

Mail Stop 6010

November 7, 2006

Via Facsimile and U.S. Mail

Mr. John C. Heinmiller
Chief Financial Officer
St. Jude Medical, Inc.
One Lillehei Plaza
St. Paul, MN 55117

**Re: St. Jude Medical, Inc.
Form 10-K for the year ended December 31, 2005
Filed March 16, 2006
File No. 1-12441**

Dear Mr. Heinmiller:

We have reviewed your filing and have the following comments. We have limited our review to only your financial statements and related disclosures and will make no further review of your documents. Where indicated, we think you should revise your document 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 the fiscal year ended December 31, 2005

Exhibit 13. Portions of 2005 Annual Report to Shareholders

Consolidated Balance Sheets, page 24

1. Please revise future filings to separately disclose any components of other current assets that exceeds 5% of total current assets. Please also separately disclose any components of other noncurrent assets that exceeds 5% of total noncurrent assets. Refer to Rule 5-02.8 and 5-02.17 of Regulation S-X.

Note 1. Summary of Significant Accounting Policies, page 27

Fiscal Year, page 27

2. We note that although your fiscal years end on the Saturday nearest December 31, you present consolidated balance sheets and income statements as of and for the periods ended December 31, 2005, 2004 and 2003 for “simplicity of presentation”.
 - Please tell us the exact date of each of your last three fiscal year ends and clearly explain the adjustments you made in order to present the information as of December 31st of each year.
 - Tell us why management believes such presentation is appropriate.
 - For future periods, please date the financial statements as of the actual end of your fiscal periods.

Revenue Recognition, page 29

3. You state that your products are sold to hospitals primarily through a direct sales force and, in certain international markets, through independent distributors. Please tell us and revise future filings to describe any special rights or incentives that you offer such as price protection, stock rotation, volume pricing or rebates. Tell us and revise future filings to disclose how these incentives impact your revenue recognition.

Note 2 – Acquisitions and Minority Investments, page 32

4. It appears that the acquisitions of Savacor, Velocimed and ESI represent a series of immaterial acquisitions that are material in the aggregate. Tell us how you considered the guidance in paragraphs 54-55 of SFAS 141 in preparing your disclosures for the year

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ended December 31, 2005. In future filings, please provide all of the disclosures required by paragraphs 53-55 of SFAS 141 as appropriate.

Note 4 – Debt, page 38

2.80% Convertible Senior Debentures, page 38

5. We note that in December 2005, you issued 2.80% Convertible Senior Debentures. The notes are convertible into shares of your common stock upon the occurrence of certain events. We further note that upon conversion, you are required to satisfy 100% of the principal amount solely in cash, with any amounts above the principal amount to be satisfied in shares of your common stock. Finally, we note that the Convertible Senior Debentures contain a put option whereby the holder can require you to repurchase for cash some or all of the Convertible Debentures. Tell us how you have applied the guidance in EITF 05-02, EITF 00-19 and SFAS 133 in evaluating whether the various features of your notes, including the conversion feature and the put option, are embedded derivatives that you should separate from the debt host, record as liabilities and account for at fair value under SFAS 133. In this regard, please provide us with your analysis of paragraphs 12-32 of EITF 00-19 for each feature you have identified. With respect to the conversion feature, please address whether the Convertible Debenture meet the definition of conventional convertible debt in paragraph 4 of EITF 00-19 and paragraphs 7-8 of EITF 05-2.

Note 11 – Segment and Geographic Information, page 50

6. We note that effective January 1, 2005, you realigned your operating segments. We note that under the new structure, you have five operating segments. We further note that you have aggregated these operating segments into two reportable segments based upon their similar operational and economic characteristics. Please respond to the following:
 - Tell us how you considered the guidance in paragraph 17 of SFAS 131 in concluding that the Cardiac Rhythm Management, Cardiac Surgery and Neuromodulation segments qualify for aggregation.
 - Tell us how you considered the guidance in paragraph 17 of SFAS 131 in concluding that the Cardiology and Atrial Fibrillation segments qualify for aggregation.

* * * *

As appropriate, please respond to these comments within 10 business days or tell us

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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.

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) 551-3643 if you have questions regarding these comments.

Sincerely,

Kevin L. Vaughn
Branch Chief