



D. Bradley Peck
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September 19, 2008

United States Securities and Exchange Commission
Mail Stop 6010
100 F Street N.E.
Washington, D.C. 20549
Attn: Jeffrey P. Riedler
Sebastian Gomez Abero

**RE: ACADIA Pharmaceuticals Inc.
Registration Statement on Form S-3 (File No. 333-153347)
Amendment No. 1**

Dear Messrs. Riedler and Abero:

We are writing in response to your letter dated September 15, 2008 (the "**Comment Letter**") with respect to a Registration Statement on Form S-3, File No. 333-153347 (the "**Registration Statement**"), originally filed by ACADIA Pharmaceuticals Inc. (the "**Company**") on September 5, 2008. Enclosed for electronic filing via EDGAR pursuant to the Securities Act of 1933, as amended, on behalf of the Company, is Amendment No. 1 ("**Amendment No. 1**") to the Registration Statement. The copy of Amendment No. 1 that is enclosed with the paper copy of this letter is marked to show changes from the Registration Statement as originally filed with the Securities and Exchange Commission (the "**Commission**"). Amendment No. 1 is being filed in response to a comment received from the staff of the Commission (the "**Staff**") as set forth in the Comment Letter. For convenience, the text of the comment has been incorporated into this letter in addition to the Company's response below.

Staff Comment and Company Response

General

We note that the registration statement relates to 7,422,364 shares of common stock that may be sold by either the selling stockholder or the registrant. The registration statement may not register shares to be sold by the selling stockholder or, in the alternative, by the registrant. Instead, the registration statement must separately identify the shares to be sold by the selling stockholder and the shares to be sold by the registrant. Please revise your registration statement accordingly.

Response: The Company acknowledges the Staff's comment and has revised the Registration Statement through Amendment No. 1 such that all 7,422,364 shares of the Company's Common Stock registered thereunder are identified as shares to be sold by the selling stockholder. All references to the Company's ability to alternatively sell such shares under the Registration Statement have been removed.

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The Company respectfully requests the Staff's assistance in completing the review of the Registration Statement and Amendment No. 1 as soon as possible. Please advise us if we can provide any further information or assistance to facilitate your review. Please direct any further comments or questions regarding Amendment No. 1 or this response letter to me at (858) 550-6012 or to Sean Clayton at (858) 550-6034.

Sincerely,

/s/ D. Bradley Peck

D. Bradley Peck

cc: Glenn F. Baity, ACADIA Pharmaceuticals Inc.
J. Patrick Loofbourrow, Cooley Godward Kronish LLP
Sean M. Clayton, Cooley Godward Kronish LLP

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