



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

*Via Facsimile and U.S. Mail*

April 29, 2011

Alan M. Pearce  
Chief Financial Officer  
Accentia Biopharmaceuticals, Inc.  
324 South Hyde Park Ave., Suite 350  
Tampa, Florida 33606

**Re: Accentia Biopharmaceuticals, Inc.  
Form 10-K for the Fiscal Year Ended September 30, 2010  
Filed December 14, 2010  
File No. 000-51383**

Dear Mr. Pearce:

We have reviewed your response dated April 4, 2011 and we have the following additional comment. Please respond to this letter within ten business days by providing the requested information, or by advising us when you will do so. If you do not believe our comment applies to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to this comment, we may have additional comments.

Item 1. Business

Revimmune for the Treatment of Autoimmune Disease, page 4

1. We have reviewed your response to our prior comment and the confidential treatment order related to your agreement with Baxter Healthcare Corporation. While confidential treatment for certain information may have been granted, under the confidential treatment rule we have the authority to reconsider our action. Accordingly, we believe that a reasonable range of the percentage of the net sales payment and the term of this agreement are material information which is required disclosure in your filing. Please provide us with revised disclosure for inclusion in your next annual report that also discloses a reasonable range of the percentage of the net sales payment (e.g. low-single digits or a range not to exceed ten percent) and the term of the agreement.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are

Alan M. Pearce  
Accentia Biopharmaceuticals, Inc.  
April 29, 2011  
Page 2

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.

Please contact Scot Foley at (202) 551-3383, Jennifer Riegel at (202) 551-3575 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey Riedler  
Assistant Director

cc: Curt P. Creely, Esq.  
Foley & Lardner LLP  
100 North Tampa Street, Suite 2700  
Tampa, Florida 33602