

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

ACADIA PHARMACEUTICALS INC.

(Exact name of Registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

06-1376651
(I.R.S. Employer
Identification Number)

**3911 Sorrento Valley Boulevard
San Diego, CA 92121
(858) 558-2871**

(Address, including zip code, and telephone number, including area code, of Registrant's principal executive offices)

**Uli Hacksell, Ph.D.
President and Chief Executive Officer
ACADIA Pharmaceuticals Inc.
3911 Sorrento Valley Boulevard, San Diego, CA 92121
(858) 558-2871**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

**Glenn F. Baity
Vice President, General Counsel & Secretary
ACADIA Pharmaceuticals Inc.
3911 Sorrento Valley Boulevard
San Diego, CA 92121
(858) 558-2871**

**L. Kay Chandler
Sean M. Clayton
Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
(858) 550-6000**

Approximate date of commencement of proposed sale to the public:

From time to time after the effective date of this Registration Statement, as determined by Registrant.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box:

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list

the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box:

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box:

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company.

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

CALCULATION OF REGISTRATION FEE

<u>Title of Each Class of Securities to Be Registered</u>	<u>Number of Shares to Be Registered(1)</u>	<u>Proposed Maximum Offering Price Per Share(2)</u>	<u>Proposed Maximum Aggregate Offering Price(2)</u>	<u>Amount of Registration Fee</u>
Common Stock, \$0.0001 par value	20,000,000	\$1.04	\$20,800,000	\$2,384

- (1) Pursuant to Rule 416 under the Securities Act of 1933, as amended, or the Securities Act, the shares being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares being registered hereunder as a result of stock splits, stock dividends or similar transactions.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) under the Securities Act, based upon the average of the high and low prices for the common stock on December 16, 2011, as reported by the Nasdaq Global Market.

The Registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell the securities under this prospectus until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED DECEMBER 23, 2011

PROSPECTUS



ACADIA
Pharmaceuticals

Common Stock

We may from time to time sell up to 20,000,000 shares of our common stock, \$0.0001 par value per share. You should read this prospectus and any supplement carefully before you invest.

Our common stock is listed on The Nasdaq Global Market under the symbol "ACAD". On December 22, 2011, the last reported sale price for our common stock was \$1.32. You are encouraged to obtain current market quotations for shares of our common stock.

Our principal executive offices are located at 3911 Sorrento Valley Boulevard, San Diego, California 92121, and our telephone number at that address is (858) 558-2871.

Investing in our common stock involves a high degree of risk. See "Risk Factors" on page 1.

As of December 22, 2011, the aggregate market value of our outstanding common stock held by non-affiliates, or the public float, was approximately \$69.5 million, which was calculated based on approximately 52.7 million shares of our outstanding common stock held by non-affiliates and on a price of \$1.32 per share, the last reported sale price for our common stock on December 22, 2011. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell our common stock in a public primary offering with a value exceeding one-third of our public float in any 12-month period unless our public float subsequently rises to \$75.0 million or more. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to and including the date of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2012.

TABLE OF CONTENTS

ACADIA PHARMACEUTICALS INC.	1
RISK FACTORS	1
NOTE REGARDING FORWARD-LOOKING STATEMENTS	1
USE OF PROCEEDS	2
PLAN OF DISTRIBUTION	2
LEGAL MATTERS	3
EXPERTS	3
WHERE YOU CAN FIND MORE INFORMATION	3

ABOUT THIS PROSPECTUS

You should rely only on the information contained or incorporated by reference in this prospectus and any related prospectus supplement. We have not authorized anyone to provide you with different information. No one is making offers to sell or seeking offers to buy these shares of our common stock in any jurisdiction where the offer or sale is not permitted. You should assume that the information contained in this prospectus and any prospectus supplement is accurate only as of the date on the front of this prospectus or the prospectus supplement, as applicable, and that any information we have incorporated by reference in this prospectus or any prospectus supplement is accurate only as of the date given in the document incorporated by reference, regardless of the time of delivery of this prospectus, any applicable prospectus supplement or any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

References in this prospectus to “ACADIA,” the “Company,” “we,” “us” and “our” refer to ACADIA Pharmaceuticals Inc., together with our wholly-owned subsidiaries.

