

Mail Stop 4720

October 14, 2009

Dr. Michael Fonstein  
Chief Executive Officer and President  
Cleveland BioLabs, Inc.  
73 High Street  
Buffalo, New York 14203

**Re: Cleveland BioLabs, Inc.  
Form S-3/A  
Filed September 28, 2009  
File No. 333-160648**

Dear Dr. Fonstein:

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 comments are inapplicable or a revision is unnecessary.

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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form S-3

General

1. Please file as exhibits to your registration statement or incorporate by reference the Securities Purchase Agreement and the Registration Rights Agreement related to the Series D preferred stock.

Payments to Investors and Affiliates

2. To the extent that a maximum payment amount is ascertainable with respect to any of the potential sinking fund and liquidated damages obligations set forth in your revised disclosure, please include such amount in the calculations set forth in the Payments to Selling Stockholders table on page 15. For instance, the Series D Registration Rights

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Agreement caps maximum aggregate liquidated damages payable to each holder at 15% of the aggregate subscription amount paid by such selling stockholder. Such aggregate potential payment amount and any others that are currently determinable should be set forth in the calculations included in the table. For purposes of clarity, you may elect to include a separate column or columns in the table setting forth potential payments and a revised calculation of the total aggregate amount taking into consideration potential payments. Please also revise the table on page 20 of your amended filing setting forth the potential profits for selling stockholders.

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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 letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Please contact Nandini Acharya at (202) 551-3495, Suzanne Hayes at (202) 551-3675 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey Riedler  
Assistant Director

cc: Ram Padmanabhan, Esq.  
Katten Muchin Rosenman LLP  
525 West Monroe Street  
Chicago, IL 60661