



DIVISION OF
CORPORATION FINANCE

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

October 21, 2010

Mr. Roger P. Deschenes
Chief Financial Officer
Implant Sciences Corporation
600 Research Drive
Wilmington, Massachusetts 01887

RE: **Implant Sciences Corporation**
Form 8-K dated October 14, 2010
Filed October 20, 2010
File No. 001-14949

Dear Mr. Deschenes:

We have reviewed your filing 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 five business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. 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 filing and the information you provide in response to these comments, we may have additional comments.

Form 8-K

Item 4.02 Non-Reliance on Previously Issued Financial Statements

1. We note the Company intends to file restated financial statements for the first, second and third fiscal quarter of 2010. Please tell us your consideration of the adequacy of your previous disclosures regarding internal controls and disclosure controls and procedures in light of the proposed restatement of your financial statements you have disclosed.

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.

If you have any questions, please call Dennis Hult at 202 551-3618 or me at 202 551-3212. You may also speak with Martin James, Senior Assistant Chief Accountant at 202 551-3671.

Sincerely,

Jeffrey Jaramillo
Accounting Branch Chief