



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4720

March 2, 2011

Mr. Michael R. Cox  
Chief Financial Officer  
Bioanalytical Systems, Inc.  
2701 Kent Avenue  
West Lafayette, Indiana 47906

**Re: Bioanalytical Systems, Inc.  
Registration Statement on Form S-1  
Filed February 28, 2011  
File No. 333-172508**

Dear Mr. Cox:

We have limited our review of your registration statement to those issues we have addressed in our comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. Where you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to these comments, we may have additional comments.

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Plan of Distribution, page 17

1. Please revise the discussion in these sections of the prospectus as applicable to disclose the means by which the dividend and conversion/exercise rates of the securities to be offered will be determined. Please refer to Instruction 2 to Item 501(b)(3) of Regulation S-K and Rule 430A of Regulation C regarding information related to price that may be omitted at the time of effectiveness and the additional disclosure that would be required in such case.

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 Act of 1933 and all applicable Securities Act rules require. 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.

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Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company 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 staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as 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. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact John L. Krug, Senior Counsel, at (202) 551-3862 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey Riedler  
Assistant Director

cc: Stephen J. Hackman, Esq.  
Ice Miller LLP  
One American Square, Suite 2900  
Indianapolis, Indiana 46282-8200