



DIVISION OF  
CORPORATION FINANCE

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

August 12, 2010

Mr. John A. Marhofer, Jr.  
Chief Financial Officer  
Cleveland BioLabs, Inc.  
73 High Street,  
Buffalo, New York 14203

**Re: Cleveland BioLabs, Inc.**  
**Form 10-K for the Fiscal Year Ended December 31, 2009**  
**Filed on March 22, 2010**  
**File No. 001-32954**

Dear Mr. Marhofer:

We have reviewed your filing and have the following comments. In our comments, we ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. Where a comment requests you to revise disclosure, the information you provide should show us what the revised disclosure will look like and identify the annual or quarterly filing, as applicable, in which you intend to first include it. If you do not believe a comment applies to your facts and circumstances, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your responses to our comments.

After reviewing the information provided, we may raise additional comments and/or request that you amend your filings.

Form 10-K for the Fiscal Year Ended December 31, 2009

Products in Development, page 4

Non-medical Applications, page 5

1. Please expand the discussion of your agreement with the Chemical Biologic Medical Systems Joint Project Management Office to explain the Office's rights under the agreement and the nature of the tasks you have agreed to perform. For example, did you license CBLB502 to the Chemical Biologic Medical Systems Joint Project Management Office or DoD? Are the tasks related to DoD's potential procurement of CBLB502? If you have licensed CBLB502, please describe the nature of the license and the rights that you retained to this product candidate. Additionally, provide us with your analysis supporting your determination that the agreement is not required to be filed pursuant to Item 601(b)(10) of Regulation S-K.

2. Please expand the discussion of your agreement with HHS to explain HHS's rights under the agreement and the nature of the tasks you have agreed to perform. Are the tasks related to the potential procurement of CBLB502? To the extent you have licensed CBLB502 to HHS, please provide a discussion of the license. Additionally, provide us with your analysis supporting your determination that the agreement is not required to be filed pursuant to Item 601(b)(10) of Regulation S-K.

Collaborative Research Agreements, page 12

3. Please expand your description of the CRADA agreement to identify the radioprotective drug and describe each party's rights and obligations under the agreement. To the extent that the agreement grants licenses to any of the parties, the terms of the license(s) should be described.
4. Please expand your discussion of your agreement with Roswell Park Cancer Institute to explain the rights and obligations of each party and the term and termination provisions. The agreement appears to anticipate future collaboration agreements. If you have entered into any collaboration agreements, please identify the product candidate(s) and/ or subject(s) of your research and describe each party's rights with respect to the subject of the agreement.

Patents, page 14

5. Please expand your patents disclosure to include the following information:
  - Identify the product candidates or product classes that are dependent on Patent No. 7,638,485 and the pending patent applications, identify the other nations that approved the patent and disclose when it expires.
  - Your disclosure states that your intellectual property platform is based on ten patent applications and you have identified the source of nine of them. Please identify the source of the tenth patent application and tell us whether the license agreements are filed.

Manufacturing, page 14

6. Please provide us with an analysis supporting your determination that you are not required to file the agreements with SynCo Bio Partners and Regis Technologies. Alternatively, file these agreements as exhibits.

Financial Statements

Note 4 - Equity Transactions, page 54

7. You have issued Series B, C, D and other warrants in various financing transactions that have anti-dilution protections. Please disclose why equity treatment is appropriate for each of these warrant issuances. Please also tell us why you have not apparently reclassified these warrants to liabilities effective January 1, 2009 under FASB ASC 815-40-15 with transition guidance at FASB ASC 815-10-65-3.

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8. You assumed a discount for lack of marketability of 40% on your Series D warrants. Since the average daily volume of your common shares traded is over 50,000 please tell us the factors you considered in assuming that a discount of 40% is appropriate. Please also tell us why you do not appear to have made similar assumptions for lack of marketability for your other warrant issuances.

Exhibit10.11

9. Please refile Exhibit 10.11 the Cooperative Research and Development Agreement dated August 1, 2004 with Appendices A and B.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings to be certain that the filings include the information the Securities Exchange Act of 1934 and all applicable Exchange 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.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Ibolya Ignat, Staff Accountant at (202) 551-3656, or Gus Rodriguez, Branch Chief, at (202) 551-3752 if you have any questions regarding the processing of your response as well as any questions regarding the comments on the financial statements and related matters. You may contact Johnny Gharib, Staff Attorney, at (202) 551-3170 or Suzanne Hayes, Branch Chief at (202) 551-3675 regarding other comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg  
Senior Assistant Chief Accountant