

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

D. Bradley Peck, Esq.
Sean M. Clayton, Esq.
Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121-1909
(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.

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

Non-accelerated filer

(Do not check if a smaller reporting company)

Accelerated filer

Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Number of Shares to be Registered (1)(2)	Proposed Maximum Offering Price Per Share (3)	Proposed Maximum Aggregate Offering Price (3)	Amount of Registration Fee
Common Stock, \$0.0001 par value	16,963,350	\$1.18	\$20,016,753	\$2,324

(1) Consists of an aggregate of 12,565,446 shares of common stock and 4,397,904 shares of common stock that may be issued upon the exercise of warrants, all of which were acquired by the selling stockholders in a private placement.

(2) Pursuant to Rule 416 under the Securities Act, the shares being registered hereunder include such indeterminate number of additional shares of common stock as may be issuable as a result of stock splits, stock dividends or similar transactions with respect to the shares being registered hereunder.

(3) 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 January 7, 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. The selling stockholders 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 JANUARY 14, 2011

PROSPECTUS



Common Stock

This prospectus relates to the disposition from time to time of up to 16,963,350 shares of our common stock, which includes 4,397,904 shares of our common stock issuable upon the exercise of warrants, which are held by the selling stockholders named in this prospectus. The selling stockholders acquired the common stock and the warrants to purchase common stock from us in a private placement that closed in January 2011 and that is more fully described in the section entitled "Prospectus Summary". We are not selling any common stock under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholders. We will, however, receive the net proceeds of any warrants exercised for cash.

The selling stockholders may sell the shares of common stock described in this prospectus in a number of different ways and at varying prices. We provide more information about how the selling stockholders may sell their shares of common stock in the section entitled "Plan of Distribution" on page 6. The selling stockholders will bear all commissions and discounts, if any, attributable to the sale or disposition of the shares, or interests therein. We will bear all costs, expenses and fees in connection with the registration of the shares. We will not be paying any underwriting discounts or commissions in this offering.

Our common stock is traded on the Nasdaq Global Market under the symbol "ACAD." On January 13, 2011, the last reported sale price of our common stock was \$1.64 per share.

An investment in our common stock involves a high degree of risk. You should review carefully the risks and uncertainties referred to under the heading "Risk Factors" beginning on page 3 of this prospectus and under any similar headings in any amendment or supplement to this prospectus or in any filing with the Securities and Exchange Commission that is incorporated by reference herein.

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

, 2011

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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, and the selling stockholders have not, authorized anyone to provide you with different information. No one is making offers to sell or seeking offers to buy these securities 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 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.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere or incorporated by reference into this prospectus. Because it is a summary, it does not contain all of the information that you should consider before investing in our securities. You should read this entire prospectus carefully, including the section entitled “Risk Factors”, any prospectus supplement and the documents that we incorporate by reference into this prospectus, before making an investment decision.

ACADIA Pharmaceuticals Inc.

We are a biopharmaceutical company focused on the development and commercialization of small molecule drugs for the treatment of central nervous system disorders. We currently are developing a portfolio consisting of our four most advanced product candidates including pimavanserin, which is in Phase III development for Parkinson’s disease psychosis. In addition to pimavanserin, we have a product candidate in Phase II for chronic pain and a product candidate in Phase I for glaucoma, both in collaboration with Allergan, Inc., as well as a product candidate in IND-track development for schizophrenia in collaboration with Meiji Seika Kaisha, 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 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. 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.

The Offering

Common stock to be offered by the selling stockholders 16,963,350 shares (1)

Use of Proceeds We will not receive any proceeds from the sale of the shares of common stock covered by this prospectus

Nasdaq Global Market Symbol ACAD

(1) Includes 4,397,904 shares of common stock that may be issued upon the exercise of warrants held by the selling stockholders.

The selling stockholders named in this prospectus may offer and sell up to 16,963,350 shares of our common stock, including 4,397,904 shares of our common stock issuable upon the exercise of warrants. Throughout this prospectus, when we refer to the shares of our common stock being registered on behalf of the selling stockholders, we are referring to the shares of common stock that have been issued pursuant to the securities purchase agreement in the private placement described below, or that may be issuable upon exercise of the warrants sold in the private placement. When we refer to the selling stockholders in this prospectus, we are referring to the investors in the private placement who are named in this prospectus as the selling stockholders and, as applicable, any donees, pledgees, transferees or other successors-in-interest selling shares received after the date of this prospectus from the selling stockholders as a gift, pledge, or other non-sale related transfer.

Private Placement

On January 9, 2011, we entered into a securities purchase agreement with certain accredited investors named in the table in “Selling Stockholders”, pursuant to which we agreed to sell 12,565,446 units, with each unit consisting of one share of our common stock and a warrant to purchase 0.35 shares of our common stock. The warrants have an exercise price of \$1.38 per share, become exercisable on July 12, 2011 and expire on January 11, 2018, unless earlier terminated. Pursuant to the securities purchase agreement, we also agreed to file this registration statement with the Securities and Exchange Commission, or SEC, to register for resale the shares issued in the private placement and the shares issuable upon exercise of the warrants. On January 12, 2011, we completed the private placement and received gross proceeds of approximately \$15 million before deduction of placement agent fees and other transaction expenses.

The issuance of shares of common stock and warrants sold in the private placement were exempt from registration under the Securities Act of 1933, as amended, or the Securities Act, pursuant to the exemption for transactions by an issuer not involving any public offering under Section 4(2) of and Regulation D promulgated under the Securities Act.