“ACADIA” is our trademark. This prospectus also includes trademarks and trade names owned by other parties, and these trademarks and trade names are the property of their respective owners. Use or display by us of other parties’ trademarks, trade dress or products in this prospectus is not intended to, and does not imply a relationship with, or endorsements or sponsorship of, us by the trademark or trade dress owners.

ACADIA PHARMACEUTICALS INC.

We are a biopharmaceutical company utilizing innovative technology to fuel drug discovery and clinical development of novel treatments for central nervous system disorders. We have four product candidates in clinical development including pimavanserin, which is in Phase III development as a potential first-in-class treatment for Parkinson's disease psychosis. We hold worldwide commercialization rights to pimavanserin. We also have a product candidate in Phase II development for chronic pain and a product candidate in Phase I development for glaucoma, both in collaboration with Allergan, Inc., and AM-831 in Phase I development for schizophrenia in collaboration with Meiji Seika Pharma Co., Ltd. All of the product candidates in our pipeline emanate from discoveries made using our proprietary drug discovery platform.

We were incorporated in Delaware in January 1997. Our website address is www.acadia-pharm.com. The information contained in, or that can be accessed through, our website is not part of this prospectus.

RISK FACTORS

An investment in our common stock is risky. Prior to making a decision about investing in our common stock, you should carefully consider the specific risks discussed under "Risk Factors" in any applicable prospectus supplement and in our filings with the Securities and Exchange Commission, or SEC, incorporated by reference in this prospectus, together with all of the other information contained in this prospectus and any applicable prospectus supplement or incorporated by reference in this prospectus. The risks and uncertainties described in any applicable prospectus supplement and in our SEC filings are not the only ones facing us. Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also harm our business. If any of the risks or uncertainties described in any applicable prospectus supplement or our SEC filings or any such additional risks and uncertainties actually occur, our business, results of operations and financial condition could be materially and adversely affected. In that case, the trading price of our common stock could decline, and you might lose all or part of your investment.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains, and the documents incorporated by reference herein and any prospectus supplement hereto may contain, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. These statements relate to future events or to our future financial performance and involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements may include, but are not limited to statements about:

- the progress or timing of clinical trials involving our drug candidates;
- the benefits to be derived from our drug candidates or the design of our clinical trials;
- the progress of our research and development programs;
- the benefits to be derived from relationships with our collaborators;
- the receipt of regulatory clearances and approvals;
- our estimates of future payments, revenues and profitability; and
- our estimates regarding our capital requirements and our need for additional financing.

In some cases, you can identify forward-looking statements by terms such as "may", "will", "should", "could", "would", "expects", "plans", "anticipates", "believes", "estimates", "projects", "predicts", "potential" and similar expressions intended to identify forward-looking statements. These statements reflect our current views with respect to future events and are based on assumptions and subject to risks and uncertainties. Given these uncertainties, you should not place undue reliance on these forward-looking statements. We discuss many of these risks in greater detail under the heading "Risk Factors" in our SEC filings, and may provide additional information in any applicable prospectus supplement. Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

You should read this prospectus, the registration statement of which this prospectus is a part, the documents incorporated by reference herein, and any applicable prospectus supplement completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in the foregoing documents by these cautionary statements.

You should rely only on the information contained, or incorporated by reference, in this prospectus and any applicable prospectus supplement. We have not authorized anyone to provide you with different information. The common stock offered under this prospectus is not being offered in any state where the offer is not permitted. You should not assume that the information provided by this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of this prospectus or the prospectus supplement, as applicable, or that any information incorporated by reference in this prospectus or in any prospectus supplement is accurate as of any date other than the date given in the document incorporated by reference. Unless required by law, we undertake no obligation to update or revise any forward-looking statements to reflect new information or future events or developments. Thus, you should not assume that our silence over time means that actual events are bearing out as expressed or implied in such forward-looking statements.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of our common stock offered under this prospectus. Unless we indicate otherwise in the applicable prospectus supplement, we anticipate that any net proceeds will be used for working capital and general corporate purposes. We will set forth in the applicable prospectus supplement our intended use for the net proceeds received from the sale of any common stock sold pursuant to that prospectus supplement.

