

Mail Stop 4561

June 9, 2008

Stephen D. Barnhill, M.D.
Chief Executive Officer
Health Discovery Corporation
2 East Bryan Street, Suite #601
Savannah, GA 31401

**Re: Health Discovery Corporation
Registration Statement on Form S-1
Filed May 13, 2008
File No. 333-150878**

Dear Dr. Barnhill:

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. 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.

General

1. We note that the registration statement covers the resale of common shares that are being offered in large amounts by major shareholders, such as Prime Mover Capital Partners and Mr. Quirk. In some situations, large resale transactions by affiliated parties may be considered transactions "by or on behalf of the issuer" for purposes of Rule 415(a)(4) of Regulation C. Under the rule, equity securities offered by or on behalf of the registrant cannot be sold "at the market" price unless the offering satisfies the requirements set forth in the rule. It appears as though you have concluded that the proposed resale of the common shares by your affiliates is appropriately characterized as a secondary offering under Rule 415(a)(1)(i). Please provide us with a detailed legal analysis supporting your conclusion.

Prospectus Summary, page 1

The Offering, page 2

2. Here, or in connection with your Item 507 disclosure, please provide a materially complete discussion of how the selling shareholders acquired the securities that you are registering on their behalf for resale. The background of the issuances to the selling shareholders and the nature of the arrangements, agreements, and relationships with the company should include, for each selling securityholder, a discussion of the date of the transaction in which the securities were sold, the amount of securities sold, the agreement(s) that evidence the sale, the instrument(s) that define the rights of the securityholders, and the private placement agent, if any.

Selling Shareholders, page 13

3. With respect to the shares to be offered for resale by legal entities, please disclose the individual or individuals who exercise the voting and dispositive powers. See Interp. I.60 of Telephone Interp. Manual (July 1997) and Interp. 4S of Reg. S-K section of 3/99 Supp. to Manual.
4. Footnote 12 relating to the chart on page 14 states that Manish Vora is an affiliate of a broker-dealer. Please represent, if true, whether: (i) the seller purchased the securities in the ordinary course of business and (ii) at the time of the purchase of the securities to be resold, the seller had no agreements or understandings, directly or indirectly, with any person to distribute the securities. If you are not able to so represent, please identify the selling stockholder as an underwriter.
5. The footnotes to the chart on page 14 describe how the shares were acquired by each selling shareholder but it is unclear which of the securities are being offered as part of this registration statement. It appears that the securities that are the subject of this registration statement were acquired entirely in the September 7, 2007 private placement of 31,937,500 shares of restricted common stock for cash, and the conversion of secured debt to equity of 19,601,322 shares of common stock and 7,437,184 shares of Series A Preferred Stock. Please clarify which securities of each selling shareholder are being offered in this registration statement.

Description of Capital Stock, page 42

6. Please provide the information required in Item 202(c) of Regulation S-K regarding the warrants in the section entitled "Description of Capital Stock" on page 42 including:
 - The amount of securities called for by such warrants or rights;

- The period during which and the price at which the warrants or rights are exercisable;
- The amount of warrants or rights outstanding;
- Provisions for changes to or adjustments in the exercise price; and
- Any other material terms of such rights on warrants.

Financial Statements, pages F1 – F16

7. Please include updated financial statements pursuant to Rule 8-08 of Regulation S-X.

Recent Sales of Unregistered Securities, page II-2

8. For each private placement discussed in Item 15 of the prospectus on page II-2, please provide the following as required by Item 701 of Regulation S-K:
- Provide the specific exemption that you relied upon in offering such securities without registration under the Securities Act of 1933. Also briefly disclose the facts upon which you relied in applying the exemption.
 - Name the persons or identify the class of persons to whom the securities were sold.
 - Name the underwriters, if any.
 - As to the securities sold for cash, state the aggregate underwriting discounts or commissions.
9. Note K to the Financial Statements on page F-14 describes an issuance of 3,400,000 warrants to consultants and other service providers in January 2006 and an issuance of 3,000,000 warrants to two directors in January 2006. Please discuss these transactions in your Item 15 disclosure.

Undertakings, page II-6

10. Please provide all the appropriate undertakings required by Item 512 of Regulation S-K that apply. Specifically, it appears that Rule 430C of the Securities Act of 1933 may be applicable and the undertakings required by Item 512(a)(5)(ii) of Regulation S-K should be included. The undertaking currently listed in paragraph (6) of Item 17 relating to Rule 430A does not seem applicable. Please revise or explain.

11. Please describe why the undertaking described in paragraph 4 of Item 17 relates to the transaction in this registration statement. It does not appear that this registration statement covers the primary offering of securities.

* * *

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 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 Act of 1933 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness 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 connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement.

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We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

If you have any questions, please call Jan Woo at (202) 551-3453. If you require further assistance, you may contact me at (202) 551-3397. If, thereafter, you require additional assistance, you may contact the Assistant Director, Barbara C. Jacobs, at (202) 551-3735.

Sincerely,

Jay E. Ingram
Attorney-Advisor

cc: Via Facsimile (404) 572-6999
M. Todd Wade, Esq.
Powell Goldstein LLP
Telephone: (404) 572-6600