



February 4, 2010

VIA FEDEX AND EDGAR

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street, N.E.
Mail Stop 6010
Washington, D.C. 20549
Attention: Michael Rosenthal
Jeffrey P. Riedler

**Re: ACADIA Pharmaceuticals Inc.
Form 10-K for the fiscal year ended 12/31/2008
Filed March 10, 2009
File No. 000-50768**

Ladies and Gentlemen:

We are writing in response to comments received from the staff of the Securities and Exchange Commission (the "**Commission**") by letter dated December 15, 2009 (the "**Comment Letter**") with respect to the Annual Report on Form 10-K for the fiscal year ended December 31, 2008 (the "**Form 10-K**") of ACADIA Pharmaceuticals Inc. (the "**Company**") filed with the Commission on March 10, 2009. The numbering of the paragraphs below corresponds to the numbering in the Comment Letter, the text of which we have incorporated into this response letter for convenience.

The Company acknowledges that (1) it is responsible for the adequacy and accuracy of the disclosures in the filing, (2) staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing and (3) the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Staff Comments and Company Responses

Form 10-K

Collaboration Agreements, page 11

1. *Please advise us whether your July 2002 agreement with Aventis remains in effect and whether you have received payments from Aventis (now Sanofi-Aventis) within the last year or may be entitled to receive payments in the future under this agreement. Please file this agreement as an exhibit or provide your analysis why such filing is not required by Item 601(b)(10) of Regulation S-K.*

Response: Our July 2002 agreement with Aventis remains in effect. Under the terms of the agreement, we receive a limited annual license fee, without the possibility of milestone or other additional payments. The annual license fees are not material to us and the agreement has never been deemed material to the Company, due to the size of the fee, the fact that the license is limited in scope and nonexclusive as to our underlying technology, and the fact that the field of interest of the license grant is unrelated to our current, and historical, areas of research focus. As the agreement is not material to us, we have never filed it as a material contract and do not believe we are required to do so under Item 601(b)(10) of Regulation S-K.

Intellectual Property, page 12

2. *To the extent not in conflict with the grant of confidential treatment for portions of the agreement, please describe all of the material terms of your November 30, 2006 agreement with the Ipsen Group.*

Response: As the license agreement with Ipsen provides a limited license to intellectual property that complements our core patent rights for our serotonin program, it is limited in scope. We do not believe that there are any terms of the license agreement with Ipsen that are material to us and not disclosed in our filings with the SEC or in the redacted copy of the agreement filed with the SEC. The specific patent rights licensed and the compounds covered by the license are covered by the confidentiality grant. In addition, while the future payments that may be made pursuant to the license agreement are covered by the confidentiality order, we have disclosed the aggregate potential amount payable under the contract in the Liquidity and Capital Resources section of *Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations* and in *Note 12. Commitments and Contingencies* to our consolidated financial statements. In our next Annual Report for the year ended December 31, 2009, we will clarify that the intellectual property license we refer to in those sections is the license agreement with Ipsen.

3. *Please expand your disclosure here to include the expiration dates for your material patents, or a range of expiration dates for each group of patents you associate with each of your material product candidates.*

Response: In our next Annual Report for the year ended December 31, 2009, we will include patent expiration ranges for our patents that relate to our lead compound, pimavanserin, our compounds in clinical trials with Allergan, and our PCAP compounds that we partnered in 2009 with Meiji Seika Kaisha, which are our current material product candidates.

Schedule 14A

Compensation Discussion and Analysis

2008 Annual Incentive Bonuses, page 20

4. *Notwithstanding the Compensation Committee's decision to pay no annual incentive bonuses for 2008, please be advised that if performance goals were established for your named executive officers you are required to disclose in your Compensation Discussion and Analysis the specific goals and the degree of attainment of those goals. Therefore, if goals have been established by the Compensation Committee for 2009, you should be prepared to discuss these in your next proxy statement. As such please provide draft disclosure for your 2010 proxy statement discussion of the detailed set of individual and corporate performance goals for each named executive officer. In addition, please confirm that in your next proxy statement you will disclose the extent to which each officer's performance met, exceeded or fell short of the goal(s) and how his or her level of performance related to the bonus ultimately awarded. To the extent that pre-established goals and the executive's level of performance are quantifiable, the discussion in your proxy statement should also be quantified.*

Response: As in 2008, the Compensation Committee established corporate performance goals for 2009 which will be evaluated in determining the executive officers' bonus awards, if any. Below is a draft of the disclosure the Company proposes to include in its 2010 proxy statement with respect to these corporate performance goals. The Compensation Committee does not establish separate individual performance goals for the Company's executive officers. In response to the staff's request, the Company hereby confirms that it will disclose in its next proxy statement the Compensation Committee's evaluation of corporate performance goal achievement and how corporate goal achievement related to the bonuses, if any, which are ultimately awarded. As described below in the Company's draft disclosure, the Compensation Committee does not make determinations of corporate goal achievement on a goal-by-goal basis, but rather evaluates goal achievement as a whole and considers that achievement, with other considerations, in exercising its discretion to award bonuses.

