



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

April 6, 2010

Timothy Young
Chief Executive Officer
HyperSolar, Inc.
93-B Castilian Drive
Santa Barbara, California 93117

**Re: HyperSolar, Inc.
Registration Statement on Form S-1
Amended on March 25, 2010
File No. 333-164708**

Dear Mr. Young:

We have reviewed your filing and have the following 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 comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

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

Overview, page 6

1. Please reconcile your disclosure here and throughout your prospectus that you have filed "patent applications" with your disclosure on pages 11 and 22 that you have filed only one patent application.

Risks Related to our Business and Industry, page 8

We will need additional financing to execute our business plan ..., page 8

2. We reissue prior comment 8 in part. Please disclose the dollar amount of additional capital that you believe you will need in order to execute your business plan and fund operations over the next twelve months instead of simply stating that you believe your current cash balance will be sufficient. We note in this regard that the heading of this risk factor indicates your need for additional financing in order to accomplish your goals.

Should our stock become quoted on the OTC Bulletin Board..., page 13

3. We note your response to comment 13. Briefly describe the extent of your reporting obligations under Section 15(d) of the Exchange Act and the consequences to investors if you do not register a class of securities under Section 12 (g).

Transactions Being Registered in this Prospectus, page 14

4. Please reconcile your disclosure in response to prior comment 17 that your private placement was completed in February 2010 with your response to prior comment 2 and the disclosure on page II-1.

Plan of Operation and Financing Needs, page 20

5. Reference is made to your revised disclosure on page 22. Please fill in the aggregate amount that the Company has paid Dr. Dagli to date under the Consulting Agreement as further discussed on page 22. Also, please tell us and disclose in your filing the amount you have accrued for Dr. Dagli's hourly compensation as of June 30, 2009 and December 31, 2009 in your balance sheets. Please tell us how you estimated these amounts and provide us with the amounts recognized as an expense in your statement of operations for the period ended June 30, 2009 and six months period ended December 31, 2009.

Executive Compensation, page 26

6. Regarding your response to prior comment 31, it is unclear why you have not included in the summary compensation table the amount that Dr. Petkie has received in salary for fiscal year 2010, as you have done for Mr. Young. Please revise.

Certain Relationships and Related Transactions, page 27

7. We note your response to prior comment 32. Please revise your disclosure to provide all information required by Regulation S-K Item 404(a), including the name of the related person and the basis on which the person is a related person.
8. Please expand to disclose the stock issuances in April 2009 to founders and two shareholders who are now affiliates, identifying each party and stating the amount of shares each received and the consideration paid.

* * *

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.

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 all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and

Timothy Young
HyperSolar, Inc.
April 6, 2010
Page 4

- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement.

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.

You may contact Dennis Hult at (202) 551-3618 or me at (202) 551-3212 if you have questions regarding comments on the financial statements and related matters. Please contact Celia Soehner at (202) 551-3463 or Peggy Fisher, Assistant Director, at (202) 551-3800 with any other questions.

Sincerely,

Jeffrey Jaramillo
Accounting Branch Chief

cc (via facsimile): Marcelle S. Balcombe, Esq. — Sichenzia Ross Friedman Ference LLP