RISK FACTORS

An investment in our common stock involves a high degree of risk. Prior to making a decision about investing in our common stock, you should consider carefully the specific risk factors discussed in the sections entitled “Risk Factors” contained in our most recent Annual Report on Form 10-K or Quarterly Report on Form 10-Q, as filed with the SEC, which are incorporated in this prospectus by reference in their entirety, as well as any amendment or updates to our risk factors reflected in subsequent filings with the SEC, including any prospectus supplement hereto. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not presently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow 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 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;
- 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 prospectus supplement hereto. 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 prospectus supplement hereto 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 hereto. 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

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not permitted. You should not assume that the information provided by this prospectus or any prospectus supplement hereto 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 hereto 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 not receive any of the proceeds from the sale of shares of our common stock by the selling stockholders pursuant to this prospectus. A portion of the shares covered by this prospectus are issuable upon exercise of warrants to purchase our common stock. Upon any exercise of any of the warrants for cash, the applicable selling stockholder would pay us the exercise price set forth in the warrants. The cash exercise price of the warrants is \$1.38 per share. We expect to use any such proceeds primarily for our working capital and other corporate and operational purposes. Under certain conditions set forth in the warrants, the warrants are exercisable on a cashless basis. If any of the warrants are exercised on a cashless basis, we would not receive any cash payment from the applicable selling stockholder upon any such exercise of the warrants.

Each selling stockholder will pay any underwriting discounts and commissions and any expenses incurred by the selling stockholder for brokerage, accounting, tax or legal services or any other expenses incurred by such selling stockholder in disposing of shares covered by this prospectus.

SELLING STOCKHOLDERS

On January 12, 2011, we issued to the selling stockholders named below an aggregate of 12,565,446 shares of common stock and warrants to purchase an additional 4,397,904 shares of common stock in a private placement. For more information, see “Prospectus Summary—Private Placement” above. This prospectus relates to the possible resale by the selling stockholders of any or all of the shares of common stock issued in the private placement or issuable upon the exercise of warrants issued in the private placement.

Except for the ownership of the shares of common stock, the selling stockholders have not had any material relationship with us or our affiliates within the past three years.

The table below, including the footnotes, lists the selling stockholders and other information regarding the beneficial ownership of the shares of common stock held by each of the selling stockholders based in part on information provided to us by the selling stockholders. The percentages of shares owned prior to and after the offering are based on 56,314,786 shares of our common stock outstanding as of January 13, 2011, which includes the outstanding shares of common stock offered by this prospectus and the maximum number of shares of our common stock issuable upon exercise of the warrants in full for cash. The number of shares beneficially owned prior to the offering indicates the number of shares of common stock beneficially owned by each selling shareholder, as of January 13, 2011.

The maximum number of shares to be sold column indicates the total number of shares of our common stock, including the shares of common stock issuable upon exercise of the warrants in full for cash, that each selling stockholder may offer under this prospectus.

The shares beneficially owned after offering numbers assume the sale of all of the shares offered by the selling stockholders pursuant to this prospectus, including all of the shares of our common stock issuable upon

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exercise of the warrants. However, because the selling stockholders may sell all or some of their shares under this prospectus from time to time, or in another permitted manner, we cannot assure you as to the actual number of shares that will be sold by the selling stockholders or that will be held by the selling stockholders after completion of any sales. We do not know how long any of the selling stockholders will hold the shares before selling them. Information concerning the selling stockholders may change from time to time and changed information will be presented in a supplement to this prospectus if and when necessary and required.

The selling stockholders may sell all, some or none of their shares in this offering. See “Plan of Distribution”.

<u>Name of Selling Stockholder</u>	<u>Shares Beneficially Owned Prior to Offering (1)</u>		<u>Maximum Number of Shares to be Sold Pursuant to this Prospectus</u>	<u>Shares Beneficially Owned After Offering (2)</u>	
	<u>Number</u>	<u>Percent</u>		<u>Number</u>	<u>Percent</u>
14159, L.P. (3)	156,604	*	151,887	4,717	*
Baker Brothers Life Sciences, L.P. (4)	5,673,434	10.1%	5,502,563	170,871	*
Growth Equity Opportunities Fund II, LLC (5)	6,785,341	12.0	6,785,341	—	—
Venrock Healthcare Capital Partners, L.P. (6)	3,824,217	6.8	3,824,217	—	—
VHCP Co-Investment Holdings, LLC (7)	699,342	1.2	699,342	—	—

* Represents beneficial ownership of less than one percent of the outstanding shares of our common stock.

