

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

FORM S-3

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

DISCOVERY LABORATORIES, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware

(State or Other Jurisdiction of Incorporation)

94-3171943

(I.R.S. Employer Identification Number)

2600 Kelly Road, Suite 100
Warrington, Pennsylvania 18976
(215) 488-9300

(Address, Including Zip Code and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Robert J. Capetola, Ph.D.
Chief Executive Officer
2600 Kelly Road, Suite 100
Warrington, Pennsylvania 18976
(215) 488-9300

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Ira L. Kotel, Esq.
Dickstein Shapiro Morin & Oshinsky LLP
1177 Avenue of the Americas, 47th Floor
New York, New York 10036-2714
(212) 835-1400

Approximate date of commencement of proposed sale to public: As soon as practicable after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 (the "Securities Act"), other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. 333-111360

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(1)(2)	Proposed Maximum Aggregate Offering Price(2)(3)	Amount of Registration Fee(1)(2)
Common Stock, \$.001 par value	1,468,592	\$5.61	\$8,238,800	\$969.71

(1) Also registered hereby are such additional and indeterminable number of shares as may be issuable due to adjustments for changes resulting from stock dividends, stock splits and similar changes.

(2) Pursuant to Rule 457(c) promulgated under the Securities Act of 1933, as amended, the proposed maximum offering price per share of such shares of common stock is estimated solely for the purpose of determining the registration fee.

(3) In accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended, an additional amount of securities having a proposed maximum aggregate offering price of no more than 20% of the proposed maximum aggregate offering price (\$41,194,000) of the remaining 4,300,000 shares of common stock of the Company eligible to be sold under the registrant's Registration Statement on Form S-3 (File No. 333-111360), or \$8,238,800, is registered hereby.

This Registration Statement shall become effective upon filing with the Securities and Exchange Commission in accordance with Rule 462(b) promulgated under the Securities Act of 1933, as amended.

**EXPLANATORY NOTE AND
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE**

This Registration Statement on Form S-3 of Discovery Laboratories, Inc. (the "Company") is being filed pursuant to Rule 462(b) and General Instruction IV to Form S-3, both as promulgated under the Securities Act of 1933, as amended, for the purpose of registering an additional 1,468,592 shares of common stock, par value \$.001 per share, of the Company.

The contents of the Registration Statement on Form S-3 (File No. 333-111360) of the Company, filed with the Securities and Exchange Commission (the "Commission") on December 19, 2003, which was declared effective by the Commission on January 7, 2004, and the documents filed by the Company with the Commission and incorporated or deemed to be incorporated therein, are incorporated herein by reference. Further, in order to update our financial statement information, we are incorporating by reference the additional documents filed with the Securities and Exchange Commission listed below:

1. Our Annual Report on Form 10-K for the fiscal year ended December 31, 2003;
 2. Our Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2004, June 30, 2004, and September 30, 2004; and
 3. Our Current Reports on Form 8-K filed on February 6, 2004, February 19, 2004, March 30, 2004, May 10, 2004, June 15, 2004, June 30, 2004, July 9, 2004, August 5, 2004, September 20, 2004, October 28, 2004, November 4, 2004, December 9, 2004, December 17, 2004, December 29, 2004, February 2, 2005 and February 14, 2005.
-

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Warrington, Commonwealth of Pennsylvania, on the 17th day of February, 2005.

DISCOVERY LABORATORIES, INC.
(Registrant)

By: /s/ Robert J. Capetola

Robert J. Capetola, Ph.D.
President and Chief Executive Officer

KNOW ALL MEN BY THESE PRESENTS, that W. Thomas Amick, whose signature appears below, constitutes and appoints each of Robert J. Capetola, Ph.D., and David L. Lopez, C.P.A., Esq., or any of them, each acting alone, his true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, in his name, place and stead, in any and all capacities, in connection with this Registration Statement on Form S-3 of Discovery Laboratories, Inc. (the "Registration Statement") under the Securities Act of 1933, as amended, including, without limiting the generality of the foregoing, to sign the Registration Statement in the name and on behalf of the Registrant or on behalf of the undersigned as a director or officer of the Registrant, and any and all amendments or supplements to the Registration Statement, including any and all stickers and post-effective amendments to the Registration Statement, and to sign any and all additional registration statements relating to the same offering of securities as the Registration Statement that are filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission and any applicable securities exchange or securities self-regulatory body, granting unto said attorneys-in-fact and agents, each acting alone, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities indicated on the dates indicated.

<u>Signature</u>	<u>Name & Title</u>	<u>Date</u>
* /s/ Robert J. Capetola	Robert J. Capetola, Ph.D. President, Chief Executive Officer and Director	February 17, 2005
* /s/ John G. Cooper	John G. Cooper Executive Vice President, Chief Financial Officer	February 17, 2005
* /s/ Cynthia Davis	Cynthia Davis Vice President, Administrative Operations and Controller (Principal Accounting Officer)	February 17, 2005
* /s/ Herbert McDade, Jr.	Herbert McDade, Jr. Chairman of the Board of Directors	February 17, 2005
* /s/ Max Link	Max Link, Ph.D. Director	February 17, 2005
* /s/ Antonio Esteve	Antonio Esteve Director	February 17, 2005
* /s/ Marvin E. Rosenthale	Marvin E. Rosenthale Director	February 17, 2005
/s/ W. Thomas Amick	W. Thomas Amick Director	February 17, 2005

* The undersigned, by signing his name hereto, does sign and execute this Registration Statement on Form S-3 on behalf of the above-named Directors and Officers of the Registrant pursuant to a Power of Attorney executed by each such Director and Officer attached as Exhibit 24.1 to the Registration Statement on Form S-3 (File No. 333-111360) of the Company filed with the Securities and Exchange Commission on December 19, 2003.

