



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

February 11, 2009

VIA U.S. MAIL AND FAX (781) 246-1167

Mr. Glenn D. Bolduc
Vice President and Chief Financial Officer
Implant Sciences Corporation
107 Audubon Road
Wakefield, Massachusetts 01880

Re: Implant Sciences Corporation
Form 10-K for the year ended June 30, 2008
Filed October 14, 2008
Form 10-Q for the quarter ended September 30, 2008
File No. 000-25839

Dear Mr. Bolduc:

We have reviewed your response dated February 6, 2009 and have the following comment. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. Where indicated, we think you should revise your documents 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.

Mr. Glenn D. Bolduc
Implant Sciences Corporation
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Form 10-K for the year ended June 30, 2008

Item 9A. Controls and Procedures, page 29

1. Please refer to our prior comment 3. It appears from your response that you have not yet completed the testing of your internal controls over financial reporting. Please clarify how management was able to conclude that internal control over financial reporting, as well as your disclosure controls and procedures were effective at June 30, 2008.

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. You may wish to provide us with marked copies of the amendments 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 amendments responses to our comments.

You may contact Julie Sherman, Staff Accountant, at (202) 551-3640 or me at (202) 551-3554 if you have any questions regarding these comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Angela Crane
Accounting Branch Chief