PLAN OF DISTRIBUTION

We may sell the common stock to one or more underwriters for public offering and sale by them and may also sell the common stock to investors directly or through agents. We will name any underwriter or agent involved in the offer and sale of common stock in the applicable prospectus supplement. We have reserved the right to sell or exchange our common stock directly to investors on our own behalf in those jurisdictions where we are authorized to do so.

We may distribute the common stock from time to time in one or more transactions:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We may also, from time to time, authorize dealers, acting as our agents, to offer and sell the common stock upon the terms and conditions set forth in the applicable prospectus supplement. We, or the purchasers of the common stock for whom the underwriters may act as agents, may compensate underwriters in the form of underwriting discounts or commissions, in connection with the sale of the common stock. Underwriters may sell the common stock to or through dealers, and those dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agent. Unless otherwise indicated in the applicable prospectus supplement, an agent will be acting on a best efforts basis and a dealer will purchase the common stock as a principal, and may then resell the common stock at varying prices to be determined by the dealer.

We will describe in the applicable prospectus supplement any compensation we pay to underwriters or agents in connection with the offering of our common stock, and any discounts, concessions or commissions allowed by underwriters to participating dealers. Dealers and agents participating in the distribution of the common stock may be deemed to be underwriters, and any discounts and commissions received by them and any profit realized by them on resale of the common stock may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against certain civil liabilities, including liabilities under the Securities Act and to reimburse these persons for certain expenses. We may grant underwriters who participate in the distribution of the common stock we are offering under this prospectus an option to purchase additional shares to cover over-allotments, if any, in connection with the distribution.

To facilitate the offering of our common stock, certain persons participating in the offering may engage in transactions that stabilize, maintain, or otherwise affect the price of the common stock. This may include over-allotments or short sales of the common stock, which involve the sale by persons participating in the offering of more common stock than we sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the common stock by bidding for or purchasing common stock in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if the common stock sold by them is repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the common stock at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

Certain underwriters, dealers or agents and their associates may engage in transactions with and perform services for us in the ordinary course of our business.

LEGAL MATTERS

Cooley LLP, San Diego, California, has given its opinion to us as to certain legal matters relating to the validity of the shares of our common stock to be offered by this prospectus. Any underwriters will be advised about the other issues relating to any offering by their own legal counsel.

EXPERTS

The financial statements incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2010 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and we file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement under the Securities Act with respect to the common stock offered hereby. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits which are part of the registration statement. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and the exhibits filed as part of the registration statement. You may read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the Public Reference Room. Our SEC filings are also available to the public from the SEC's website at www.sec.gov. We maintain a website at www.acadia-pharm.com. The information contained in, or that can be accessed through, our website is not part of this prospectus.

The SEC allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring to those documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the following documents we filed with the SEC pursuant to Section 13 of the Exchange Act:

- Annual Report on Form 10-K for the fiscal year ended December 31, 2010 (including information specifically incorporated by reference into our Form 10-K from our Proxy Statement for our 2011 Annual Meeting of Stockholders);
- Quarterly Reports on Form 10-Q for the quarters ended March 31, June 30, and September 30, 2011;
- Current Reports on Form 8-K filed on January 12, April 1, April 11, June 14, and December 9, 2011;
- Description of our common stock contained in our registration statement on Form 8-A dated May 19, 2004; and
- All documents filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the initial filing of the registration statement to which this prospectus relates and prior to effectiveness of the registration statement or (ii) after the date of this prospectus and before the last offering of common stock under this prospectus (excluding any portion of such documents which are furnished and not filed with the SEC).

