

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549

SCHEDULE 13D  
(Rule 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT  
TO RULE 13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT  
TO RULE 13d-2(a)

(Amendment No. 8)\*

**ACADIA Pharmaceuticals Inc.**

(Name of Issuer)

**Common Stock, par value \$0.0001 per share**

(Title of Class of Securities)

**004225108**

(CUSIP number)

Alexandra A. Toohey  
Chief Financial Officer  
Baker Bros. Advisors LP  
667 Madison Avenue, 21<sup>st</sup> Floor  
New York, NY 10065  
(212) 339-5690

(Name, address and telephone number of person authorized to receive notices and communications)

March 31, 2016

(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 Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box

(Continued on the following pages)

(Page 1 of 11 Pages)

\*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 or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act.

1.	NAMES OF REPORTING PERSONS Baker Bros. Advisors LP		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input type="checkbox"/>		
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS* OO		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER: 24,566,113 (1)	
	8.	SHARED VOTING POWER: 0	
	9.	SOLE DISPOSITIVE POWER: 24,566,113 (1)	
	10.	SHARED DISPOSITIVE POWER: 0	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 24,566,113 (1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 21.8% (2)		
14.	TYPE OF REPORTING PERSON* IA, PN		

(1) Includes 49,375 shares of the Issuer's common stock underlying 49,375 options.

(2) Based on 112,636,457 shares of the Issuer's common stock outstanding as of January 29, 2016, as reported in the Issuer's 10-K filed with the SEC on February 29, 2016.

1.	NAMES OF REPORTING PERSONS Baker Bros. Advisors (GP) LLC		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input type="checkbox"/>		
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS* OO		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION Delaware		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER: 24,566,113 (1)	
	8.	SHARED VOTING POWER: 0	
	9.	SOLE DISPOSITIVE POWER: 24,566,113 (1)	
	10.	SHARED DISPOSITIVE POWER: 0	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 24,566,113 (1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 21.8% (2)		
14.	TYPE OF REPORTING PERSON* HC, OO		

(1) Includes 49,375 shares of the Issuer's common stock underlying 49,375 options.

(2) Based on 112,636,457 shares of the Issuer's common stock outstanding as of January 29, 2016, as reported in the Issuer's 10-K filed with the SEC on February 29, 2016.

1.	NAMES OF REPORTING PERSONS Felix J. Baker		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input type="checkbox"/>		
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS* OO		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER: 24,566,113 (1)	
	8.	SHARED VOTING POWER:	
	9.	SOLE DISPOSITIVE POWER: 24,566,113 (1)	
	10.	SHARED DISPOSITIVE POWER:	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 24,566,113 (1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 21.8% (2)		
14.	TYPE OF REPORTING PERSON* IN, HC		

(1) Includes 49,375 shares of the Issuer's common stock underlying 49,375 options.

(2) Based on 112,636,457 shares of the Issuer's common stock outstanding as of January 29, 2016, as reported in the Issuer's 10-K filed with the SEC on February 29, 2016.

1.	NAMES OF REPORTING PERSONS Julian C. Baker		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input type="checkbox"/>		
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS* OO		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e) <input type="checkbox"/>		
6.	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER: 24,566,113 (1)	
	8.	SHARED VOTING POWER	
	9.	SOLE DISPOSITIVE POWER: 24,566,113 (1)	
	10.	SHARED DISPOSITIVE POWER:	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 24,566,113 (1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>		
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 21.8% (2)		
14.	TYPE OF REPORTING PERSON* IN, HC		

(1) Includes 49,375 shares of the Issuer's common stock underlying 49,375 options.

(2) Based on 112,636,457 shares of the Issuer's common stock outstanding as of January 29, 2016, as reported in the Issuer's 10-K filed with the SEC on February 29, 2016.

### **Amendment No. 8 to Schedule 13D**

This Amendment No. 8 to Schedule 13D amends and supplements the previously filed Schedules 13D filed by Baker Bros. Advisors LP (the “Adviser”), Baker Bros. Advisors (GP), LLC (the “Adviser GP”), Julian C. Baker and Felix J. Baker. Except as supplemented herein, such statements, as heretofore amended and supplemented, remain in full force and effect.

The Adviser GP is the sole general partner of the Adviser. Pursuant to the amended and restated management agreements, among the Adviser, Baker Brothers Life Sciences, L.P. (“Life Sciences”), 14159, L.P. (“14159”), and 667, L.P. (“667”, and together with Life Sciences and 14159, the “Funds”), and their respective general partners, the Adviser has complete and unlimited discretion and authority with respect to the Funds’ investments and voting power over investments.

#### **Item 3. Source and Amount of Funds or Other Consideration.**

Item 3 of Schedule 13D is supplemented and amended, as the case may be, as follows:

The disclosure regarding the purchases in Item 5(c) below is incorporated herein by reference.

