



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

August 5, 2009

VIA U.S. MAIL

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 completed our review of your Form 10-K and related filings and do not, at this time, have any further comments.

Sincerely,

Martin James
Senior Assistant Chief Accountant