



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

Mail Stop 3030

November 24, 2009

Via Facsimile and U.S. Mail

Mr. Stephen J. Fanning
Chief Executive Officer
Solta Medical, Inc.
25881 Industrial Boulevard
Hayward, CA 94545

Re: Solta Medical, Inc.
Form 10-K for fiscal year ended December 31, 2008
Filed March 31, 2009
File No. 1-33123

Dear Mr. Fanning:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise future filings 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 on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for fiscal year Ended December 31, 2008

Note 3 – Acquisition of Reliant Technologies, Inc., page 76

1. We note the valuation of your intangible assets was primarily determined using the income and market approaches. Given the significance of your allocation to intangible assets, please tell us and revise future filings to disclose your valuation methodology and principle assumptions used for each of your major intangible assets.
2. As a related matter, we note the significance of the goodwill you recognized in this transaction. Please revise future filings to disclose the primary factors that led to the recognition of such a significant amount of goodwill.
3. We note that you expensed acquired in-process research and development (IPR&D) of \$9.1 million. We further note that you used the discounted cash flow approach to determine its value as of the acquisition date. In future filings, please revise the notes to the financial statements to provide the following:
 - Describe each significant IPR&D project acquired;
 - Discuss all significant assumptions made and estimates used in determining the assigned values to each significant IPR&D project such as the risk adjusted discount rate applied to the project's cash flows and period in which material net cash inflows from significant projects are expected to commence;
 - For each project, disclose in MD&A the status of the development, stage of completion at acquisition date, the nature and timing of the remaining efforts for completion, anticipated completion date, the date you will begin benefiting from the projects, the risks and uncertainties associated with completing development within a reasonable period of time and the risks involved if the IPR&D projects are not completed on a timely basis; and
 - In subsequent filings, revise MD&A to provide a detailed discussion of the status of your efforts for completion of the R&D projects and the impact from any delays. Also, provide an explanation of material variations between projected results and actual results and how failure to achieve projected results impacted (or will impact) expected return on investment, future results and financial condition.

Item 13. Certain Relationships and Related Transactions . . . , page 99

4. We note from your disclosure on page 15 of your definitive proxy statement incorporated by reference into your annual report on Form 10-K that you “describe below” your transactions with related parties. However, no such transactions appear to be disclosed. Please advise.
5. In your future filings, please expand the disclosures required by Regulation S-K Item 404(b) to describe the standards applied by your audit committee in reviewing and deciding whether to approve a related-party transaction presented to it.

6. When you identify a director as independent, please ensure your disclosure in applicable future filings includes the information required by Item 407(a) of Regulation S-K. We note, for example, that you identify Dr. Knowlton as independent on page 14 of your definitive proxy statement, but do not explain how your “consulting agreement” with him was considered by your board in reaching its conclusion.

Quarterly report on Form 10-Q for the period ended September 30, 2009

Signatures, page 42

7. In your applicable future filings, please include the appropriate signature on behalf of the company by including the company’s name, as required by the form.

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As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter with your response 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 and Exchange Act of 1934 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.

In connection with responding to our comments, please provide, in writing, a 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.

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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 our review of your filing or in response to our comments on your filing.

You may contact David Burton, Staff Accountant, at (202) 551-3626 or me at (202) 551-3663 if you have questions regarding comments on the financial statements and related matters. Please contact Geoffrey Kruczek, Staff Attorney, at (202) 551-3641 or Peggy Fisher, Assistant Director, at (202) 551-3800 if you have questions on other comments. In this regard, do not hesitate to contact Kevin Vaughn, Accounting Branch Chief at (202) 551-3643.

Sincerely,

Eric Atallah
Reviewing Accountant