Prospectus Supplement (To Prospectus dated August 18, 2009)





We are offering 782,339 shares of our common stock to Medeon Fastigheter AB. Our common stock is listed on the NASDAQ Global Market under the symbol "ACAD". On April 7, 2011, the last reported sale price for our common stock was \$1.69. We will not be paying any underwriting discounts or commissions in this offering.

Investing in our common stock involves a high degree of risk. See "Risk Factors" on page S-1 of this prospectus supplement.

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

Delivery of the shares of common stock is expected to be made on April 8, 2011.

April 8, 2011

TABLE OF CONTENTS

Prospectus Supplement

About this Prospectus Supplement	S-ii
Risk Factors	S-1
Note Regarding Forward-Looking Statements	S-1
<u>Use of Proceeds</u>	S-2
<u>Plan of Distribution</u>	S-2
<u>Legal Matters</u>	S-2
<u>Experts</u>	S-2
Where You Can Find More Information	S-2
Prospectus	
About this Prospectus	i
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 SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to, updates and changes information contained in the accompanying prospectus and the documents incorporated by reference. The second part is the accompanying prospectus, which gives more general information. To the extent the information contained in this prospectus supplement differs from or conflicts with the information contained in the accompanying prospectus or any document incorporated by reference, the information in this prospectus supplement will control.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We 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 supplement is accurate as of the date on the front cover of this prospectus supplement only and that any information we have incorporated by reference or included in the accompanying prospectus is accurate only as of the date given in the document incorporated by reference or as of the date of the prospectus, as applicable, regardless of the time of delivery of this prospectus supplement, the accompanying prospectus or any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

Unless otherwise mentioned or unless the context requires otherwise, references in this prospectus supplement or the accompanying prospectus to "ACADIA," the "Company," "we," "us" and "our" refer to ACADIA Pharmaceuticals Inc., together with its wholly-owned subsidiaries.

"ACADIA" is our trademark. This prospectus supplement 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.

RISK FACTORS

Before you make a decision to invest in our common stock, you should consider carefully the risks described below and in the section entitled "Risk Factors" contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, as filed with the Securities and Exchange Commission, or the SEC, on March 10, 2011, together with other information in this prospectus supplement, the accompanying prospectus and the information incorporated by reference herein and therein. If any of the events described actually occurs, our business, operating results, prospects or financial condition could be materially and adversely affected. This could cause the trading price of our common stock to decline and you may lose all or part of your investment. The risks described below or in our Annual Report on Form 10-K are not the only ones that we face. Additional risks not presently known to us or that we currently deem immaterial may also affect our business operations.

Risk Related to This Offering

You may experience future dilution as a result of future equity offerings or other equity issuances.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock, which could result in dilution to then-existing stockholders.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, and the documents incorporated by reference herein and therein 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 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 in the documents incorporated by reference herein, including under the heading "Risk Factors." Also, these forward-looking statements represent our estimates and assumptions only as of the date of the document containing the applicable statement.

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. Before deciding to purchase our common stock, you should carefully consider the risk factors incorporated by reference herein, in addition to the other information set forth in this prospectus supplement, the accompanying prospectus and in the documents incorporated by reference herein and therein.

USE OF PROCEEDS

We are offering 782,339 shares of our common stock to Medeon Fastigheter AB, or Medeon, in connection with a termination agreement related to a lease between our Swedish subsidiary, Nordsviten AB, and Medeon, a subsidiary of Wihlborgs Fastigheter AB, or Wihlborgs. Pursuant to the termination agreement, in consideration for the issuance of the offered shares and the payment of cash, (i) Nordsviten will be relieved from all of its obligations under the lease agreement (ii) our general agreement with Medeon dated as of April 22, 2004 will be terminated, and (iii) Medeon and Wihlborgs will release any claims that they may have against us and Nordsviten related in any way to the lease or the general agreement. We will not receive any cash proceeds from the issuance of the shares in this offering.

PLAN OF DISTRIBUTION

We are offering 782,339 shares of our common stock to Medeon in connection with the termination agreement as discussed above under "Use of Proceeds". Neither we nor any member of our management will be compensated for the foregoing distribution of common stock other than the regular compensation that members of management receive under the terms of their employment. Any expenses incurred in this distribution will be borne by us.

LEGAL MATTERS

Cooley LLP, San Diego, California, will pass upon the validity of the issuance of the shares being sold in this offering.

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 supplement 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 supplement, 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 supplement, 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 with the SEC 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 supplement.

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 supplement and the accompanying 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 supplement until the termination of the offering of the shares covered by this prospectus supplement (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K):

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, filed with the SEC on March 10, 2011;
- our Current Reports on Form 8-K filed on January 12 and April 1, 2011; and

• the description of our common stock contained in our registration statement on Form 8-A dated May 19, 2004.

You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statement, and amendments 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. We do not consider information contained on, or that can be accessed through, our website to be part of this prospectus supplement or the related registration statement.

In addition, we will furnish without charge to each person, including any beneficial owner, to whom a prospectus supplement and accompanying prospectus is delivered, on written or oral request of such person, a copy of any or all of the documents incorporated by reference in this prospectus supplement and the accompanying prospectus (not including exhibits to such documents, unless such exhibits are specifically incorporated by reference in this prospectus supplement or the accompanying prospectus or into such documents). Such requests may be directed to:

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

782,339 Shares



Common Stock

Prospectus Supplement
April 8, 2011