
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. 11)*

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
860 Washington Street, 3rd Floor
New York, NY 10014
(212) 339-5690

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

October 13, 2017

(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 9 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) o | |
| 6. | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7. | SOLE VOTING POWER: 27,339,279 (1) |
| | 8. | SHARED VOTING POWER: 0 |
| | 9. | SOLE DISPOSITIVE POWER: 27,339,279 (1) |
| | 10. | SHARED DISPOSITIVE POWER: 0 |
| 11. | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 27,339,279 (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) 22.1% (1)(2) | |
| 14. | TYPE OF REPORTING PERSON* IA, PN | |

- (1) Includes 35,000 shares of the common stock of Acadia Pharmaceuticals Inc. (the "Issuer") underlying options directly held by Julian C. Baker, a principal of Baker Bros. Advisors LP ("the Adviser") and 74,000 shares of the common stock of the Issuer underlying options directly held by Dr. Stephen R. Biggar, an employee of the Adviser, and 39,378 shares of common stock issuable upon the exercise of the 2018 Warrants (as defined below).
- (2) Based on 122,400,306 shares of the Issuer's common stock outstanding as of July 31, 2017, as reported in the Issuer's Form 10-Q filed with the Securities Exchange Commission ("SEC") on August 8, 2017 and 1,371,133 shares issued upon the exercise of the 2018 Warrants (as defined below).

| | | |
|---|---|---|
| 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) o | |
| 6. | CITIZENSHIP OR PLACE OF ORGANIZATION Delaware | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7. | SOLE VOTING POWER: 27,339,279 (1) |
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| 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) 22.1% (1)(2) | |
| 14. | TYPE OF REPORTING PERSON* HC, OO | |

- (1) Includes 35,000 shares of the common stock of the Issuer underlying options directly held by Julian C. Baker, a principal of the Adviser and 74,000 shares of the common stock of the Issuer underlying options directly held by Dr. Stephen R. Biggar, an employee of the Adviser, and 39,378 shares of common stock issuable upon the exercise of the 2018 Warrants (as defined below).
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| | | | |
|---|---|---|--|
| 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) o | | |
| 6. | CITIZENSHIP OR PLACE OF ORGANIZATION United States | | |
| NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH | 7. | SOLE VOTING POWER: 27,339,279 (1) | |
| | 8. | SHARED VOTING POWER: 0 | |
| | 9. | SOLE DISPOSITIVE POWER: 27,339,279 (1) | |
| | 10. | SHARED DISPOSITIVE POWER: 0 | |
| 11. | AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 27,339,279 (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) 22.1% (1)(2) | | |
| 14. | TYPE OF REPORTING PERSON* IN, HC | | |

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| | | | |
|---|---|---|--|
| 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 | | |
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- (2) Based on 122,400,306 shares of the Issuer's common stock outstanding as of July 31, 2017, as reported in the Issuer's Form 10-Q filed with the SEC on August 8, 2017 and 1,371,133 shares issued upon the exercise of the 2018 Warrants (as defined below).

Amendment No. 11 to Schedule 13D

This Amendment No. 11 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 (collectively the “Reporting Persons”). 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 management agreements, as amended, 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 Funds’ respective general partners relinquished to the Adviser all discretion and authority with respect to the investment and voting power of the securities held by the Funds, and thus the Adviser has complete and unlimited discretion and authority with respect to the Funds’ investments and voting power over investments.

All capitalized terms contained herein but not otherwise defined shall have the meanings ascribed to such terms in the Schedule 13D, as amended. Information given in response to each item shall be deemed incorporated by reference in all other items, as applicable.

Item 4. Purpose of the Transaction.

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

On October 13, 2017, Life Sciences exercised a warrant to acquire 1,426,590 shares of the common stock of ACADIA Pharmaceuticals Inc. (“the Issuer”) at an exercise price of \$1.38 per share with an expiration date of January 11, 2018 (the “2018 Warrants”). Life Sciences paid the exercise price on a cashless basis resulting in the Issuer withholding 55,457 of the 2018 Warrant shares to pay the exercise price and issuing to Life Sciences the remaining 1,371,133 shares of common stock of the Issuer.

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.

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. 11 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 2018 Warrants and the 2019 Warrants (as defined below) by the Funds, subject to the limitations on exercise described below.

| Holder | Shares of Common Stock | 2018 Warrants | 2019 Warrants |
|------------------------------------|---------------------------|---------------|----------------|
| 667, L.P. | 3,029,953 | - | 42,131 |
| Baker Brothers Life Sciences, L.P. | 23,708,408 | - | 447,138 |
| 14159, L.P. | 452,540 | 39,378 | 10,731 |
| Total | 27,190,901 | 39,378 | 500,000 |

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 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. 11 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. 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) Except as described in this Amendment No. 11, none of the Reporting Persons has effected any transaction in the securities of the Issuer in the past 60 days.

(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.

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.

October 16, 2017

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
