

Mail Stop 6010

October 21, 2008

Stephen B. Thompson  
Chief Financial Officer  
Access Pharmaceuticals, Inc.  
2600 Stemmons Freeway, Suite 176  
Dallas, TX 75207

**Re: Access Pharmaceuticals, Inc.  
Amendment No. 1 to Form S-1/A  
Filed 10/8/08  
File Number 333-149633**

Dear Mr. Thompson:

We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Amendment No. 1 to Form S-1/A

General

1. We note your response to Comment 9 and reissue the comment in part. We note that you are registering 7,577,868 shares of Series A Preferred Stock and an additional 1,582,360 shares of common stock that may be issued as dividends on the Series A Preferred Stock. It appears that you continue to register more shares than we will allow as a primary offering. Please reduce the size of your offering.

Selling Stockholders

2. We note your response to Comment 3. Please note Comment 2 from our letter dated March 19, 2008 requested disclosure of all payments to selling shareholders, affiliates of selling shareholders and any person whom a selling shareholder has a contractual relationship regarding the transaction. These payments should include interest payments, liquidated damage payments and other payments made to placement agents. Please provide this information in tabular format. Additionally, update the liquidated damages and disclose the maximum potential liquidated damages.

Table 1.A – Proceeds Received of Private Placement Transaction, page 27

3. We note the line item labeled “Placement Agent Fees” indicates that it comes from Table 2. However, we were not able to reconcile this number with the information presented in Table 2. Please provide reconciliation or revise the information to reflect the amount presented in Table 2.

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We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert this action as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

Please contact Rose Zukin at (202) 551-3239 or me at (202) 551-3710 with any questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director

cc: John J. Concannon III, Esq.  
Bingham McCutchen LLP  
150 Federal Street  
Boston, MA 02110