



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

Mail Stop 3030

May 29, 2009

Via Facsimile and U.S. Mail

Mr. Francis J. Tarallo
Chief Financial Officer and Treasurer
Theragenics Corporation
5203 Bristol Industrial Way
Buford, Georgia 30518

Re: Theragenics Corporation
Form 10-K for the Fiscal Year Ended December 31, 2008
Filed March 13, 2009
File No. 001-14339

Dear Mr. Tarallo:

We have reviewed your filing and have the following comments. 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 comments are 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 December 31, 2008

Cover Page

1. You indicate on the cover page of the Form 10-K that your Commission file number is "0-15443." It appears, however, that you are actually filing under the file number 001-14339. In applicable future filings, please use your correct Commission file number.

Item 1. Business, page 1

2. We see from the transcript of your earnings call that occurred on February 19, 2009 that your backlog increased by 15% from the third to fourth quarter and your Chief Executive Officer's statements that although such backlog is subject to cancellation or delay, the backlog is still an indicator of the company's prospects. In your applicable future filings, please disclose the information required by Item 101(c)(1)(vii) with respect to each segment in which you operate and include any appropriate disclosure regarding cancellations or delays.

Item 6. Selected Financial Data, page II-2

3. Please revise future filings to describe, or cross-reference to a discussion thereof, factors that affect comparability of the information reflected in your selected financial data. In this regard we note you consummated several business combinations during the 5 year period ended December 31, 2008. For reference, see Item 301 of Regulation S-K.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page II-3

Operating income (loss) and costs and expenses, page II-5

4. We note your presentation of the non-GAAP measure operating income, excluding special items. In order to fully comply with the guidance in Item 10(e) of Regulation S-K and the guidance in our related Frequently Asked Questions Regarding the Use of Non-GAAP Financial Measures, please revise your disclosure in future filings to discuss the following items:
 - the manner in which management uses the non-GAAP measure to conduct or evaluate its business;
 - the economic substance behind management's decision to use such a measure;
 - the material limitations associated with use of the non-GAAP financial measure as compared to the use of the most directly comparable GAAP financial measure;

- the manner in which management compensates for these limitations when using the non-GAAP financial measure; and
- the substantive reasons why management believes the non-GAAP financial measure provides useful information to investors.

Please provide us with a sample of the proposed revised disclosure to be included in future filings.

5. As a related matter, please note that Item 10(e) of Regulation S-K prohibits adjusting a non-GAAP financial performance measure to eliminate items when the nature of the charge is such that it is reasonably likely to recur within two years or there was a similar charge or gain within the prior two years. Please explain to us why you believe that your presentation of the non-GAAP financial measure complies with this guidance.
6. We note your disclosures here and on pages II-6 through II-7 and page F-22 regarding the impairment of your goodwill and intangible assets. You state on page II-7 that “these impairment charges are not expected to affect [y]our liquidity, cash flows from operating activities, or future operations.” However, you state that the impairment charges were based in part on a discounted cash flow model. As such, it appears that the impairment charges are based in part on an expected decline in cash flows in future periods which will also impact your liquidity. Please revise future filings to provide enhanced disclosure of how the impairment charge relates to your expectations for your results of operations in future periods. In this regard, please specifically discuss any known trends or uncertainties that have had or that you reasonably expect will have a material favorable or unfavorable impact on revenues or income from continuing operations. Refer to Item 303(A)(3)(ii) of Regulation S-K.
7. Further to the above, you state that “[y]our estimates of fair value of [y]our reporting units were severely limited by [y]our market capitalization.” Please tell us and revise future filings to explain in greater detail how your market capitalization “limited” your fair value estimates.
8. Please provide us with additional information regarding your evaluation of goodwill for impairment. Discuss in greater detail the valuation methodologies you used. To the extent you used more than one methodology, explain how you weighted each of the methodologies. Disclose the specific assumptions used, including discount rates, growth rates, market multiples, etc. Please also revise the critical accounting policies and estimates section on pages II-9 through II-11 in future filings to provide more specific disclosure of the significant management judgments and estimates.
9. We note your disclosure that in connection with your evaluation of your tradename intangible assets, you determined that these assets no longer had an indefinite life but

instead had a remaining useful life of 10 years. Please tell us and revise future filings to explain what changed in relation to these assets that caused you to conclude they no longer had an indefinite life.