You may access our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, Proxy Statement, and amendments to those documents, if any, filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at the SEC's website or our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The reference to our website does not constitute incorporation by reference of the information contained in our website. We do not consider information contained on, or that can be accessed through, our website to be part of this prospectus or the related registration statement.

You may request a copy of our SEC filings at no cost, by telephoning or writing us at the following address:

Investor Relations
ACADIA Pharmaceuticals Inc.
3911 Sorrento Valley Boulevard
San Diego, CA 92121
(858) 558-2871

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, payable by us in connection with the offering of common stock being registered. All amounts are estimates except the registration fee.

	Amount to Be Paid
Registration fee	\$ 2,415
Legal fees and expenses	25,000
Accounting fees and expenses	10,000
Transfer agent fees	3,500
Printing and engraving expenses	10,000
Miscellaneous	4,085
Total	\$ 55,000

Item 15. Indemnification of Directors and Officers

Section 102 of the Delaware General Corporation Law allows a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for a breach of fiduciary duty as a director, except where the director breached his duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of Delaware corporate law or obtained an improper personal benefit.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against amounts paid and expenses incurred in connection with an action or proceeding to which he is or is threatened to be made a party by reason of such position, if such person shall have acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interest of the corporation, and, in any criminal proceeding, if such person had no reasonable cause to believe his conduct was unlawful; provided that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the adjudicating court determines that such indemnification is proper under the circumstances.

Our amended and restated certificate of incorporation and bylaws include provisions that indemnify our directors and officers for actions taken in such capacity, if the actions were taken in good faith and in a manner reasonably believed to be in our best interests and, in a criminal proceeding, the director or officer had no reasonable cause to believe that his or her conduct was unlawful. A director or officer who is successful in defending a claim will be indemnified for all expenses incurred in connection with his or her defense. We have entered into indemnification agreements with our officers and directors that require us to indemnify such persons against any and all expenses (including attorneys' fees), witness fees, damages, judgments, fines, settlements and other amounts incurred in connection with any action, suit or proceeding, whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was or at any time becomes a director, an officer or an employee of ACADIA or any of our affiliated enterprises, provided that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to our best interest and, with respect to any criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful.

We maintain directors and officers insurance providing indemnification for certain of our directors, officers, affiliates, partners and employees for certain liabilities.

Item 16. Exhibits

<u>Exhibit Number</u>	<u>Description</u>
3.1	Amended and Restated Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q, filed August 10, 2011).
3.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K, filed December 17, 2009).
4.1	Reference is made to Exhibits 3.1 and 3.2 above.
4.3	Form of common stock certificate of Registrant (incorporated by reference to Exhibit 4.1 to Registration Statement No. 333-52492).
4.4	Form of Warrant to Purchase Preferred Stock issued to GATX Ventures on May 31, 2002 (incorporated by reference to Exhibit 4.3 to Registration Statement No. 333-113137).
4.5	Warrant to Purchase Common Stock issued to Kingsbridge Capital Limited on August 4, 2008 (incorporated by reference to Exhibit 4.4 to Registrant's Quarterly Report on Form 10-Q, filed August 7, 2008).
4.6	Form of Warrant to Purchase Common Stock issued to purchasers in a private placement on January 12, 2011 (incorporated by reference to Exhibit 4.5 to Registration Statement No 333-171722).
5.1	Opinion of Cooley llp
23.1	Consent of Independent Registered Public Accounting Firm.
23.2	Consent of Counsel (included in Exhibit 5.1).
24.1	Power of Attorney (included on signature page).

Item 17. Undertakings

A. The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by section 10(a)(3) of the Securities Act of 1933, as amended, or the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission, or the Commission, pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that subparagraphs (i), (ii) and (iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to section 13 or section 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser:

(i) If the Registrant is relying on Rule 430B:

(a) Each prospectus filed by the Registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(b) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

or

(ii) If the Registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

B. For the purpose of determining liability of the Registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned Registrant hereby undertakes that in a primary offering of securities of the undersigned Registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned Registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(1) any preliminary prospectus or prospectus of the undersigned Registrant relating to the offering required to be filed pursuant to Rule 424;

(2) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrant or used or referred to by the undersigned Registrant;

(3) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrant or its securities provided by or on behalf of the undersigned Registrant; and

(4) any other communication that is an offer in the offering made by the undersigned Registrant to the purchaser.

