

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

SCHEDULE 13D

Under the Securities Exchange Act of 1934  
(Amendment No. \_\_)\*

Acadia Pharmaceuticals Inc.

-----  
(Name of Issuer)

Common Stock

-----  
(Title of Class of Securities)

US0042251084

-----  
(CUSIP Number)

OrbiMed Advisors LLC  
OrbiMed Capital LLC  
Samuel D. Isaly  
767 Third Avenue  
New York, NY 10017  
Telephone: (212) 739-6400

-----  
(Name, Address and Telephone Number of Person Authorized  
to Receive Notices and Communications)

Copy to:

Paul S. Schreiber, Esq.  
Shearman & Sterling LLP  
599 Lexington Avenue  
New York, New York 10022  
Telephone: (212) 848-4000

April 15, 2005

-----  
(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 ss. 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g) check the following box [ ] .

Note: Schedules filed in paper format shall include a signed original and five copies of the schedule, including all exhibits. See ss. 240.13d-7(b) for other parties to whom copies are to be sent.

\*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 (the "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).

SCHEDULE 13D

CUSIP No. US0042251084

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1 NAME OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

OrbiMed Advisors LLC

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)  
(a)   
(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO  
ITEMS 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

7 SOLE VOTING POWER

0

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING  
PERSON  
WITH

8 SHARED VOTING POWER

621,606

9 SOLE DISPOSITIVE POWER

0

10 SHARED DISPOSITIVE POWER

621,606

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

621,606

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN  
SHARES (See Instructions)

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

2.65%

14 TYPE OF REPORTING PERSON (See Instructions)

IA

SCHEDULE 13D

CUSIP No. US0042251084

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1 NAME OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

OrbiMed Capital LLC

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)

(a)

(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

WC

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO  
ITEMS 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

Delaware

7 SOLE VOTING POWER

0

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING  
PERSON  
WITH

8 SHARED VOTING POWER

863,906

9 SOLE DISPOSITIVE POWER

0

10 SHARED DISPOSITIVE POWER

863,906

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

863,906

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN  
SHARES (See Instructions)

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

3.69%

14 TYPE OF REPORTING PERSON (See Instructions)

IA

SCHEDULE 13D

CUSIP No. US0042251084

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1 NAME OF REPORTING PERSONS  
I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY)

Samuel D. Isaly

2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP (See Instructions)  
(a)   
(b)

3 SEC USE ONLY

4 SOURCE OF FUNDS (See Instructions)

AF

5 CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO  
ITEMS 2(d) or 2(e)

6 CITIZENSHIP OR PLACE OF ORGANIZATION

United States

7 SOLE VOTING POWER

0

NUMBER OF  
SHARES  
BENEFICIALLY  
OWNED BY  
EACH  
REPORTING  
PERSON  
WITH

8 SHARED VOTING POWER

1,485,512

9 SOLE DISPOSITIVE POWER

0

10 SHARED DISPOSITIVE POWER

1,485,512

11 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON

1,485,512

12 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN  
SHARES (See Instructions)

13 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11)

6.34%

14 TYPE OF REPORTING PERSON (See Instructions)

HC

Item 1. Security and Issuer.

The class of equity securities to which this Statement on Schedule 13D relates is the Common Stock (the "Shares"), of Acadia Pharmaceuticals Inc. (the "Issuer"), a Delaware corporation with its principal executive offices located at 3911 Sorrento Valley Boulevard, San Diego, California 92121.

Item 2. Identity and Background.

(a) This Statement is being filed by OrbiMed Advisors LLC, a limited liability company organized under the laws of Delaware, OrbiMed Capital LLC, a limited liability company organized under the laws of Delaware, and Samuel D. Isaly ("Isaly"), an individual (collectively, the "Reporting Persons").

(b)-(c) OrbiMed Advisors LLC is a registered investment adviser under the Investment Advisers Act of 1940, as amended, that acts as investment adviser or general partner to certain clients which hold Shares of the Issuer, as more particularly described in Item 3 below. OrbiMed Advisors LLC has its principal offices at 767 Third Avenue, 30th Floor, New York, New York 10017.

OrbiMed Capital LLC is a registered investment adviser under the Investment Advisers Act of 1940, as amended, that acts as general partner to certain limited partnerships as more particularly described in Item 3 below. OrbiMed Capital LLC has its principal offices at 767 Third Avenue, 30th Floor, New York, New York 10017.

Isaly, a natural person, owns a controlling interest in OrbiMed Advisors LLC and OrbiMed Capital LLC.

The directors and executive officers of OrbiMed Advisors LLC and OrbiMed Capital LLC are set forth on Schedules I and II, attached hereto. Schedules I and II set forth the following information with respect to each such person:

- (i) name;
- (ii) business address (or residence address where indicated);
- (iii) present principal occupation or employment and the name, principal business and address of any corporation or other organization in which such employment is conducted;
- (iv) citizenship.