Item 11. Executive Compensation, page III-1

10. The Compensation Discussion and Analysis section should be a narrative at the beginning of your compensation disclosure, putting into perspective the tables that follow. Your current format includes a list of your executive officers between your Compensation Discussion and Analysis and the required compensation tables for your named executive officers. Please revise your future filings, as applicable, so that your Compensation Discussion and Analysis immediately precedes these tables.
11. We note from your discussion on pages 11 and 12 of the proxy statement that you have incorporated by reference into your Form 10-K that you have not disclosed the specific targets to be achieved in order for your named executive officers to earn their respective short-term cash incentive payments for 2008. We also note similar disclosures on page 13 regarding your 2009 short-term incentive compensation program and on pages 13 through 14 regarding your long-term incentive compensation program. Please disclose those targets in your future filings, as applicable. To the extent you believe that disclosure of such information, on a historical basis, would result in competitive harm such that the information could be excluded under Instruction 4 to Item 402(b) of Regulation S-K, please provide us with a detailed explanation supporting your conclusion. To the extent that it is appropriate to omit specific targets or performance objectives, you are required to provide appropriate disclosure pursuant to Instruction 4 to Item 402(b) of Regulation S-K. Refer also to Question 118.04 of the Regulation S-K Compliance and Disclosure Interpretations available on our website at <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>. In discussing how difficult or likely it will be to achieve the target levels or other factors, you should provide as much detail as necessary without disclosing information that poses a reasonable risk of competitive harm.

Item 15. Exhibits and Financial Statement Schedules, page IV-1

12. It appears you have not filed as an exhibit the distribution agreement with C.R. Bard that is mentioned on page I-8. Since this agreement accounts for a substantial portion of your revenues, please provide us your analysis as to whether that agreement is required to be filed pursuant to Regulation S-K Item 601(b)(10). If that agreement should be filed as an exhibit, please include that agreement in your next available filing.

Financial Statements, page F-1

Note B – Summary of Significant Accounting Policies, page F-13

Revenue Recognition, page F-13

13. We note that your product sales are recognized upon shipment and are “generally” not returnable. Please tell us and revise future filings to disclose the material terms of your revenue generating agreements. Explain how you apply to the criteria set forth in SAB 104 and any other relevant literature to your sales agreements, including a discussion of why recognition of revenue upon shipment is appropriate. Describe the circumstances where product sales are returnable including how those return provisions impact your revenue recognition.

Note C – Acquisitions, page F-17

NeedleTech, page F-18

14. Please tell us and revise future filings to disclose the factors that contributed to a purchase price that resulted in the recognition of a significant amount of goodwill in accordance with paragraph 51(b) of SFAS 141. In this regard, please also tell us and revise future filings to explain in greater detail the factors that led to the goodwill recognized in connection with the July 28, 2008 acquisition to be deemed to be fully impaired as of December 31, 2008.

Note E – Fair Value, page F-20

15. If your cash equivalents or outstanding borrowings are material in future periods, please revise this note to provide the disclosures required by paragraphs 32-35 of SFAS 157 for all of your financial assets and liabilities.

Note I – Credit Facility, page F-24

16. We note that your credit facility requires you to maintain certain financial ratios. To the extent you are subject to material financial debt covenants in future filings, please revise future filings to disclose your most significant debt covenants and ratios.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please file your cover letter on EDGAR. Please understand that we may have additional comments after reviewing your amendments and responses to our comments.

Theragenics Corporation
Mr. Francis J. Tarallo
May 29, 2009
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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.

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 Eric Atallah, Staff Accountant, at (202) 551-3663 or me at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. Please contact Geoffrey Kruczek, Staff Attorney, at (202) 551- 3641, or Timothy Buchmiller, Reviewing Attorney, at (202) 551-3635 if you have questions on any other comments. In this regard, do not hesitate to contact me or Martin James, Senior Assistant Chief Accountant, at (202) 551-3671 with any questions.

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief