



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

DIVISION OF
CORPORATION FINANCE

May 14, 2012

Via E-Mail
Frank Oakes
President and Chief Executive Officer
Stellar Biotechnologies, Inc.
332 E. Scott Street
Port Hueneme, California 93041

**Re: Stellar Biotechnologies, Inc.
Registration Statement on Form 20-F
Amendment No. 1 filed April 30, 2012
File No. 000-54598**

Dear Mr. Oakes:

We have reviewed the amendment to your registration statement filed on April 30, 2012 and have the following 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 within ten business days by amending your registration statement and providing the requested information. If 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.

Registration Statement on Form 20-F

General

1. Please note that our comments on your recent request for confidential treatment with respect to certain exhibits will be provided under separate cover. In addition, please note that we may request additional disclosures in your registration statement as a result of our review of the exhibits for which you have requested confidential treatment.
2. Since you appear to qualify as an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act, please disclose prominently in the beginning of your registration statement that you are an emerging growth company. In addition, describe how and when a company may lose emerging growth company status and provide a brief description of the exemption from Section 404(b) of the Sarbanes-Oxley Act of 2002.

Part I

Item 3. Key Information

Statement of Capitalization and Indebtedness, page 7

3. It appears that the stockholders' equity amounts at February 28, 2012 should be labeled November 30, 2011 consistent with your disclosure on page 120. Please revise.

Item 5. Operating and Financial Review and Prospects, page 27

4. Please revise your disclosure to highlight that the financial information for the periods ended November 30, 2011 and 2010 are unaudited.

Part III

Item 17. Financial Statements

Consolidated Statements of Income (Loss), Comprehensive Income (Loss), and Deficit, page 95

5. Based on your revised disclosure in response to prior comment 44, it appears the earnings (loss) per share prior to the recapitalization should be restated to reflect the equivalent number of shares received by Stellar CA. Please revise your disclosure in Note 3, and explain to us, how the shares issued in the recapitalization were retroactively restated in the historical financial statements prior to the transaction.

Notes to Consolidated Financial Statements

Note 7. Licensing Rights, page 106

6. Refer to your revised disclosure in response to prior comment 46. Please revise your disclosure in the application sections of the filing to describe all of the significant terms of your agreements. For example, it appears that you did not disclose the length of each agreement, any material milestone payments, and the termination provisions.

Note 10. Share Capital, page 108

7. We note your response to prior comment 47. It appears that you should revise your tabular disclosure in Note 10 and Note 16 to arrive at 10,000,000 as the number of shares outstanding immediately prior to the recapitalization and 6,763,256 as the shares issued in fiscal 2010 to reflect the historical number of shares of the legal parent upon recapitalization. Please revise or tell us why your current disclosure is appropriate.
8. Consistent with your revised disclosure in response to prior comment 44 please revise your disclosure in Note 10 and Note 16 to state that the line item for the net assets of the parent were recorded at their carrying value and not fair value.

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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 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.

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

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 Dana Hartz, Staff Accountant, at (202) 551-3648 or Don Abbott, Senior Accountant, at (202) 551-3608, if you have questions regarding comments on the financial statements and related matters. Please contact John Krug, Senior Counsel, at (202) 551-3862, Dan Greenspan, Branch Chief, at (202) 551-3623, or me at (202) 551-3715 with any other questions.

Sincerely,

/s/ Daniel Greenspan for

Jeffrey Riedler
Assistant Director

cc: Mr. Steve Taylor
A.B. Korelin & Associates, Inc.
17404 163rd Place SE
Renton, Washington 98058

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