C. The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to section 13(a) or section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

D. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to provisions described in Item 15 above or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

INDEX TO EXHIBITS

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December 23, 2011

ACADIA Pharmaceuticals Inc.
3911 Sorrento Valley Boulevard
San Diego, CA 92121

Ladies and Gentlemen:

We have acted as counsel to ACADIA Pharmaceuticals Inc., a Delaware corporation (the “**Company**”), in connection with the filing of a Registration Statement on Form S-3 (the “**Registration Statement**”) under the Securities Act of 1933, as amended (the “**Securities Act**”), relating to an aggregate of 20,000,000 shares of common stock, par value \$0.0001 per share (“**Common Stock**”), of the Company (the “**Shares**”). The Shares are being registered for offering and sale from time to time pursuant to Rule 415 of the General Rules and Regulations promulgated under the Securities Act (the “**Securities Act Rules**”).

In connection with this opinion, we have examined and relied upon the originals, or copies certified to our satisfaction, of such records, documents, certificates, opinions, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. As to certain factual matters, we have relied upon certificates of the officers of the Company and have not sought independently to verify such matters.

In rendering this opinion, we have assumed the genuineness and authenticity of all signatures on original documents; the authenticity of all documents submitted to us as originals; the conformity to originals of all documents submitted to us as copies; the accuracy, completeness and authenticity of certificates of public officials; and the due authorization, execution and delivery of all documents where authorization, execution and delivery are prerequisites to the effectiveness of such documents. We have also assumed that, at the time of issuance and sale of the Shares, a sufficient number of shares of Common Stock is authorized and reserved or available for issuance and that the consideration for the issuance and sale of such Shares is not less than the par value of the Common Stock, and that, prior to any offering and sale of the Shares, the Company’s board of directors (the “**Board**”), including any appropriate committee appointed thereby, will duly authorize the terms of and the prices at which the Shares are to be issued and sold.

Our opinion herein is expressed solely with respect to the federal laws of the United States and the Delaware General Corporation Law. We express no opinion as to whether the laws of any jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing and in reliance thereon, and subject to the qualifications herein stated, we are of the opinion that, with respect to any offering of Shares, when (i) the Registration Statement, as finally amended, has become effective; (ii) an appropriate prospectus supplement with respect to the Shares has been prepared, delivered and filed in compliance with the Securities Act and the applicable Securities Act Rules; (iii) if the Shares are to be sold pursuant to a purchase, underwriting or similar agreement, such purchase, underwriting or similar agreement has been duly authorized, executed and delivered by the Company and the other parties thereto and has become a valid and binding agreement of the Company; (iv) the Board, including any appropriate committee appointed thereby, and appropriate officers of the Company have taken all necessary corporate action to approve the issuance and terms of the Shares and related matters; and (v) the terms of the Shares and of their issuance and sale have been duly established in conformity with the operative certificate of incorporation and bylaws of the Company and the Delaware General Corporation Law so as not to violate any applicable law, the operative certificate of incorporation or bylaws of the Company or result in a default under or breach of any agreement or instrument binding upon the Company and so as to comply with any requirement or restriction imposed by any court or governmental body having jurisdiction over the Company, then the Shares, when issued and sold in accordance with a duly authorized, executed and delivered purchase, underwriting or similar agreement, will be duly authorized, validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our firm under the caption “Legal Matters” in the prospectus included in the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Jane K. Adams

Jane K. Adams

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated March 10, 2011 relating to the financial statements, which appears in ACADIA Pharmaceuticals Inc.'s Annual Report on Form 10-K for the year ended December 31, 2010. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/PricewaterhouseCoopers LLP

San Diego, California
December 23, 2011