- (1) The selling stockholders disclaim beneficial ownership of our common stock that exceeds 9.9% of our outstanding common stock. Under the terms of the warrants issued in the private placement, the number of shares of our common stock that may be acquired by the selling stockholders upon any exercise of the warrants is generally limited to the extent necessary to ensure that, following such exercise, the total number of shares of our common stock then beneficially owned by a selling stockholder, together with its affiliates and any other persons or entities whose beneficial ownership, as calculated pursuant to Section 13(d) of the Securities Exchange Act and the applicable regulations of the SEC, would not exceed 9.9% of the total number of shares of our common stock then issued and outstanding. Solely for purposes of this table, the 9.9% limitation is disregarded, and the numbers of shares of common stock beneficially owned do not reflect this limitation. Also for purposes of this table, the warrants are assumed to be exercisable within 60 days, although the warrants are not exercisable until six months following the closing of the private placement.
- (2) The selling stockholders may offer and sell all or part of the common stock covered by this prospectus, but no estimates can be made as to the amount of shares of common stock that will be held by the selling stockholders after the completion of this offering.
- (3) Includes 39,378 shares of common stock issuable upon the exercise of warrants held by 14159, L.P. Julian C. Baker and Felix J. Baker have voting and investment power over the shares held by 14159, L.P.
- (4) Includes 1,426,590 shares of common stock issuable upon the exercise of warrants held by Baker Brothers Life Sciences, L.P. Julian C. Baker and Felix J. Baker have voting and investment power over the shares held by Baker Brothers Life Sciences, L.P.
- (5) Includes 1,759,162 shares of common stock issuable upon the exercise of warrants held by Growth Equity Opportunities Fund II, LLC, or GEO II. The shares of common stock and warrants directly held by GEO II are indirectly held by New Enterprise Associates 13, L.P., or NEA 13, which is the sole member of GEO II; NEA Partners 13, L.P., or NEA Partners 13, which is the sole general partner of NEA 13; NEA 13 GP, LTD, or NEA 13 LTD, which is the sole general partner of NEA Partners 13; and each of the individual directors of NEA 13 LTD. The individual directors of NEA 13 LTD are M. James Barrett, Peter J. Barris, Forest Baskett, Ryan D. Drant, Patrick J. Kerins, Krishna “Kittu” Kolluri, C. Richard Kramlich, David M. Mott, Scott D. Sandell, Ravi Viswanathan and Harry R. Weller. All indirect holders of the above referenced shares and warrants disclaim beneficial ownership of all applicable shares and warrants except to the extent of their actual pecuniary interest therein.

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- (6) Includes 991,463 shares of common stock issuable upon the exercise of warrants held by Venrock Healthcare Capital Partners, L.P, or VHCP. VHCP Management, LLC, or VHCPM, is the general partner of VHCP and may be deemed to beneficially own all shares held by VHCP. VHCPM disclaims beneficial ownership of all shares held by VHCP, except to the extent of its indirect pecuniary interest therein. Bryan E. Roberts and Anders D. Hove are the managers of VHCPM and may be deemed to beneficially own all shares beneficially owned by VHCPM. Mr. Roberts and Mr. Hove disclaim beneficial ownership of all shares beneficially owned by VHCPM, except to the extent of their indirect pecuniary interest therein.
- (7) Includes 181,311 shares of common stock issuable upon the exercise of warrants held by VHCP Co-Investment Holdings, LLC, or Co-Investment. VHCPM is the manager of Co-Investment and may be deemed to beneficially own all shares held by Co-Investment. VHCPM disclaims beneficial ownership of all shares held by Co-Investment, except to the extent of its indirect pecuniary interest therein. Bryan E. Roberts and Anders D. Hove are the managers of VHCPM and may be deemed to beneficially own all shares beneficially owned by VHCPM. Mr. Roberts and Mr. Hove disclaim beneficial ownership of all shares beneficially owned by VHCPM, except to the extent of their indirect pecuniary interest therein.

PLAN OF DISTRIBUTION

The selling stockholders may sell the shares offered by this prospectus. The selling stockholders, including their donees, pledgees, transferees or other successors-in-interest selling shares of common stock received after the date of this prospectus from a selling stockholder as a gift, pledge, partnership distribution or other transfer, may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. To the extent any of the selling stockholders gift, pledge, grant a security interest in, or otherwise transfer the shares offered hereby, such transferees may offer and sell the shares from time to time under this prospectus, provided that this prospectus has been amended under Rule 424(b)(3) or other applicable provision of the Securities Act to include the name of such transferee in the list of selling stockholders under this prospectus if and when necessary or required.

The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. They may use any one or more of the following methods when disposing of shares or interests therein:

- ordinary brokerage transactions and transactions in which a broker-dealer solicits purchasers;
- block trades in which a broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account under this prospectus;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- “at the market” or through market makers or into an existing market for the shares;
- short sales entered into after the effective date of the registration statement of which this prospectus is a part;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise, after the effective date of the registration statement of which this prospectus is a part;

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- through the distribution of the common stock by any selling stockholders to its partners, members or stockholders;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- through one or more underwritten offerings on a firm commitment or best efforts basis;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

In connection with the sale of the shares, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of our common stock short and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The aggregate proceeds to the selling stockholders from the sale of the shares offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering. We will, however, receive the proceeds of any warrants exercised for cash.

The selling stockholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act of 1933, provided that they meet the criteria and conform to the requirements of that rule.

The selling shareholders and any broker-dealers that act in connection with the sale of securities may be deemed to be “underwriters” within the meaning of Section 2(11) of the Securities Act in connection with such sales, and any commissions received by such broker-dealers and any profit on the resale of the securities sold by them while acting as principals may be deemed to be underwriting discounts or commissions under the Securities Act. In the event that any selling stockholder is deemed to be an “underwriter” within the meaning of Section 2(11) of the Securities Act, the selling stockholder will be subject to the prospectus delivery requirements of the Securities Act. The selling stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act. To our knowledge and based upon information we received from the selling stockholders, each selling stockholder that is affiliated with a broker-dealer acquired the shares of common stock being registered hereunder in the ordinary course of business, and, at the time such selling stockholder acquired the shares being registered hereunder, such selling stockholder did not have any agreement or understanding, directly or indirectly, with any person to distribute such shares. To our knowledge, none of the selling stockholders received any shares as underwriting compensation.