(d)-(e) During the last five years, neither the Reporting Persons nor any Person named in Schedules I or II have been (i) convicted in a criminal proceeding (excluding traffic violations or similar misdemeanors) or (ii) a party to a civil proceeding of a judicial or administrative body of competent jurisdiction and as a result of such proceeding was or is subject to a judgment, decree or final order enjoining future violations of, or prohibiting or mandating

activities subject to, federal or state securities laws or finding any violation with respect to such laws.

(f) Isaly is a citizen of the United States.

Item 3. Source and Amount of Funds or Other Considerations.

On and prior to April 15, 2005, pursuant to the discretionary investment management authority of OrbiMed Advisors LLC and OrbiMed Capital LLC under their respective investment advisory contracts and limited partnership agreements with or relating to Eaton Vance Worldwide Health Sciences and Finsbury Worldwide Pharmaceutical Trust caused these clients to purchase 1,485,512 Shares of the Issuer. The authority referenced in the preceding sentence included authority to vote, purchase and/or sell securities held by or on behalf of such clients, including those Shares of the Issuer referenced in that sentence.

Following the above transactions, Isaly, as the owner of a controlling interest in OrbiMed Advisors LLC and OrbiMed Capital LLC, is the beneficial owner of approximately 6.34% of the outstanding Shares of the Issuer. OrbiMed Advisors LLC is the beneficial owner of approximately 2.65% of the outstanding Shares of the Issuer and OrbiMed Capital LLC is the beneficial owner of approximately 3.69% of the outstanding Shares of the Issuer.

None of the Reporting Persons have acquired or disposed of any additional Shares of the Issuer since April 15, 2005.

Item 4. Purpose of Transaction.

As described more fully in Item 3 above, this statement relates to the acquisition of Shares by the Reporting Persons. The Shares acquired by the Reporting Persons have been acquired for the purpose of making an investment in the Issuer and not with the intention of acquiring control of the Issuer's business on behalf of Eaton Vance Worldwide Health Sciences or Finsbury Worldwide Pharmaceutical Trust or any other of the Reporting Persons' respective advisory clients.

The Reporting Persons were previously granted and exercised the right to appoint a representative to the Board of Directors (the "Board") of the Issuer, so as to permit active monitoring of the operations of the Issuer. Carl L. Gordon currently serves as the Reporting Persons' representative to the Board.

The Reporting Persons from time to time intend to review their investment in the Issuer on the basis of various factors, including the Issuer's business, financial condition, results of operations and prospects, general economic and industry conditions, the securities markets in general and those for the Issuer's Shares in particular, as well as other developments and other investment opportunities. Based upon such review, the Reporting Persons will take such actions in the future as the Reporting Persons may deem appropriate in light of the circumstances existing from time to time. If the Reporting Persons believe that further investment in the Issuer is attractive, whether because of the market price of the Issuer's Shares or otherwise, they may acquire shares of common stock or other securities of the Issuer either in the open market or in

privately negotiated transactions. Similarly, depending on market and other factors, the Reporting Persons may determine to dispose of some or all of the Shares currently owned by the Reporting Persons or otherwise acquired by the Reporting Persons either in the open market or in privately negotiated transactions.

Except as set forth above, the Reporting Persons have not formulated any plans or proposals which relate to or would result in: (a) the acquisition by any person of additional securities of the Issuer or the disposition of securities of the Issuer, (b) an extraordinary corporate transaction involving the Issuer or any of its subsidiaries, (c) a sale or transfer of a material amount of the assets of the Issuer or any of its subsidiaries, (d) any change in the present board of directors or management of the Issuer, (e) any material change in the Issuer's capitalization or dividend policy, (f) any other material change in the Issuer's business or corporate structure, (g) any change in the Issuer's charter or bylaws or other or instrument corresponding thereto or other action which may impede the acquisition of control of the Issuer by any person, (h) causing a class of the Issuer's securities to be deregistered or delisted, (i) a class of equity securities of the Issuer becoming eligible for termination of registration or (j) any action similar to any of those enumerated above.

Item 5. Interest in Securities of the Issuer.

(a)-(b) As of the date of this filing, OrbiMed Advisors LLC, OrbiMed Capital LLC and Samuel D. Isaly may be deemed directly or indirectly, including by reason of their mutual affiliation, to be the beneficial owners of the Common Stock described in Item 3. Based upon information contained in the most recent available filing by the Issuer with the SEC, such Shares constitute approximately 6.34% of the issued and outstanding Shares. As described above in Item 2, Isaly owns, pursuant to the terms of the limited liability company agreement of each of OrbiMed Advisors LLC and OrbiMed Capital LLC, a controlling interest in the outstanding limited liability company interests of such entity. As a result, Isaly, OrbiMed Advisors LLC and OrbiMed Capital LLC share power to direct the vote and to direct the disposition of the Common Stock described in Item 3.

