

**SECURITIES AND EXCHANGE COMMISSION**

Washington, DC 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 13d-2(b)**

**(Amendment No. )\***

**Acadia Pharmaceuticals Inc.**

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(Name of Issuer)

**Common Stock**

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(Title of Class of Securities)

**004225108**

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(CUSIP Number)

**December 29, 2008**

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(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)

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\*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 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 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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1 NAME OF REPORTING PERSON:  
**Biotechnology Value Fund, L.P.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a)  X  
(b)  o

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
**Delaware**

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER	<b>0</b>
	6	SHARED VOTING POWER	<b>481,076(1)</b>
	7	SOLE DISPOSITIVE POWER	<b>0</b>
	8	SHARED DISPOSITIVE POWER	<b>481,076 (1)</b>

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
**481,076 (1)**

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

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
**1.29% (1) (2)**

12 TYPE OF REPORTING PERSON\*  
**PN**

1 NAME OF REPORTING PERSON:  
**Biotechnology Value Fund II, L.P.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a)  X  
(b)  o

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
**Delaware**

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER	<b>0</b>
	6	SHARED VOTING POWER	<b>330,250 (1)</b>
	7	SOLE DISPOSITIVE POWER	<b>0</b>
	8	SHARED DISPOSITIVE POWER	<b>330,250 (1)</b>

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
**330,250 (1)**

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

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
**0.88% (1) (2)**

12 TYPE OF REPORTING PERSON\*  
**PN**

1 NAME OF REPORTING PERSON:  
**BVF Investments, L.L.C.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a)  X  
(b)  o

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
**Delaware**

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER	<b>0</b>
	6	SHARED VOTING POWER	<b>1,139,500 (1)</b>
	7	SOLE DISPOSITIVE POWER	<b>0</b>
	8	SHARED DISPOSITIVE POWER	<b>1,139,500 (1)</b>

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
**1,139,500 (1)**

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

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
**3.05% (1) (2)**

12 TYPE OF REPORTING PERSON\*  
**OO**

1 NAME OF REPORTING PERSON:  
**Investment 10, L.L.C.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a)  X  
(b)  o

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
**Illinois**

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER	<b>0</b>
	6	SHARED VOTING POWER	<b>118,000 (1)</b>
	7	SOLE DISPOSITIVE POWER	<b>0</b>
	8	SHARED DISPOSITIVE POWER	<b>118,000 (1)</b>

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
**118,000 (1)**

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

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
**0.32% (1) (2)**

12 TYPE OF REPORTING PERSON\*  
**OO**

1 NAME OF REPORTING PERSON:  
**BVF Partners L.P.**

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a)  X  
(b)  o

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
**Delaware**

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER	<b>0</b>
	6	SHARED VOTING POWER	<b>2,068,826 (1)</b>
	7	SOLE DISPOSITIVE POWER	<b>0</b>
	8	SHARED DISPOSITIVE POWER	<b>2,068,826 (1)</b>

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
**2,068,826 (1)**

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

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
**5.53% (1) (2)**

12 TYPE OF REPORTING PERSON\*  
**PN, HC**

1 NAME OF REPORTING PERSON:  
BVF Inc.

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP\* (a)  X  
(b)  o

3 SEC USE ONLY

4 CITIZENSHIP OR PLACE OF ORGANIZATION  
Delaware

NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH:	5	SOLE VOTING POWER	0
	6	SHARED VOTING POWER	2,068,826 (1)
	7	SOLE DISPOSITIVE POWER	0
	8	SHARED DISPOSITIVE POWER	2,068,826 (1)

9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON  
2,068,826 (1)

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

11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9)  
5.53% (1)(2)

12 TYPE OF REPORTING PERSON\*  
CO, HC

The following footnotes relate to pages 2 through 7:

(1) With respect to each Reporting Person, the following securities are held, as follows (See Items 2(a) and 2(d) for defined terms for each entity and all other capitalized terms below):

Security Type	BVF	BVF2	Investments	ILL10	Partners	BVF Inc.
Common Stock	409,600	285,000	1,030,000	106,000	1,830,600	1,830,600
Warrants	71,476	45,250	109,500	12,000	238,226	238,226

The Warrants may be exercised at any time until expiration for shares of the Issuer's Common Stock at an exercise price of \$8.148 per share. The Warrants are exercisable until April 19, 2010.

(2) The percentage calculations are based on 37,380,865 shares of Common Stock outstanding determined as follows: (x) 37,142,639 shares of Common Stock outstanding plus (y) 238,226 shares of Common Stock issuable upon exercise of the Warrants held by the Reporting Persons.