To the extent required, the shares of our common stock to be sold, the names of the selling stockholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that includes this prospectus.

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To comply with the securities laws of some states, if applicable, the shares may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the shares may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

We have advised the selling stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares of our common stock in the market and to the activities of the selling stockholders and their affiliates. These rules may limit the timing of purchases and sales of the shares by such selling stockholders. Regulation M may also restrict the ability of any person engaged in the distribution of the shares of common stock to engage in market-making activities with respect to the shares of common stock. All of the foregoing may affect the marketability of the shares of common stock and the ability of any person or entity to engage in market-making activities with respect to the shares of common stock.

We will bear all of the costs, expenses and fees in connection with the registration of the shares of common stock, other than any commissions, discounts or other fees payable to broker-dealers in connection with any sale of shares, which will be borne by the selling stockholder selling such shares of common stock. We have agreed to indemnify the selling stockholders against certain liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

There can be no assurance that any selling stockholder will sell any or all of the shares of common stock registered pursuant to the registration statement, of which this prospectus forms a part.

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.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2009 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.

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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 and any future filings we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act after the date of this prospectus until the termination of the offering of the shares covered by this prospectus (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K):

- Annual Report on Form 10-K for the fiscal year ended December 31, 2009 (including information specifically incorporated by reference into our Form 10-K from our Proxy Statement for our 2010 Annual Meeting of Stockholders);
- Quarterly Reports on Form 10-Q for the quarters ended March 31, 2010, June 30, 2010 and September 30, 2010;
- Current Reports on Form 8-K filed on January 28, 2010, March 3, 2010, March 23, 2010, June 15, 2010, August 5, 2010, September 24, 2010, October 28, 2010, November 9, 2010 and January 12, 2011;
- Description of our common stock contained in our registration statement on Form 8-A dated May 19, 2004; and
- All filings we make with the SEC pursuant to the Exchange Act after the date of the initial registration statement, of which this prospectus is a part, and prior to the effectiveness of the registration statement (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, if any, to those documents 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
SEC registration fee	\$ 2,324
Legal fees and expenses	15,000
Accounting fees and expenses	15,000
Printing and miscellaneous	2,676
Total	\$ 35,000

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.

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Item 16. Exhibits

<u>Exhibit Number</u>	<u>Description</u>
3.1	Amended and Restated Certificate of Incorporation (filed as Exhibit 3.2 to Registration Statement No. 333-113137).
3.2	Amended and Restated Bylaws (filed as 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.
4.2	Form of common stock certificate of Registrant (filed as Exhibit 4.1 to Registration Statement No. 333-52492, dated December 21, 2000).
4.3	Form of Warrant to Purchase Preferred Stock issued to GATX Ventures on May 31, 2002 (filed as Exhibit 4.3 to Registration Statement No. 333-113137).
4.4	Form of Warrant to Purchase Common Stock issued to Kingsbridge Capital Limited on August 4, 2008 (filed as Exhibit 4.4 to Registrant's Quarterly Report on Form 10-Q, filed August 7, 2008).
4.5	Form of Warrant to Purchase Common Stock issued to purchasers in private placement on January 12, 2011.
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

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 SEC 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 SEC 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.

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(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.

(5) That, 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:

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

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

(6) 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 herein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the provisions of Item 15 above, or otherwise, the Registrant has been advised that in the opinion of the SEC 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

<u>Exhibit Number</u>	<u>Description</u>
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4.5	Form of Warrant to Purchase Common Stock issued to purchasers in private placement on January 12, 2011.
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).

FORM OF WARRANT

THIS WARRANT AND THE UNDERLYING SECURITIES HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. THE SECURITIES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER APPLICABLE SECURITIES LAWS OR UNLESS OFFERED, SOLD, PLEDGED, HYPOTHECATED OR TRANSFERRED PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THOSE LAWS. THE COMPANY SHALL BE ENTITLED TO REQUIRE AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED TO THE EXTENT THAT AN OPINION IS REQUIRED PURSUANT TO THE AGREEMENT UNDER WHICH THE SECURITIES WERE ISSUED.

ACADIA PHARMACEUTICALS INC.

WARRANT TO PURCHASE COMMON STOCK

No. CW

January 12, 2011

Void After January 11, 2018

THIS CERTIFIES THAT, for value received, _____, with its principal office at _____, or assigns (the "**Holder**"), is entitled to subscribe for and purchase at the Exercise Price (defined below) from ACADIA Pharmaceuticals Inc., a Delaware corporation, with its principal office at 3911 Sorrento Valley Blvd., San Diego, CA 92121 (the "**Company**") up to _____ shares of the Common Stock of the Company (the "**Common Stock**"), subject to adjustment as provided herein. This Warrant is one of a series of Warrants being issued pursuant to the terms of the Securities Purchase Agreement, dated January 9, 2011, by and among the Company and the original Holder of this Warrant and the other parties named therein (the "**Purchase Agreement**"). Capitalized terms not otherwise defined herein shall have the respective meanings ascribed to such terms in the Purchase Agreement.