(c) The following tables set forth all transactions with respect to the Shares, effected during the past sixty (60) days by any of the Reporting Persons. All such transactions were effected in a private placement, and the tables include commissions paid in per share prices.

Name	Date	No. of Shares Purchased	Price Per Share (\$)
Finsbury Worldwide Pharmaceutical Trust	April 15, 2005	359,603 common shares and 89,900 warrants	\$6.82 per unit (common share and 0.25 warrants)

(d) Not applicable.

(e) Not applicable.

Item 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

Other than the agreements and the relationships mentioned above, to the best knowledge of the Reporting Persons, there are no contracts, arrangements, understandings or relationships (legal or otherwise) among the persons named in Item 2 and between such persons and any persons with respect to any securities of the Issuer, including, but not limited to, transfer or voting of any of the Shares, finder's fees, joint ventures, loan or option arrangements, puts or calls, guarantees of profits, division of profits or loss, or the giving or withholding of proxies.

Item 7. Materials to be Filed as Exhibits.

Exhibit	Description
A.	Joint Filing Agreement among OrbiMed Advisors LLC, OrbiMed Capital LLC and Samuel D. Isaly

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.

Dated: April 29, 2005

OrbiMed Advisors LLC

By: /s/ Samuel D. Isaly

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Name: Samuel D. Isaly

Title: Managing Partner

OrbiMed Capital LLC

By: /s/ Samuel D. Isaly

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Name: Samuel D. Isaly

Title: Managing Partner

By: /s/ Samuel D. Isaly

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Name: Samuel D. Isaly

Schedule I

The name and present principal occupation of each of the executive officers and directors of OrbiMed Advisors LLC are set forth below. Unless otherwise noted, each of these persons are United States citizens and have as their business address 767 Third Avenue, New York, NY 10017.

Name	Position with Reporting Person	Principal Occupation
Samuel D. Isaly	Managing Partner	Partner OrbiMed Advisors LLC
Michael Sheffery	Partner	Partner OrbiMed Advisors LLC
Carl L. Gordon	Partner	Partner OrbiMed Advisors LLC
Sven Borho German and Swedish Citizen	Partner	Partner OrbiMed Advisors LLC
Jonathan T. Silverstein	Partner	Partner OrbiMed Advisors LLC
Eric A. Bittelman	Chief Financial Officer and Chief Compliance Officer	CFO/CCO OrbiMed Advisors LLC

Schedule II

The name and present principal occupation of each of the executive officers and directors of OrbiMed Capital LLC are set forth below. Unless otherwise noted, each of these persons are United States citizens and have as their business address 767 Third Avenue, New York, NY 10017.

Name	Position with Reporting Person	Principal Occupation
Samuel D. Isaly	Managing Partner	Partner OrbiMed Capital LLC
Michael Sheffery	Partner	Partner OrbiMed Capital LLC
Carl L. Gordon	Partner	Partner OrbiMed Capital LLC
Sven Borho German and Swedish Citizen	Partner	Partner OrbiMed Capital LLC
Jonathan T. Silverstein	Partner	Partner OrbiMed Capital LLC
Eric A. Bittelman	Chief Financial Officer and Chief Compliance Officer	CFO/CCO OrbiMed Capital LLC

EXHIBIT INDEX

Exhibit	Description	Page No.
A.	Joint Filing Agreement among OrbiMed Advisors LLC, OrbiMed Capital, LLC and Samuel D. Isaly	A-1

JOINT FILING AGREEMENT

The undersigned hereby agree that the Statement on this Schedule 13D, dated April 15, 2005 (the "Schedule 13D"), with respect to the Common Stock, par value \$.001 per share, of Acadia Pharmaceutical Inc. is filed on behalf of each of us pursuant to and in accordance with the provisions of Rule 13d-1(k) under the Securities and Exchange Act of 1934, as amended, and that this Agreement shall be included as an Exhibit to this Schedule 13D. Each of the undersigned agrees to be responsible for the timely filing of the Schedule 13D, and for the completeness and accuracy of the information concerning itself contained therein. This Agreement may be executed in any number of counterparts, all of which taken together shall constitute one and the same instrument.

IN WITNESS WHEREOF, the undersigned have executed this Agreement as of the 29th day of April 2005.

OrbiMed Advisors LLC

By: /s/ Samuel D. Isaly

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Name: Samuel D. Isaly

Title: Managing Partner

OrbiMed Capital LLC

By: /s/ Samuel D. Isaly

-----

Name: Samuel D. Isaly

Title: Managing Partner

By: /s/ Samuel D. Isaly

-----

Name: Samuel D. Isaly