



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

Mail Stop 3030

July 9, 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
Form 8-K filed June 2, 2009
File No. 001-14339

Dear Mr. Tarallo:

We have reviewed your letter dated June 25, 2009 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.

Form 10-K for the year ended December 31, 2008

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

1. We note your response to prior comment 4. We do not see where you have discussed the material limitations associated with the use of operating income, excluding special items

or how management compensates for those limitations. Please revise future filings to comply.

Goodwill and other intangible assets, page II-10

2. We note your responses to prior comments 6 through 8. Further we note that you do not believe that disclosure of specific assumptions in your future filings would be meaningful since your entire goodwill balance has been written off at December 31, 2008. Given the significance of the goodwill impairment charge and the fact this charge will affect the comparability of your financial statements it is unclear as to why this disclosure would not be meaningful in your future filings. Accordingly, please revise future filings to discuss the methodologies and any significant assumptions you used in calculating your goodwill impairment.

Item 11. Executive Compensation, page III-1

3. It appears from your response to prior comment 10 that a portion of the goals applicable to your short-term incentive program relate to financial targets for a fiscal period that has already been completed, including the revenue, profitability and EBITDA goals you mention. Please expand your analysis for why you believe disclosing the historical financial performance goals applicable to your short-term incentive program will result in competitive harm to you. For example, please:
 - Clarify how disclosing performance target levels for a past year would “reveal specific information about [your] current and future goals, anticipated corporate actions and resource allocation, [and] give [your] competitors insight into [your] efforts to exploit identified opportunities.” For instance, explain why a past year’s performance targets would necessarily be predictive of your strategic plans for future years, given that your compensation committee could assign different weights to these goals or different goals altogether; and
 - Explain in more detail how “[d]isclosure of this information is tantamount to disclosure of [your] strategies to execute [your] strategic plan and could compromise [your] ability to compete successfully.” How would a competitor’s comparison of these business goals as reflected in the performance targets enable it to draw a specific conclusion with respect to your strategic activities in future years? Might there be multiple variables that affected actual performance that are unrelated to the performance targets and your strategy?

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Form 8-K filed June 2, 2009

4. It appears you have omitted from Exhibit 10.1 to your Form 8-K filed June 2, 2009 the schedules listed on page iv of that exhibit. Please re-file that exhibit with your next available filing to include all previously omitted schedules and attachments.

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.

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