1. DEFINITIONS. As used herein, the following terms shall have the following respective meanings:

(a) "**Exercise Period**" shall mean the period commencing July 12, 2011, six months after the date of the closing and ending January 11, 2018, unless sooner terminated as provided below.

(b) "**Exercise Price**" shall mean \$1.38 per share, subject to adjustment pursuant to Section 5 below.

(c) "**Exercise Shares**" shall mean the shares of the Company's Common Stock issued upon exercise of this Warrant, subject to adjustment pursuant to the terms herein, including but not limited to adjustment pursuant to Section 5 below.

2. EXERCISE OF WARRANT.

2.1 Method of Exercise. The rights represented by this Warrant may be exercised in whole or in part at any time during the Exercise Period, by delivery of the following to the Company at its address set forth above (or at such other address as it may designate by notice in writing to the Holder):

(a) An executed Notice of Exercise in the form attached hereto;

(b) Payment of the Exercise Price either (i) in cash or by check or wire transfer of immediately available funds, or (ii) pursuant to a Cashless Exercise, as described below; and

(c) This Warrant.

Upon the exercise of the rights represented by this Warrant, shares of Common Stock shall be issued for the Exercise Shares so purchased, and shall be registered in the name of the Holder or persons affiliated with the Holder, if the Holder so designates, within a reasonable time after the rights represented by this Warrant shall have been so exercised and shall be issued in certificate form and delivered to the Holder, if so requested.

The person in whose name any Exercise Shares are to be issued upon exercise of this Warrant shall be deemed to have become the holder of record of such shares on the date on which this Warrant was surrendered and payment of the Exercise Price was made, irrespective of the date of issuance of the shares of Common Stock, except that, if the date of such surrender and payment is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the close of business on the next succeeding date on which the stock transfer books are open.

2.2 Cashless Exercise. Notwithstanding any provisions herein to the contrary, if, at any time during the Exercise Period, the Current Market Price (as defined below) of one share of Common Stock is greater than the Exercise Price (at the date of calculation as set forth below), in lieu of exercising this Warrant by payment of cash, the Holder may exercise this Warrant by a cashless exercise by surrender of this Warrant at the principal office of the Company together with the properly endorsed Notice of Exercise and the Company shall issue to the Holder a number of shares of Common Stock computed using the following formula:

$$X = \frac{Y(B-A)}{B}$$

Where:

- X = the number of shares of Common Stock to be issued to the Holder.
- Y = the number of shares of Common Stock purchasable upon exercise of all of the Warrant or, if only a portion of the Warrant is being exercised, the portion of the Warrant being exercised.
- A = the Exercise Price.
- B = the Current Market Price of one share of Common Stock.

“Current Market Price” means on any particular date:

(a) if the Common Stock is traded on The Nasdaq Global Market or The Nasdaq Capital Market, the closing price of the Common Stock of the Company on such market on the day prior to the applicable date of valuation;

(b) if the Common Stock is traded on any registered national stock exchange but is not traded on The Nasdaq Global Market or The Nasdaq Capital Market, the closing price of the Common Stock of the Company on such exchange on the day prior to the applicable date of valuation;

(c) if the Common Stock is traded over-the-counter, but not on The Nasdaq Global Market, The Nasdaq Capital Market or a registered national stock exchange, the closing bid price of the Common Stock of the Company on the day prior to the applicable date of valuation; and

(d) if there is no active public market for the Common Stock, the value thereof, as determined in good faith by the Board of Directors of the Company upon due consideration of the proposed determination thereof by the Holder.

2.3 Partial Exercise. If this Warrant is exercised in part only, the Company shall, upon surrender of this Warrant, execute and deliver, within 10 days of the date of exercise, a new Warrant evidencing the rights of the Holder, or such other person as shall be designated in the Notice of Exercise, to purchase the balance of the Exercise Shares purchasable hereunder. In no event shall this Warrant be exercised for a fractional Exercise Share, and the Company shall not distribute a Warrant exercisable for a fractional Exercise Share. Fractional Warrant shares shall be treated as provided in Section 6 hereof.

2.4 No Settlement for Cash. The Warrant cannot be settled with the Company for cash.

2.5 Exercise Limitation. Notwithstanding any provisions herein to the contrary, the Holder shall not be entitled to exercise this Warrant for a number of Warrant Shares in excess of that number of Warrant Shares which, upon giving effect to such exercise, would cause the aggregate number of shares of Common Stock beneficially owned by the Holder to exceed 9.9% of the outstanding shares of the Common Stock following such exercise. For purposes of the foregoing proviso, the aggregate number of shares of Common Stock beneficially owned by the Holder shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which determination of such proviso is being made, but shall exclude the shares of Common Stock which would be issuable upon (i) exercise of the remaining, unexercised Warrants beneficially owned by the Holder and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by the Holder subject to a limitation on conversion or exercise analogous to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this Section 2.5, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act. The Holder may waive the foregoing limitation by written notice to the Company upon not less than 61 days prior written notice (with such waiver taking effect only upon the expiration of such 61 day notice period and applying only to the Holder and not to any other holder of Warrants sold in the Offering). For purposes of this Section 2.5, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in (x) the Company's most recent Form 10-Q or Form 10-K, as the case may be, filed with the SEC on the date thereof, (y) a more recent public announcement by the Company or (z) any other notice by the Company or its transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written request of the Holder, the Company shall within three trading days confirm in writing or by electronic mail to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder since the date as of which such number of outstanding shares of Common Stock was reported.

3. COVENANTS OF THE COMPANY.

3.1 Covenants as to Exercise Shares. The Company covenants and agrees that all Exercise Shares that may be issued upon the exercise of the rights represented by this Warrant will, upon issuance, be validly issued and outstanding, fully paid and nonassessable, and free from all taxes, liens and charges with respect to the issuance thereof. The Company further covenants and agrees that the Company will at all times during the Exercise Period, have authorized and reserved, free from preemptive rights, a sufficient number of shares of its Common Stock to provide for the exercise of the rights represented by this Warrant. If at any time during the Exercise Period the number of authorized but unissued shares of Common Stock shall not be sufficient to permit exercise of this Warrant, the Company will take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock (or other securities as provided herein) to such number of shares as shall be sufficient for such purposes.

3.2 No Impairment. Except and to the extent as waived or consented to by the Holder or otherwise in accordance with Section 11 hereof, the Company will not, by amendment of its Certificate of Incorporation (as such may be amended from time to time), or through any means, avoid or seek to avoid the observance or performance of any of the terms to be observed or performed hereunder by the Company, but will at all times in good faith assist in the carrying out of all the provisions of this Warrant and in the taking of all such action as may be necessary or appropriate in order to protect the exercise rights of the Holder against impairment.

3.3 Notices of Record Date. In the event of any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend which is the same as cash dividends paid in previous quarters) or other distribution, the Company shall mail to the Holder, at least ten days prior to the date specified herein, a notice specifying the date on which any such record is to be taken for the purpose of such dividend or distribution.

3.4 Notice of Expiration. In the event this Warrant is still outstanding, the Company shall provide written notice to the Holder of the impending expiration of this Warrant no more than 90 days and no less than 60 days prior to January 11, 2018.

4. REPRESENTATIONS OF HOLDER.

4.1 Acquisition of Warrant for Personal Account. The Holder represents and warrants that it is acquiring the Warrant and the Exercise Shares solely for its account for investment and not with a present view toward the public or distribution of said Warrant or Exercise Shares or any part thereof and has no intention of selling or distributing said Warrant or Exercise Shares or any arrangement or understanding with any other persons regarding the sale or distribution of said Warrant or, except in accordance with the provisions of Article 6 of the Purchase Agreement, the Exercise Shares, and except

as would not result in a violation of the Securities Act. The Holder will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) the Warrant except in accordance with the Securities Act and will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) the Exercise Shares except in accordance with the provisions of Article 6 of the Purchase Agreement or pursuant to and in accordance with the Securities Act.

4.2 Securities Are Not Registered.

(a) The Holder understands that the offer and sale of the Warrant or the Exercise Shares have not been registered under the Securities Act on the basis that no distribution or public offering of the stock of the Company is to be effected. The Holder realizes that the basis for the exemption may not be present if, notwithstanding its representations, the Holder has a present intention of acquiring the securities for a fixed or determinable period in the future, selling (in connection with a distribution or otherwise), granting any participation in, or otherwise distributing the securities. The Holder has no such present intention.

(b) The Holder recognizes that the Warrant and the Exercise Shares must be held indefinitely unless they are subsequently registered under the Securities Act or an exemption from such registration is available. The Holder recognizes that the Company has no obligation to register the Warrant or, except as provided in the Purchase Agreement, the Exercise Shares of the Company, or to comply with any exemption from such registration.

(c) The Holder is aware that neither the Warrant nor the Exercise Shares may be sold pursuant to Rule 144 adopted under the Securities Act unless certain conditions are met, including, among other things, the existence of a public market for the shares, the availability of certain current public information about the Company, the resale following the required holding period under Rule 144 and the number of shares being sold during any three month period not exceeding specified limitations. Holder is aware that any such sale made in reliance on Rule 144, if Rule 144 is available, may be made only in accordance with the terms of Rule 144.

4.3 Disposition of Warrant and Exercise Shares.

(a) The Holder further agrees not to make any disposition of all or any part of the Warrant or Exercise Shares in any event unless and until:

(i) The Company shall have received a letter secured by the Holder from the SEC stating that no action will be recommended to the SEC with respect to the proposed disposition;

(ii) There is then in effect a registration statement under the Securities Act covering such proposed disposition and such disposition is made in accordance with said registration statement; or

(iii) The Holder shall have notified the Company of the proposed disposition and shall have furnished the Company with a detailed statement of the circumstances surrounding the proposed disposition, and if reasonably requested by the Company, the Holder shall have furnished the Company with an opinion of counsel, reasonably satisfactory to the Company, for the Holder to the effect that such disposition will not require registration of such Warrant or Exercise Shares under the Securities Act or any applicable state securities laws; *provided*, that no opinion shall be required for any disposition made or to be made in accordance with the provisions of Rule 144.

(b) The Holder understands and agrees that all certificates evidencing the Exercise Shares to be issued to the Holder may bear a legend in substantially the following form; *provided*, that such legend shall be removed (or such Exercise Shares shall be issued without such legend upon exercise of this Warrant) as required pursuant to Section 3.8(b) of the Purchase Agreement:

THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES. THE SECURITIES MAY NOT BE SOLD, OFFERED FOR SALE, PLEDGED, HYPOTHECATED, TRANSFERRED OR ASSIGNED IN THE ABSENCE OF AN EFFECTIVE REGISTRATION STATEMENT FOR THE SECURITIES UNDER APPLICABLE SECURITIES LAWS, OR UNLESS OFFERED, SOLD, PLEDGED,

HYPOTHECATED OR TRANSFERRED PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THOSE LAWS. THE COMPANY SHALL BE ENTITLED TO REQUIRE AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED TO THE EXTENT THAT AN OPINION IS REQUIRED PURSUANT TO THE AGREEMENT UNDER WHICH THE SECURITIES WERE ISSUED.