#### **Item 4. Purpose of the Transaction.**

Item 4 of Schedule 13D is supplemented and amended, as the case may be, as follows:

This Amendment No. 8 is being filed to report the acquisition of shares of ACADIA Pharmaceuticals, Inc. (the “Issuer”) common stock reported in Item 5(c) that resulted in a more than 1 percent change in beneficial ownership. The disclosure regarding the purchases in Item 5(c) below is incorporated herein by reference.

The Funds hold securities of the Issuer for investment purposes. The Reporting Persons or their affiliates may purchase additional securities or dispose of securities in varying amounts and at varying times depending upon the Reporting Persons’ continuing assessments of pertinent factors, including the availability of shares of common stock or other securities for purchase at particular price levels, the business prospects of the Issuer, other business investment opportunities, economic conditions, stock market conditions, money market conditions, the attitudes and actions of the board of directors and management of the Issuer, the availability and nature of opportunities to dispose of shares in the Issuer and other plans and requirements of the particular entities. The Reporting Persons may discuss items of mutual interest with the Issuer, which could include items in subparagraphs (a) through (j) of Schedule 13D.

Depending upon their assessments of the above factors, the Reporting Persons or their affiliates may change their present intentions as stated above and they may assess whether to make suggestions to the management of the Issuer regarding financing, and whether to acquire additional securities of the Issuer, including shares of common stock (by means of open market purchases, privately negotiated purchases, exercise of some of all of the warrants, exercise of some or all of the Stock Options, or otherwise) or to dispose of some or all of the securities of the Issuer, including shares of common stock, under their control.

Except as otherwise disclosed herein, at the present time, the Reporting Persons do not have any plans or proposals with respect to any extraordinary corporate transaction involving the Issuer including, without limitation, those matters described in subparagraphs (a) through (j) of Item 4 of Schedule 13D.

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**ITEM 5. Interest in Securities of the Issuer.**

(a) and (b) Items 7 through 11 and 13 of each of the cover pages of this Amendment No. 8 are incorporated herein by reference.

Set forth below is the aggregate number of shares of Common Stock of the Issuer directly held by each of the Funds, which may be deemed to be indirectly beneficially owned by the Reporting Persons, as well as shares of Common Stock that may be acquired upon exercise of the 2019 Warrants and the 2018 Warrants (as defined below) by the Funds, subject to the limitations on exercise described below.

Holder	Shares of Common Stock	2019 Warrants	2018 Warrants
667, L.P.	2,896,800	42,131	-
Baker Brothers Life Sciences, L.P.	21,167,398	447,138	1,426,590
14159, L.P.	452,540	10,731	39,378
Total	24,516,738	500,000	1,465,968

The warrants to acquire common stock at an exercise price of \$0.01 per share with an expiration date of December 17, 2019 (“the 2019 Warrants”) are only exercisable to the extent that after giving effect to such exercise the holders thereof and their affiliates would beneficially own, for purposes of Rule 13d-3 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), no more than 19.99% of the outstanding shares of Common Stock of the Issuer. As a result of this restriction, the number of shares that may be issued upon exercise of the 2019 Warrants by the above holders may change depending upon changes in the outstanding shares of Common Stock.

The warrants to acquire common stock at an exercise price of \$1.38 per share with an expiration date of January 11, 2018 (the “2018 Warrants”) are only exercisable to the extent that giving effect to such exercise would not cause the holders thereof and their affiliates to beneficially own, for purposes of Rule 13d-3 under the Exchange Act, in excess of 9.9% of the outstanding shares of Common Stock of the Issuer. As a result of this restriction, the number of shares that may be issued on exercise of the 2018 Warrants by the above holders may change depending upon changes in the outstanding shares of Common Stock.

The Adviser GP, Felix J. Baker and Julian C. Baker as principals of the Adviser GP, and the Adviser may be deemed to be beneficial owners of securities of the Issuer directly held by the Funds, and may be deemed to have the power to vote or direct the vote of and the power to dispose or direct the disposition of such securities.

The Reporting Persons disclaim beneficial ownership of the securities held by each of the Funds, and this Amendment No. 8 shall not be deemed an admission that the Reporting Persons are the beneficial owners of such securities for purposes of Section 13(d) or for any other purpose.

Julian C. Baker and Stephen R. Biggar currently serve on the Issuer’s Board of Directors (the “Board”) as representatives of the Funds. The policy of the Funds and the Adviser does not permit principals or employees of the Adviser to receive compensation for serving as directors of the Issuer, and the Funds are instead entitled to the pecuniary interest in the options to purchase Common Stock of the Issuer (“Stock Options”). Julian C. Baker and Dr. Biggar have no voting or dispositive power and no pecuniary interest in the Stock Options previously disclosed in amendments to this Schedule 13D. Other than through their control of the Adviser, Felix J. Baker and Julian C. Baker have neither voting nor dispositive power and have no direct pecuniary interest in the Stock Options held by Dr. Biggar.

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The Funds are instead entitled to the pecuniary interest in the Stock Options held by Julian C. Baker and Dr. Biggar previously disclosed in amendments to this Schedule 13D.

