE POWER	
BENEFICIALLY OWNED BY EACH	•	6	0 shares SHARED VOTING POWER	
NUMBER OF SHARES	United States	5	SOLE VOTING POWER	
4	CITIZENSHIP OR PLACE OF ORGANIZATION			
3	SEC USE ONLY			
2	Mark N. Lampert CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (a) x (b) o			
1	NAME OF KE	IONTINGTERS	ON	

CUSIP NO. 759916109

Item 1(a). Name of Issuer:

Repligen Corporation, a Delaware corporation (the "Issuer").

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

41 Seyon Street Bldg. 1, Suite 100 Waltham, MA 02453

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 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. 75	9916109		
Item 2(d).		Title of Class of Securities	:
Common Stock	, par value \$0.01 per s	hare (the "Common Stock")	
Item 2(e).		CUSIP Number:	
759916109			
Item 3. If This S	Statement is Filed Purs	uant to Rule 13d-1(b), or 13d-2(b) or (c	e), Check Whether the Person Filing is a:
		/x/	Not applicable.
(a)	//	Broker or dealer registered under Sect	ion 15 of the Exchange Act.
(b) //	Bank as defined in Section 3(a	a)(6) of the Exchange Act.
(c)	// Ins	surance company as defined in Section 3	3(a)(19) of the Exchange Act.
(d)	// Investmen	nt company registered under Section 8 c	of the Investment Company Act.
(e)	//	An investment adviser in accordance	with Rule 13d-1(b)(1)(ii)(E).
(f) / /	An employee be	nefit plan or endowment fund in accord	ance with Rule 13d-1(b)(1)(ii)(F).
(g) /	/ A parent holdin	g company or control person in accorda	ance with Rule 13d-1(b)(1)(ii)(G).
(h)	// A savings asso	ociation as defined in Section 3(b) of th	e Federal Deposit Insurance Act.
(i)//A church plan that is excluded from the definition of an investment company under Section 3(c)(14) of the Investment Company Act.			
	(j) //	Group, in accordance wit	h Rule 13d-1(b)(1)(ii)(J).
(k)//Group, in accordance with Rule 240.13d-1(b)(1)(ii)(K). If filing as a non-U.S. institution in accordance with Rule 240.13d-1(b)(1)(ii)(J), please specify the type of institution:			
Item 4.		Ownership	
	(a)	Amount benefic	ially owned:
		· · · · · · · · · · · · · · · · · · ·	ed 508,750 shares of Common Stock, (ii) beneficially owned 1,092,700 shares of

Common Stock and (iv) ILL10 beneficially owned 123,100 shares of Common Stock.

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CUSIP NO. 759916109

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 2,038,950 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 2,038,950 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 2,038,950 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 on 30,761,807 shares of Common Stock outstanding as of January 26, 2010, as reported in the Issuer's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on February 4, 2010. As of the close of business on December 31, 2009, (i) BVF beneficially owned approximately 1.7% of the outstanding shares of Common Stock, (ii) BVF2 beneficially owned approximately 1.0% of the outstanding shares of Common Stock, (iii) BVLLC beneficially owned approximately 3.6% 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 6.6% 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.	
11	

CUSIP NO. 759916109

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.

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 Parent 7. Holding Company or Control Person.

Not Applicable.

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

See Exhibit A to Amendment No. 5 to the Schedule 13G, filed May 20, 2009.

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.

CUSIP NO. 759916109

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: February 12, 2010

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

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

partner manager

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

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

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

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

Mark N. Lampert

By: /s/ Mark N. Lampert President

Mark N. Lampert

President

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

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

Mark N. Lampert

By: BVF Inc., its general partner President

By: /s/ Mark N. Lampert

Mark N. Lampert
President

/s/ Mark N. Lampert
MARK N. LAMPERT