**ITEM 1(a). NAME OF ISSUER: ACADIA PHARMACEUTICALS INC. ("ACAD")**

**ITEM 1(b). ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES:**

3911 Sorrento Valley Boulevard  
San Diego, CA 92121

**ITEM 2(a). NAME OF PERSON FILING:**

This Schedule 13G is being filed on behalf of the following persons (the "Reporting Persons"):

- (i) Biotechnology Value Fund, L.P. ("BVF")
- (ii) Biotechnology Value Fund II, L.P. ("BVF2")
- (iii) BVF Investments, L.L.C. ("BVLLC")
- (iv) Investment 10, L.L.C. ("ILL10")
- (v) BVF Partners L.P. ("Partners")
- (vi) BVF Inc. ("BVF Inc.")

**ITEM 2(b). ADDRESS OF PRINCIPAL BUSINESS OFFICE:**

The principal business office of the Reporting Persons comprising the group filing this Schedule 13G is located at 900 North Michigan Avenue, Suite 1100, Chicago, Illinois, 60611.

**ITEM 2(c). CITIZENSHIP:**

BVF: a Delaware limited partnership  
 BVF2: a Delaware limited partnership  
 BVLLC: a Delaware limited liability company  
 ILL10: an Illinois limited liability company  
 Partners: a Delaware limited partnership  
 BVF Inc.: a Delaware corporation

**ITEM 2(d). TITLE OF CLASS OF SECURITIES:**

This Schedule 13G, is being filed with respect to the common stock, par value \$0.0001 per share ("Common Stock"), of ACAD. The Reporting Persons' percentage ownership of Common Stock is based on 37,142,639 shares of Common Stock being outstanding and the beneficial ownership by the Reporting Persons of 238,226 warrants (the "Warrants") to purchase an equivalent number of shares of the Common Stock. See the discussion in footnote (1) for a further description of the Warrants.

As of December 31, 2008, BVF beneficially owned 481,076 shares of Common Stock, of which 71,476 shares are attributable to Warrants, BVF2 beneficially owned 330,250 shares of Common Stock, of which 45,250 shares are attributable to Warrants, BVLLC beneficially owned 1,139,500 shares of Common Stock, of which 109,500 shares are attributable to Warrants and ILL10 beneficially owned 118,000 shares of Common Stock, to which 12,000 shares are attributable to Warrants. Partners and BVF Inc. may each be deemed to beneficially own 2,068,826 shares of Common Stock, of which 238,226 shares are attributable to Warrants.



**ITEM 2(e). CUSIP Number:** 004225108

**ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULE 13d-1(b), or 13d-2(b) or (c) CHECK WHETHER THE PERSON FILING IS: One of the following**

Not applicable as this Schedule 13G is filed pursuant to Rule 13d-1(c).

**ITEM 4. OWNERSHIP:**

The information in items 1 and 5 through 11 on the cover pages (pp. 2 - 7) of this Schedule 13G is hereby incorporated by reference.

**ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS:**

If this statement is being filed to report the fact that as of the date hereof the reporting persons have ceased to be the beneficial owners of more than 5 percent of the class of securities, check the following [ ].

**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 funds of Samana Capital, L.P., the majority member of BVLLC, in the shares of Common Stock beneficially owned by BVLLC and to vote and exercise dispositive power over those shares of Common Stock. Partners and BVF Inc. share voting and dispositive power over shares of Common Stock beneficially owned by BVF, BVF2, BVLLC and those owned by ILL10, on whose behalf Partners acts as an investment manager and, accordingly, Partners and BVF Inc. have beneficial ownership of all of the shares of Common Stock owned by such parties.

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**ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY:**

Mr. Lampert is the owner, sole director and an officer of BVF Inc. BVF Inc. is the general partner of Partners, which is the general partner of BVF and BVF 2. Partners is the manager of BVLLC and is investment adviser to ILL10.

**ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF A GROUP:**

The members of the group making this filing on Schedule 13G are: 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. and BVF Inc.

**ITEM 9. NOTICE OF DISSOLUTION OF GROUP:**

Not applicable.

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**ITEM 10. CERTIFICATION**

By signing below I 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.

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: January 8, 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

**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

**BVP 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



**Exhibit A**  
**JOINT FILING AGREEMENT**

The undersigned agree that Schedule 13G, dated January 8, 2009, relating to the Common Stock of ACAD shall be filed on behalf of the undersigned.

Dated: January 8, 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

**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

**BVP 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