

Mail Stop 6010

May 5, 2006

Judy M. Robinett
President and Chief Executive Officer
Medical Discoveries, Inc.
1338 S. Foothill Drive - #266
Salt Lake City, Utah 84108

**Re: Medical Discoveries, Inc.
Supplemental Response dated April 20, 2006
File No. 333-121635**

Dear Ms. Robinette:

We have reviewed your submission and have the following comments. 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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not 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.

Prospectus Summary – page 1

1. We note the revision you propose to make in response to comment 1. However, the revised disclosure does not indicate when you made the amended filing with the FDA or what action the FDA has taken in regard to the amended filing. Please disclose the date the application was submitted and clearly disclose the date and decision reached by the FDA.

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Risk Factors – page 2

We may not be able to raise sufficient capital to meet present and future obligations. – page 3

2. We note the revisions you made in response to comment 6. However, the disclosure has only been updated to February 28, 2006. Your revised disclosure should be as of a more recent date.

Obtaining additional capital through the sale of common stock will result in dilution of stockholder interests. – page 4

3. Please quantify the disclosure in this risk factor so that potential investors can evaluate the extent of the dilution you refer to.

We face intense competition and competing products. – page 6

4. Please delete the second sentence of the third paragraph of the risk factor. The statement contains mitigating language which is inappropriate.
5. It is still unclear to us what need(s) would be met by your proposed products that are not being met by the currently available products, and why you believe there is a market for them. Please revise the risk factor accordingly.

Description of Business – page 22

6. Under “SaveCream” on page 23, please delete the word “promising” from the second sentence of the second paragraph. In the alternative, please provide factual support for the claim.
7. We note that you have deleted the reference to “Stage 4 breast cancer.” We think that this is important qualifying information about the claims you make in regard to this proposed product. Please return the reference to the document, explain what the term refers to and discuss the significance of this fact on the results you describe.

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As appropriate, please amend your registration statement in response to these comments. 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 supplemental information. Detailed cover letters greatly facilitate our review. We may have additional comments after reviewing your amendment and responses to our comments.

You may contact Keira Ino at 202-551-3659 or James Rosenberg at 202-551-3679 if you have questions regarding comments on the financial statements and related matters. Please contact Mary K. Fraser at 202-551-3609 or me at 202-551-3710 with any other questions.

Regards,

Jeffrey P. Riedler
Assistant Director

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