Annual Incentive Bonuses. In addition to base salary, the Compensation Committee evaluates the performance of, and recommends for approval to our Board of Directors the bonuses payable to, our executive officers on an annual basis. We believe that performance-based cash bonuses play an important role in providing incentives to our executives to achieve defined annual corporate goals. Each year, the Compensation Committee reviews a detailed set of overall corporate performance goals for the current year prepared by management and presented to the full Board of Directors that are intended to apply to the executives' bonus awards. Annual incentive bonuses are based on a blend of the overall performance of the executive's functional area, including his relative individual contributions, and our company's overall performance in achieving corporate goals, while taking into account competitive market information. Since our Chief Executive Officer is responsible for the performance of the entire company, his bonus is based on the company's overall performance in achieving corporate goals, while taking into account competitive market information. The Compensation Committee does not assess the achievement of our corporate goals on an individual or categorical basis, but rather reviews the Company's achievement of the corporate goals in their totality, taking into account the Company's overall performance for the year. The Compensation Committee also does not make a quantifiable assessment of total corporate goal achievement. Instead, corporate goal achievement as a whole is weighed in the discretion of the Compensation Committee with the other information available with respect to each executive officer's performance during the year and competitive market information.

The target annual incentive bonuses for the executive officers in 2009 were: 50% for Dr. Hacksell, 35% for Dr. Mills and Mr. Aasen, and 30% for Dr. Tolf and Mr. Kaiser. Dr. Tolf and Mr. Kaiser are no longer employed by us. The Compensation Committee has the discretion to recommend bonus amounts to our Board from 0 to 150% of the applicable target percentage based on the performance of the individual executive officer, his functional area within the company and the company as whole. The degree to which the corporate goals were achieved is taken into account by the Compensation Committee in determining percentages of target awards, and the level of achievement is not associated with any particular compensation outcome, which remains in the discretion of the Compensation Committee regardless of goal achievement.

For 2009, the Compensation Committee established corporate goals related to the following categories: our pimavanserin program, lifecycle management of pimavanserin, our ACP-106 program, our PCAP program, drug discovery, business development, financing and investor relations, strategic marketing and commercialization, and administration and infrastructure.

- Pimavanserin program goals consisted of completing Phase III and other studies, performing other enabling development, conducting market research and pre-marketing activities, and preparing publications and presentations.
- Pimavanserin lifecycle management goals consisted of developing a lifecycle management strategy, completing development plans, clinical trial preparations and marketing analysis for specified indications and continuing to pursue patent protection for pimavanserin.
- ACP-106 program goals consisted of completing specified studies and providing research support.
- PCAP program goals consisted primarily of signing a collaboration agreement for the program and then delivering on appropriate development preparations to support any such collaboration.
- Drug discovery goals consisted of supporting project initiatives under our collaboration with Allergan and our grant from the Michael J. Fox Foundation, supporting partnering activities with respect to specified compounds, and formulating drug discovery strategies.
- Business development goals included completing a partnership of pimavanserin, evaluating and executing transactions related to specified assets, extending our collaboration with Allergan and evaluating potential business development and strategic opportunities.
- Financing and investor relations goals included strengthening our cash position, and executing cost savings and financing opportunities.
- Strategic marketing and commercialization goals consisted of completing marketing research and plans, holding advisory board meetings, analyzing price and reimbursement matters and updating commercialization plans.
- Administration and infrastructure goals consisted of enhancing our reporting and financial modeling capabilities, evaluating facilities strategies, executing human resources programs, and developing and securing intellectual property assets related to specified programs.”

The Company respectfully requests the staff’s assistance in completing the review of the Company’s response. Please advise us if we can provide any further information or assistance to facilitate your review. Please direct any further comments or questions regarding this response letter to Glenn Baity, the Company’s general counsel, at (858) 320-8601 or to Brad Peck of Cooley Godward Kronish LLP, the Company’s outside legal counsel, at (858) 550-6012.

Sincerely,

ACADIA Pharmaceuticals Inc.

/s/ Thomas H. Aasen

Thomas H. Aasen

Vice President and Chief Financial Officer

cc: Glenn F. Baity, ACADIA Pharmaceuticals Inc.
D. Bradley Peck, Cooley Godward Kronish LLP

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