



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

May 6, 2009

VIA U.S. MAIL AND FAX (408) 636-0022

Mr. J. K. Hullett
Chief Financial Officer
Intraop Medical Corporation
570 Del Rey Avenue
Sunnyvale, California 94086

Re: Intraop Medical Corporation
Form 10-K for the year ended September 30, 2008
Filed October 14, 2008
File No. 000-10761

Dear Mr. Hullett:

We have reviewed your filings and have the following comments. 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.

Form 10-K for the year ended September 30, 2008

Management's Discussion and Analysis of Financial Condition and Results of Operations, page 21

Results of Operations for the fiscal year ended September 30, 2008 compared to the fiscal year ended September 30, 2007, page 23

1. We note that you present and discuss several non-GAAP measures in your results of operations, including an adjusted gross margin and research and development, general and administrative and sales and marketing excluding the impact of share based compensation. In future filings, please consider revising MD&A to disclose and quantify the impact of share based compensation on your US GAAP results. For example, you could indicate that the increase in research and development for the period reflected the impact of share based compensation of \$XX million.

If you continue to provide these non-GAAP measures, please revise future filings to fully comply with Item 10(e) of Regulation S-K, including a reconciliation to the directly comparable GAAP measure for each non-GAAP measure presented, an explanation of why you believe the measures provide useful information to investors, and a statement disclosing the additional purposes for which the non-GAAP measures.

Liquidity and Capital Resources, page 27

2. We note your disclosure on page F-21 that the holders of your senior debentures agreed to amend certain restrictive covenants; however, we do not see any discussion regarding your compliance and the nature of the covenants. Revise future filings to define, in greater detail, the financial and other covenants that you are required to maintain under your loans and debentures, whether you were in compliance with such covenants, the reason for the amendment, and disclose any non-compliance with the covenants.
3. We note your discussion on page 10 that you currently do not have sufficient capital resources to retire the 10% senior secured debentures when the notes mature on December 31, 2008 and that you will be in default unless you can raise additional capital, however, we did not see any related discussion in Liquidity and Capital Resources. While you present the senior secured debentures as current obligations, there does not appear to be any discussion regarding when these debentures become due and payable and how the company intends to meet their obligation. Revise your discussion in future filings to provide a clear picture of the company's ability to generate cash and to meet existing and known or reasonably likely future cash requirements.

Debt and Lease Obligations, page 29

4. We see you have disclosed your debt and lease obligations as of December 1, 2008. Please clarify why your disclosure is as of December 1, 2008 rather than the balance sheet date of September 30, 2008. Revise future filings as necessary.

Financial Statements, page F-1

5. We note that the financial statements included in your 10-K only include a balance sheet as of September 30, 2008. Rule 8-02 of Regulation S-X requires a smaller reporting company to file an audited balance sheet as of the end of each of the two most recent fiscal years. Please confirm that you will comply fully with Article 8 of Regulation S-X in all future filings. In addition, we note that you did not provide comparative data for the year ended September 30, 2007 in the notes to financial statements relating to your balance sheet items. Please present that comparative information in all future periods. Refer to the guidance that can be found at <http://www.sec.gov/rules/final/2007/33-8876.pdf>

Note 3 – Balance Sheet Components, page F-17

Inventory, page F-17

6. We note that you maintain separate inventory under a “product financing arrangement” totaling approximately \$3.8 million, where ownership of the financed inventory is “transferred” to the lender and you have the right to subsequently repurchase the financed inventory at a price equal to the original transfer price plus interest. Please explain in more detail the terms of this agreement. For example, clarify why the \$3.8 million is included in inventory if it is “transferred” to the lender under the arrangement. Also, clarify how you account for the inventory when you repurchase from the lender. Cite the accounting literature that supports your accounting.

Note 6 – August 2007 Agreements, page F-22

7. We note in 2007 you entered into agreements with Lacuna Investors which you refer to as “August 2007 Agreements” and the “Second Closing.” We also note that you used the “transaction method” to value these investments made by Lacuna. Please tell us the significant terms of these agreements and your accounting. Specifically, cite the accounting literature upon which you relied and explain in detail how you applied that literature to the terms of your agreements. Your response should address the accounting for the agreements, any options and warrants, including classification and valuation of each and any extinguishments and cancellations. Address both the method and the significant assumptions applied. Finally, given that your shares are publicly traded, please tell us why the transaction method was the appropriate method to value the investments.

Certifications Exhibit 31.1 and 31.2

8. We note that your annual report contains management's internal control report as required by Item 308T of Regulation S-K. As such, your certifications should include the introductory language in paragraph 4 of the certification that refers to the certifying officers' responsibility for establishing and maintaining internal control over financial reporting for the company as well as the language of paragraph 4(b) of Item 601(b)(31) of Regulation S-K. Please amend your Form 10-K to include corrected certifications that include the required language. You may provide an abbreviated amendment that consists of a cover page, explanatory note, signature page and paragraphs 1, 2, 4 and 5 of the certification.
9. We note that the identification of the certifying individual at the beginning of the certification required by Exchange Act Rule 13a-14(a) also includes the title of the certifying individual. In future filings the identification of the certifying individual at the beginning of the certification should be revised so as not to include the individual's title. Refer to Item 601 (31) of Regulation S-K. This comment applies to your interim filings as well.

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 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 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 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