

Mail Stop 6010

August 6, 2008

Francis E. O'Donnell, Jr., M.D.  
Chief Executive Officer  
Accentia Biopharmaceuticals, Inc.  
324 South Hyde Park Avenue, Suite 350  
Tampa, Florida 33606

**Re: Accentia Biopharmaceuticals, Inc.  
Registration Statement on Form S-3  
Response letter filed July 23, 2008  
File No. 333-152148**

Dear Dr. O'Donnell:

This is to advise you that we have limited our review of the above referenced registration statement to the issues identified below. We will make no further review of this filing.

Each of our comments requests that you revise your filing to provide additional disclosure about the selling security holders or the transaction or transactions in which they purchased the registrant's securities. We will consider your supplemental explanation if you believe a comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation.

Payments to the investor and affiliates

1. Please provide disclosure of the net proceeds to the issuer from the sale of the convertible debentures and the total possible payments to all selling shareholders and any of their affiliates in the first year following the sale of convertible debentures.

Comparison of issuer proceeds to potential investor profit

2. We note your response to our prior comment 5 and reissue that comment in part. Please provide – as a percentage – the total amount of all possible payments as disclosed in response to our prior Comment 2 divided by the net proceeds to the issuer from the sale of the convertible debentures, as well as the amount of that resulting percentage averaged over the term of the convertible debentures.

Prior transactions between the issuer and the selling shareholders

3. We note your response to our prior comment 6 and reissue that comment in part. Please revise your disclosure to provide the disclosure in tabular format as requested.

Comparison of registered shares to outstanding shares

4. We note your response to our prior comment 7 and reissue that comment in part. Please explain to us how you have calculated the number of shares registered for resale by the selling shareholders or affiliates of the selling shareholders in prior registration statements. We note that in the Form S-3 declared effective April 17, 2008, file no. 333-149045, you registered for resale 2,808,987 shares of common stock held by BAM Opportunity Fund LP. In the table you have provided in response to our prior comment 7, however, you state that you registered for resale 1,123,595 shares of common stock for BAM Opportunity Fund LP in prior registration statements.
5. In the table you have provided in response to our prior comment 7, please disclose which transactions apply to the shares registered for resale by the selling shareholders or affiliates of the selling shareholders in prior registration statements.
6. Please confirm to us the amount of time that has passed since the selling shareholders or their affiliates completed the resale of the shares registered for resale in prior registration statements.

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As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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.

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 Sonia Barros at (202) 551-3655 or Michael Reedich at (202) 551-3612 with any questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director

cc: Barry I. Grossman, Esq.  
David Selengut, Esq.  
Ellenoff Grossman & Schole LLP  
150 E, 42nd St, 11th Floor  
New York, New York 10017