

Mail Stop 6010

August 8, 2008

Jack J. Kogut  
Senior Vice President Administration  
Northfield Laboratories Inc.  
1560 Sherman Avenue  
Suite 1000  
Evanston, Illinois 60201-4800

**Re: Northfield Laboratories Inc.  
Preliminary Proxy Statement on Schedule 14A  
Filed August 1, 2008  
File No. 0-24050**

Dear Mr. Kogut:

We have limited our review of your filing to those issues we have addressed in our 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.

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.

Executive Compensation, page 10

Summary Compensation Table, page 12

1. We note that the Summary Compensation Table you provided does not follow the format specified in Item 402(c) of Regulation S-K. Please revise your disclosure to provide the tabular disclosure required by Item 402(c) of Regulation S-K.

Item 4: Amendment to Restated Certificate of Incorporation to Effect a Reverse Split of Northfield's Common Stock, page 31

Effects of the Reverse Stock Split, page 32

2. We note that upon effectiveness of the reverse stock split, the number of authorized shares of common stock that are not issued or outstanding or reserved for issuance would increase from approximately 30 million to between approximately 50 million and 55.7 million. Please revise your disclosure to describe any plans, arrangements or understandings to issue shares of common stock that will be available as a result of the amendment to your Restated Certificate of Incorporation. If you have no such plans, arrangements or understandings, please revise your disclosure to state so.

\* \* \*

As appropriate, please amend your filing and respond to these comments within 10 business days or tell us when you will provide us with a response. 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 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 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

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- 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.

Please contact Sebastian Gomez Abero at (202) 551-3578 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler  
Assistant Director