Baker Bros. Advisors LP has voting and investment power over the Stock Options held by Julian C. Baker and Dr. Biggar previously disclosed in amendments to this Schedule 13D.

The Adviser GP, and Felix J. Baker and Julian C. Baker as principals of the Adviser GP, may be deemed to have the power to vote or direct the vote of and the power to dispose or direct the disposition of the Stock Options held by Julian C. Baker and Dr. Biggar previously disclosed in amendments to this Schedule 13D.

(c) The following transactions in the Issuer's Common Stock were effected by the Funds noted below during the sixty days preceding the filing of this statement using working capital of the applicable purchasing Fund. All purchase transactions were effected in the open market directly with a broker-dealer. Except as disclosed herein or in any previous amendments to this Schedule 13D, none of the Reporting Persons or their affiliates has effected any other transactions in securities of the Issuer during the past 60 days.

<b>Name</b>	<b>Date</b>	<b>Number of Shares</b>	<b>Transaction</b>	<b>Price/Share</b>	<b>Footnotes</b>
667, L.P.	3/30/2016	408,607	Purchase	25.9247	1
667, L.P.	3/30/2016	37,882	Purchase	25.9750	2
667, L.P.	3/30/2016	16,057	Purchase	26.3472	3
667, L.P.	3/31/2016	1,614	Purchase	25.6070	4
Baker Brothers Life Sciences, L.P.	3/31/2016	14,775	Purchase	25.6070	4
667, L.P.	3/31/2016	1,467	Purchase	26.2850	5
Baker Brothers Life Sciences, L.P.	3/31/2016	13,433	Purchase	26.2850	5
667, L.P.	3/31/2016	19,676	Purchase	26.4944	6
Baker Brothers Life Sciences, L.P.	3/31/2016	180,122	Purchase	26.4944	6
667, L.P.	3/31/2016	3,106	Purchase	26.5545	7
Baker Brothers Life Sciences, L.P.	3/31/2016	28,433	Purchase	26.5545	7
667, L.P.	3/31/2016	6,618	Purchase	27.5588	8
Baker Brothers Life Sciences, L.P.	3/31/2016	60,587	Purchase	27.5588	8
667, L.P.	3/31/2016	34,844	Purchase	27.7173	9
Baker Brothers Life Sciences, L.P.	3/31/2016	318,969	Purchase	27.7173	9
667, L.P.	4/1/2016	1,182	Purchase	27.8202	10
Baker Brothers Life Sciences, L.P.	4/1/2016	10,818	Purchase	27.8202	10
667, L.P.	4/1/2016	28,647	Purchase	28.5484	11
Baker Brothers Life Sciences, L.P.	4/1/2016	262,253	Purchase	28.5484	11

(1) The reported price is a weighted average price. These shares were traded in multiple transactions at a prices ranging from \$25.52 to \$26.47. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the staff of the Securities and Exchange Commission (the "Staff"), upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(2) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$25.74 to \$26.24. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(3) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$25.60 to \$26.46. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.



(4) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$25.56 to \$25.95. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(5) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$26.00 to \$26.46. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(6) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$25.97 to \$26.95. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(7) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$26.43 to \$26.74. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(8) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$27.51 to \$27.60. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(9) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$27.17 to \$28.06. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(10) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$27.68 to \$27.98. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

(11) The reported price is a weighted average price. These shares were traded in multiple transactions at prices ranging from \$28.00 to \$28.995. The Reporting Persons undertake to provide the Issuer, any security holder of the Issuer, or the Staff, upon request, full information regarding the number of shares traded at each separate price within the ranges set forth in this footnote.

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(d) Certain securities of the Issuer are held directly by 667, a limited partnership the sole general partner of which is Baker Biotech Capital, L.P., a limited partnership the sole general partner of which is Baker Biotech Capital (GP), LLC. Julian C. Baker and Felix J. Baker are the controlling members of Baker Biotech Capital (GP), LLC.

Certain securities of the Issuer are held directly by Life Sciences, a limited partnership the sole general partner of which is Baker Brothers Life Sciences Capital, L.P., a limited partnership the sole general partner of which is Baker Brothers Life Sciences Capital (GP), LLC. Julian C. Baker and Felix J. Baker are the controlling members of Baker Brothers Life Sciences Capital (GP), LLC.

Certain securities of the Issuer are held directly by 14159, a limited partnership the sole general partner of which is 14159 Capital, L.P., a limited partnership the sole general partner of which is 14159 Capital (GP), LLC. Julian C. Baker and Felix J. Baker are the controlling members of 14159 Capital (GP), LLC.

(e) Not applicable.

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**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.

April 1, 2016

**BAKER BROS. ADVISORS LP**

By: Baker Bros. Advisors (GP) LLC, its general partner

By: /s/ Scott L. Lessing

Name: Scott L. Lessing

Title: President

**BAKER BROS. ADVISORS (GP) LLC**

By: /s/ Scott L. Lessing

Name: Scott L. Lessing

Title: President

/s/ Julian C. Baker

Julian C. Baker

/s/ Felix J. Baker

Felix J. Baker

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