5. ADJUSTMENT OF EXERCISE PRICE. In the event of changes in the outstanding Common Stock of the Company by reason of stock dividends, split-ups, recapitalizations, reclassifications, combinations or exchanges of shares, separations, reorganizations, liquidations, or the like, the number and class of shares available under the Warrant in the aggregate and the Exercise Price shall be correspondingly adjusted to give the Holder of the Warrant, on exercise for the same aggregate Exercise Price, the total number, class, and kind of shares as the Holder would have owned had the Warrant been exercised prior to the event and had the Holder continued to hold such shares until after the event requiring adjustment. The form of this Warrant need not be changed because of any adjustment in the number, class, and kind of shares subject to this Warrant. The Company shall promptly provide a certificate from its Chief Financial Officer notifying the Holder in writing of any adjustment in the Exercise Price and/or the total number, class, and kind of shares issuable upon exercise of this Warrant, which certificate shall specify the Exercise Price and number, class and kind of shares under this Warrant after giving effect to such adjustment.

6. FRACTIONAL SHARES. No fractional shares shall be issued upon the exercise of this Warrant as a consequence of any adjustment pursuant hereto. All Exercise Shares (including fractions) issuable upon exercise of this Warrant may be aggregated for purposes of determining whether the exercise would result in the issuance of any fractional share. If, after aggregation, the exercise would result in the issuance of a fractional share, the Company shall, in lieu of issuance of any fractional share, pay the Holder otherwise entitled to such fraction a sum in cash equal to the product resulting from multiplying the then current fair market value of an Exercise Share by such fraction.

7. CERTAIN EVENTS. In the event of, at any time during the Exercise Period, any capital reorganization, or any reclassification of the capital stock of the Company (other than a change in par value or from par value to no par value or no par value to par value or as a result of a stock dividend or subdivision, split-up or combination of shares), or the consolidation or merger of the Company with or into another corporation (other than a merger solely to effect a reincorporation of the Company into another state), in each case, in which the stockholders of the Company immediately prior to such capital reorganization, reclassification, consolidation or merger, will hold less than a majority of the outstanding shares of the Company or resulting corporation immediately after such capital reorganization, reclassification, consolidation or merger, or the sale or other disposition of all or substantially all of the properties and assets of the Company and its subsidiaries, taken as a whole, in its entirety to any other person, other than sales or other dispositions that do not require stockholder approval (each, an **“Event”**), the Company shall provide to the Holder ten days’ advance written notice of such Event, and the Holder shall have the option, in its sole discretion, to allow any unexercised portion of the Warrant to be deemed automatically exercised pursuant to Section 2.2. This Warrant will be binding upon the successors and assigns of the Company upon an Event.

8. NO STOCKHOLDER RIGHTS. This Warrant in and of itself shall not entitle the Holder to any voting rights or other rights as a stockholder of the Company.

9. TRANSFER OF WARRANT. Subject to applicable laws and compliance with Section 4.3 hereof, this Warrant and all rights hereunder are transferable, by the Holder in person or by duly authorized attorney, upon delivery of this Warrant and the form of assignment attached hereto to any transferee designated by Holder. The transferee shall sign an investment letter in form and substance satisfactory to the Company.

10. LOST, STOLEN, MUTILATED OR DESTROYED WARRANT. If this Warrant is lost, stolen, mutilated or destroyed, the Company may, on such terms as to indemnity or otherwise as it may reasonably impose (which shall, in the case of a mutilated Warrant, include the surrender thereof), issue a new Warrant of like denomination and tenor as the Warrant so lost, stolen, mutilated or destroyed. Any such new Warrant shall constitute an original contractual obligation of the Company, whether or not the allegedly lost, stolen, mutilated or destroyed Warrant shall be at any time enforceable by anyone.

11. MODIFICATIONS AND WAIVER. This Warrant and any provision hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the Company and (i) Purchasers holding Warrants representing at least 80% of the number of Exercise Shares then issuable upon exercise of the Warrants sold in the Offering, *provided, however*, that such modification, amendment or waiver is made with respect to all Warrants issued in the Offering and does not adversely affect the Holder without adversely affecting all holders of Warrants in a similar manner; or (ii) the Holder.

12. NOTICES, ETC. All notices required or permitted hereunder shall be in writing and shall be deemed effectively given: (a) upon personal delivery to the party to be notified, (b) when sent by confirmed email, telex or facsimile if sent during normal business hours of the recipient, if not, then on the next business day, (c) five days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (d) one business day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt. All communications shall be sent to the Company at the address listed on the signature page and to the Holders at the addresses on the Company records, or at such other address as the Company or Holder may designate by ten days' advance written notice to the other party hereto.

13. ACCEPTANCE. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

14. GOVERNING LAW. This Warrant and all rights, obligations and liabilities hereunder shall be governed by the laws of the State of New York without regard to the principles of conflict of laws.

