

September 12, 2006

CONFIDENTIAL

Via Overnight Courier and Filed by Edgar

Mr. Jim B. Rosenberg
Senior Assistant Chief Accountant
Division of Corporate Finance, Mail Stop 6010
United States Securities and Exchange Commission
100 F Street, NE
Washington, D.C. 20549

RE: Threshold Pharmaceuticals, Inc.
Form 10-K for the fiscal year ended December 31, 2005
Filed March 28, 2006
File No. 000-51136

Dear Mr. Rosenberg:

On behalf of Threshold Pharmaceuticals, Inc. ("Threshold" or the "Company"), this letter responds to the comment of the staff of the Securities and Exchange Commission (the "Staff") set forth in the letter dated August 15, 2006 in connection with the Company's Form 10-K for the fiscal year ended December 31, 2005. The response below is preceded by the Staff's comment.

"Item 7: Management's Discussion and Analysis of Financial Condition and Results of Operations, page 46

Research and Development Expenses, page 47

1. Please provide us, in disclosure type format, additional disclosure for your R&D projects by referring to the Division of Corporation Finance "Current Issues and Rulemaking Projects Quarterly Update under section VIII—Industry Specific Issues—Accounting and Disclosure by Companies engaged in Research and Development Activities." You can find it at the following website address: <http://www.sec.gov/divisions/corpfin/cfcrq032001.htm#secviii>.

Please disclose the following information for each of your major research and development projects: a. The costs incurred during each period presented and to date on the project; b. The nature, timing and estimated costs of the efforts necessary to complete the project; c. The anticipated completion dates of each project; d. The period for each project in which material net cash flows are expected to commence.

Regarding b., if you do not maintain any research and development costs by project, disclose that fact and explain why management does not maintain and evaluate research and development costs by project. Provide other quantitative or qualitative disclosure that indicates the amount of the company's resources being used in the project.

Regarding c. and d., disclose the amount or range of estimated costs and timing to complete the phase in process and each future phase. To the extent that information is not estimable, disclose those facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate."

Response:

The Company respectfully refers the Staff to its letter to the Company dated May 6, 2004, which included a comment (No. 36) addressing the issue of accounting and disclosing research and development expenses and requesting the same disclosures listed above. In connection with its May 10, 2004 response to this letter, the Company included in its registration statement on Form S-1 expenses by development

project for the year ended December 31, 2003 and for the period ended March 31, 2004. The Company has continued to provide disclosure of project-by-project research and development expenses for each reporting period in its subsequent filings under the Securities Exchange Act of 1934. In addition to the disclosure noted by the Staff on page 47 of the Company's Form 10-K for the fiscal year ended December 31, 2005, we respectfully direct the Staff's attention to the detailed disclosure of expenses by major project for each of the years ended December 31, 2003, 2004 and 2005 provided on pages 48 and 49.

In its May 10, 2004 response to the Staff's prior letter, the Company supplementally informed the Staff that it did not track research and development costs by project prior to 2003, so that cumulative project expenses to date could not be presented. It is still the case that cumulative project expenses to date cannot be presented since this information was not available prior to 2003.

Also in response to the earlier Staff comment letter, the Company supplementally advised the Staff that it could not reasonably predict when any project will result in net cash inflows, the timing, or costs to completion for any project, as these depend on a number of risks and uncertainties, such as future clinical trial results and enrollment rates, regulatory approval and market acceptance. These risks and uncertainties, which are fully described in "Risk Factors" in the Company's Form 10-K for the fiscal year ended December 31, 2005, continue to exist, and preclude the Company from predicting the nature, timing and estimated costs of efforts necessary to complete each project, the anticipated completion dates of each project and the period in which net cash flows are expected to commence. In future filings, the Company plans to add the following language to its discussion of Research and Development in Management's Discussion and Analysis of Financial Condition and Results of Operations:

We did not track research and development expenses by project prior to 2003, and therefore we cannot provide cumulative project expenses to date. Due to the risks and uncertainties involved in discovering and developing product candidates, such as clinical trial results, regulatory approval requirements, dependence on third parties and market acceptance, all of which are described in greater detail in "Risk Factors", we cannot reasonably estimate the costs and timing of completion of each project.

The Company hereby acknowledges that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filings; 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.

Please contact the undersigned at (650) 233-8519, or Sarah O'Dowd at (650) 324-7045, if you have any questions regarding the responses to the staff comment letter.

Sincerely,

/s/ Stephen Thau

cc: Harold E. Selick, Ph.D.
Ms. Sarah O'Dowd
Mr. Michael Ostrach

