



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

DIVISION OF  
CORPORATION FINANCE

December 13, 2010

Mr. Peter Riehl  
Chief Executive Officer  
Stellar Pharmaceuticals, Inc.  
544 Egerton  
St London, Ontario, Canada N58 3Z8

**Re: Stellar Pharmaceuticals, Inc.**  
**Form 10-K**  
**Filed March 30, 2010**  
**File No. 000-31198**

Dear Mr. Riehl:

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 amending your filing, providing the requested information, or by advising us when you will provide the requested response. 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 filing.

Form 10-K for the year ended December 31, 2009

Cover Page

1. On your cover page, you indicate that your common stock is traded on the NASDAQ Global Market and registered pursuant to Section 12(b) of the Exchange Act. On page 16, however, you disclose that your common stock has traded on the OTC Bulletin Board since 2002. In addition, you registered your common stock under Section 12(g) of the Exchange Act on your Form 10SB filed on September 6, 2001, however, you have not filed a registration statement registering your common stock under Section 12(b) of the Exchange Act. Accordingly, please confirm that you will revise your cover page in future filings to disclose that your common stock is registered pursuant to Section 12(g) of the Exchange Act and remove any disclosure regarding the NASDAQ Global Market.

Manufacturing, page 9

2. You disclose in Note 13 on page F-21 that your products are being manufactured pursuant to agreements with Therapure Biopharma Inc. and Draxis Pharma, Inc. Please provide proposed disclosure to be included in your Form 10-K for the fiscal year ended December 31, 2010 to include the material terms of your agreements with each manufacturer including, but not limited to, the material payment terms, any minimum purchase obligations and term and termination provisions. Additionally, please file a copy of each agreement or provide an analysis supporting your determination that you are not substantially dependent on each agreement. See Item 601(b)(10)(ii)(B) of Regulation S-K.

Patent and Proprietary Protection, page 10

3. You have incorporated by reference a copy of a U.S. patent and a Canadian patent. Please provide proposed disclosure to be included in your Form 10-K for the fiscal year ended December 31, 2010 to identify these and any other material patents. Please include in this disclosure the products to which each patent relates, whether the patent is owned or licensed and the expiration date and jurisdiction of each patent.

Item 10. Directors, Executive Officers and Corporate Governance, page 28

4. Please provide proposed disclosure to be included in your Form 10-K for the fiscal year ended December 31, 2010 to disclose the specific experience, qualifications, attributes or skills that led to the conclusion that each of your directors should serve as a director as required under Item 401(e) of Regulation S-K.

Item 11. Executive Compensation, page 31

Termination and Change of Control Benefits, page 33

5. Please file a copy of your employment agreement with Mr. Riehl.

Signatures

6. It does not appear that the filing has been signed by your controller or principal accounting officer as required by Form 10-K. If Peter Riehl, your chief executive officer, or Janice Clarke, your chief financial officer, was acting as controller or principal accounting officer at the time the filing was executed, please confirm that he or she signed the Form 10-K in the capacity of controller or principal accounting officer in addition to the other listed capacity and that you will include such title in signature section of your Form 10-K for the fiscal year ended December 31, 2010. Alternatively, if Mr. Riehl or Ms. Clarke was not acting in the capacity of controller or principal accounting officer, please amend your Form 10-K to have your controller or principal accounting officer sign your Form 10-K. See Instruction D.2(a) of Form 10-K for further information.

Report of Independent Registered Chartered Accountants, page F-2

7. We note that the report of Deloitte & Touche LLP has not been reissued. Inclusion of a report in your Form 10-K that has not been reissued does not comply with the requirements of Rule 2-02 of Regulation S-X to include a report that indicates the audit was conducted in accordance with the standards of the Public Company Oversight Board (United States). Whenever you seek to use a report of an independent accountant previously included in a filing with the Securities and Exchange Commission, you must obtain from the independent accountant their reissued report prior to including it in your filing. Amend your Form 10-K immediately to remove the copy of the report of Deloitte & Touche LLP and to include in your amended Form 10-K a report of an independent accountant that complies with the requirements of Article 2 of Regulation S-X.

Notes to Financial Statements, page F-7

Note 13. Contingencies and Commitments, page F-20

License Agreements

8. We note that you recognized CDN\$273,580 in non-recurring, non-refundable license fees and milestone payments for license agreements in Italy and South Korea. We also note your revenue recognition policy that “Non-refundable up-front fees for the transfer of methods and technical know-how, not requiring the Company to perform additional research or development activities or other significant future performance obligations, are recognized upon delivery of the methods and technical know-how.” Please explain what you consider to be immaterial “other significant future performance obligations” and if there are non-significant future performance obligations related to any of your license agreements. Also, tell us the significant terms of your recent license agreement for the distribution and marketing of Uracyst in Spain, including but not limited to, any non-significant continuing obligations.

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 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.

Mr. Peter Riehl  
Stellar Pharmaceuticals, Inc.  
December 13, 2010  
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You may contact Christine Allen, Staff Accountant at (202) 551-3652 or Melissa Rocha, Branch Chief at (202) 551-3854 if you have questions regarding the processing of your response as well as any questions regarding the comment on the financial statements and related matters. Please contact Karen Ubell, Staff Attorney at (202) 551-3873 or Jennifer Riegel, Staff Attorney at (202) 551-3575 with questions on any of the other comments. In this regard, do not hesitate to contact me, at (202) 551-3679.

Sincerely,

Jim B. Rosenberg  
Senior Assistant Chief Accountant