15. DESCRIPTIVE HEADINGS. The descriptive headings of the several paragraphs of this Warrant are inserted for convenience only and do not constitute a part of this Warrant. The language in this Warrant shall be construed as to its fair meaning without regard to which party drafted this Warrant.

16. SEVERABILITY. The invalidity or unenforceability of any provision of this Warrant in any jurisdiction shall not affect the validity or enforceability of such provision in any other jurisdiction, or affect any other provision of this Warrant, which shall remain in full force and effect.

17. ENTIRE AGREEMENT. This Warrant constitutes the entire agreement between the parties pertaining to the subject matter contained in it and supersedes all prior and contemporaneous agreements, representations, and undertakings of the parties, whether oral or written, with respect to such subject matter.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its duly authorized officer as of January 12, 2011.

ACADIA PHARMACEUTICALS INC.

By: _____

Name: _____

Title:

Address: 3911 Sorrento Valley Blvd.
San Diego, CA 92121
Attention: Chief Financial Officer
Facsimile: (858) 320-8637

NOTICE OF EXERCISE

TO: ACADIA PHARMACEUTICALS INC.

(1) The undersigned hereby elects to (check one box only):

q purchase ___ shares of the Common Stock of ACADIA Pharmaceuticals Inc. (the "Company") pursuant to the terms of the attached Warrant, and tenders herewith payment of the exercise price in full for such shares, together with all applicable transfer taxes, if any.

q purchase the number of shares of Common Stock of the Company by cashless exercise pursuant to the terms of the Warrant as shall be issuable upon cashless exercise of the portion of the Warrant relating to ___ shares, and shall tender payment of all applicable transfer taxes, if any.

(2) Please issue a certificate or certificates representing said shares of Common Stock in the name of the undersigned or in such other name as is specified below:

(Name)

(Address)

(3) The undersigned represents that (i) the aforesaid shares of Common Stock are being acquired for the account of the undersigned for investment and not with a view to, or for resale in connection with, the distribution thereof and that the undersigned has no present intention of distributing or reselling such shares; (ii) the undersigned is aware of the Company's business affairs and financial condition and has acquired sufficient information about the Company to reach an informed and knowledgeable decision regarding its investment in the Company; (iii) the undersigned is experienced in making investments of this type and has such knowledge and background in financial and business matters that the undersigned is capable of evaluating the merits and risks of this investment and protecting the undersigned's own interests; (iv) the undersigned understands that the shares of Common Stock issuable upon exercise of this Warrant have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), by reason of a specific exemption from the registration provisions of the Securities Act, which exemption depends upon, among other things, the bona fide nature of the investment intent as expressed herein, and, because such securities have not been registered under the Securities Act, they must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available; (v) the undersigned is aware that the aforesaid shares of Common Stock may not be sold pursuant to Rule 144 adopted under the Securities Act unless certain conditions are met and until the undersigned has held the shares for the time period prescribed by Rule 144, that among the conditions for use of the Rule is the availability of current information to the public about the Company and that the Company has not made such information available and has no present plans to do so; and (vi) the undersigned agrees not to make any disposition of all or any part of the aforesaid shares of Common Stock unless and until there is then in effect a registration statement under the Securities Act covering such proposed disposition and such disposition is made in accordance with said registration statement, or the undersigned has furnished the Company with an opinion of counsel, reasonably satisfactory to the Company, to the effect that such disposition is not required to be registered pursuant to the Securities Act or any applicable state securities laws; provided, that no opinion shall be required for any disposition made or to be made in accordance with the provisions of Rule 144.

(Date)

(Signature)

(Print name)

ASSIGNMENT FORM

(To assign the foregoing Warrant, subject to compliance with section 4.3 hereof, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name:

(Please Print)

Address:

(Please Print)

Dated: _____, 20__

Holder's
Signature: _____

Holder's
Address: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatever. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

[Cooley Letterhead]

J. Patrick Loofbourrow
(858) 550-6089
loof@cooley.com

January 14, 2011

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

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by ACADIA Pharmaceuticals Inc., a Delaware corporation (the "**Company**"), of a Registration Statement on Form S-3 (the "**Registration Statement**") with the Securities and Exchange Commission, including a related prospectus filed with the Registration Statement (the "**Prospectus**"), covering the registration for resale of up to 16,963,350 shares of the Common Stock, \$0.0001 par value, of the Company on behalf of certain selling stockholders, including 12,565,446 shares of Common Stock (the "**Shares**") and up to 4,397,904 shares of Common Stock (the "**Warrant Shares**") issuable upon the exercise of certain warrants held by such selling stockholders (the "**Warrants**").

In connection with this opinion, we have examined and relied upon the Registration Statement, the Prospectus, the Warrants, the Company's Amended and Restated Certificate of Incorporation, its Amended and Restated Bylaws, and the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below. We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that (i) the Shares are validly issued, fully paid and nonassessable, and (ii) the Warrant Shares, when issued and sold in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus and to the filing of this opinion as an exhibit to the Registration Statement.

Very truly yours,

Cooley LLP

By: /s/ J. Patrick Loofbourrow
J. Patrick Loofbourrow

4401 EASTGATE MALL, SAN DIEGO, CA92121 T: (858) 550-6000 F: (858) 550-6420 WWW.COOLEY.COM

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 9, 2010 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in ACADIA Pharmaceuticals Inc.'s Annual Report on Form 10-K for the year ended December 31, 2009. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

San Diego, California
January 14, 2011