



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 4631

February 2, 2010

By U.S. Mail

Kim Thompson
Chief Executive Officer
Kraig Biocraft Laboratories, Inc.
120 N. Washington Square
Suite 805
Lansing, MI 48933

Re: Kraig Biocraft Laboratories, Inc.
Amendment No. 2 to Registration Statement on Form S-1
Filed January 25, 2010
File No. 333-162316
Quarterly Report on Form 10-Q/A for the Period Ended June 30, 2009
Filed November 24, 2009
File No. 333-146316

Dear Mr. Thompson:

We have reviewed your filing and have the following comments.

Amendment No. 2 to Registration Statement on Form S-1

Executive Compensation, page 34

1. Please update your disclosure to cover the fiscal year ended December 31, 2009. Please see paragraph 217.11 of our Compliance and Disclosure Interpretations under Regulation S-K, which are available on our website.

Financial Statements

Note 6. Subsequent Events, page F-18

2. We note your response to comment four in our letter dated January 7, 2010, however, it remains unclear to us how you determined to account for the subsequent change in capital structure as a stock dividend rather than as a stock split based on the relative size of the additional shares that were issued. It continues to appear to us that the stock dividend was in substance a stock split effected in the form of a dividend and that prior periods should be revised. See ASC 505-20-25, ASC 505-20-30 and SAB Topic 4:C.

3. Please also revise your filing to consistently present the stock dividend or stock split in accordance with ASC 505-20-50.

Note 4. Convertible Debt, page F-27

4. We note your response to comment five in our letter dated January 7, 2010. Please provide us with a more specific and comprehensive discussion regarding how you determined that your debentures and warrants do not contain provisions that would result in a derivative liability. In this regard, please revise to include more specific and comprehensive discussion of the terms and conditions of your anti-dilution provisions, including whether there are any circumstances in which the holders would be protected from declines in your stock price. Based on your disclosures on pages 18 and 27, it appears that such provisions do exist and this may result in a derivative liability. In addition, we note your statement in your response that the anti-dilution clause does not result in a derivative liability. Given this statement, it is unclear why to us why the revised disclosure on page F-28 states, "There is no effect on the derivative liability..." Please revise to clarify. Reference EITF 07-5 (ASC 815-10-65-3).
5. Please revise to disclose the amortization period for your debt discount and where the amount is recognized on your condensed statements of operations.

Note 6. Commitments and Contingencies, page F-32

6. We note your response to comment six in our letter dated January 7, 2010. It is unclear to us how you concluded that the lowest conversion price was equal to the fair value of the stock prior to June 30, 2009. In this regard, we note from your disclosures on page 26 that your stock has been trading at a price as low as \$0.00 per share. Please explain further and provide us with the lowest conversion option stock price and the stock fair value for each period since the inception of this provision in the CEO's contingent employment agreement.

Quarterly Report on Form 10-Q/A for the Period Ended June 30, 2009

7. We note your response to comment seven in our letter dated January 7, 2010. It is unclear to us if your CEO and CFO concluded that your disclosure controls and procedures were also not effective to ensure that information required to be disclosed in your reports you file under the Exchange Act is accumulated and communicated to management to allow timely decisions regarding required disclosure. Please clarify. Please note that your disclosure may simply conclude that your disclosure controls and procedures are not effective, without providing a definition. Please refer to Exchange Act Rule 13a-15(e).

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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.

You may contact Bret Johnson, Staff Accountant, at (202) 551-3753 or Patricia Armelin, Staff Accountant, at (202) 551-3747 if you have questions regarding comments on the financial statements and related matters. Please contact Dieter King, Staff Attorney, at (202) 551-3338 with any other questions.

Sincerely,

Pamela Long
Assistant Director

cc: Richard C. Fox, Esq. (Via Facsimile 603-778-9911)
William Dauber, Esq. (Via Facsimile 212-886-2399)
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