By: /s/ David L. Lopez
David L. Lopez, C.P.A., Esq.

Discovery Laboratories, Inc.
Registration Statement on Form S-3

Index to Exhibits

<u>Exhibit No.</u>	<u>Description</u>
5.1	Opinion of Dickstein Shapiro Morin & Oshinsky LLP, legal counsel.*
23.1	Consent of Ernst & Young LLP, independent registered accounting firm.*
23.2	Consent of Eisner LLP, independent registered accounting firm.*
23.3	Consent of Dickstein Shapiro Morin & Oshinsky LLP, legal counsel (included in Exhibit 5.1).*
24.1	Powers of Attorney, incorporated by reference to Exhibit 24.1 to the Registration Statement on Form S-3 of the Company (File No. 333-111360).
24.2	Power of Attorney for W. Thomas Amick (included in Signatures page to this Registration Statement on Form S-3).

* Filed herewith.

[Letterhead of]

Dickstein Shapiro Morin & Oshinsky LLP
1177 Avenue of the Americas, 47th Floor
New York, New York 10036-2714

February 17, 2005

Board of Directors
Discovery Laboratories, Inc.
2600 Kelly Road, Suite 100
Warrington, PA 18976

Discovery Laboratories, Inc.--
Registration Statement on Form S-3

Ladies and Gentlemen:

We have acted as counsel for Discovery Laboratories, Inc., a Delaware corporation (the "Company"), in connection with the preparation of the Registration Statement on Form S-3 (the "Registration Statement") of the Company as filed under the Securities Act of 1933 (the "Securities Act") with the United States Securities and Exchange Commission (the "Commission") on February 17, 2005, for the registration under the Securities Act of up to 1,468,592 shares (the "Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock"), to be offered by the Company to the public pursuant to Rule 462(b) promulgated under the Securities Act, as described in the Registration Statement. The Registration Statement provides that the Shares may be offered as soon as practicable after the Registration Statement becomes effective and in such amounts and at such prices, terms and conditions as the Company shall set forth in a prospectus supplement (the "Prospectus Supplement") to the Registration Statement.

In rendering this opinion, we have relied upon, among other things, our examination of certain records of the Company, including without limitation, the Company's Restated Certificate of Incorporation, the Company's Bylaws and resolutions of the Company's Board of Directors. We have also examined certificates of the Company's officers and of public officials, and have reviewed such questions of law and made such other inquiries, as we have deemed necessary or appropriate for the purpose of rendering this opinion. As to various questions of fact material to this opinion, we have also relied upon representations and warranties of the Company and upon such certificates and other instruments of officers of the Company and public officials furnished to us by the Company, in each case without independent investigation or verification.

In addition, without any independent investigation or verification, we have assumed (i) the genuineness of all signatures, (ii) the authenticity of all documents submitted to us as originals and the conformity with the original documents of all documents submitted to us as certified, conformed or photostatic copies, (iii) the authority of all persons signing any document other than the officers of the Company, where applicable, signing in their capacity as such, (iv) the enforceability of all the documents we have reviewed in accordance with their respective terms against the parties thereto and (v) the truth and accuracy of all matters of fact set forth in all certificates and other instruments furnished to us.

Based on and subject to the assumptions, qualifications and limitations set forth herein, we are of the opinion that:

When, if at all, the Shares are authorized for issuance by a resolution of the Company's Board of Directors (the "Authorizing Resolution") and issued pursuant to the Registration Statement as it shall be amended and as it shall be supplemented by the Prospectus Supplement, subject to the receipt of consideration for such issuance in accordance with the terms and conditions of the Authorizing Resolution, such Shares shall be duly and validly authorized and issued, fully paid and nonassessable.

No opinion is expressed herein with respect to any laws other than the General Corporation Law and the Constitution of the State of Delaware. No opinion is expressed as to the effect that the law of any other jurisdiction may have upon the subject matter of the opinion expressed herein under conflicts of law principles, rules and regulations or otherwise. We assume no obligation to supplement this letter if any applicable laws change after the date hereof or if we become aware of any new facts that might affect any view expressed herein after the date hereof.

To the extent it may be relevant to the opinion expressed herein, we have assumed that the Company will have sufficient authorized but unissued shares of Common Stock on the date of issuance of the Shares registered pursuant to the Registration Statement.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement. In giving this consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated thereunder by the Commission.

The foregoing opinion is delivered to the Board of Directors of the Company in connection with the Registration Statement, and may not be relied upon by any other person or for any other purpose.

We wish to call your attention to the fact that the fair market value of all securities of the Company that are beneficially owned by attorneys of this Firm exceeds \$50,000.

Very truly yours,

/s/ Dickstein Shapiro Morin & Oshinsky LLP

Consent of Independent Registered Accounting Firm

We consent to the incorporation by reference in this Registration Statement (Form S-3 No. 333-111360) filed pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, and related prospectus of Discovery Laboratories, Inc. for the registration of 1,468,592 shares of its common stock of our report dated February 13, 2004, with respect to the consolidated financial statements of Discovery Laboratories, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2003, filed with the Securities and Exchange Commission. We hereby consent to the incorporation by reference in this Registration Statement of the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3 No. 333-111360) and related prospectus of Discovery Laboratories, Inc., filed with the Securities and Exchange Commission on December 19, 2003, for the registration of 6,500,000 shares of its common stock.

/s/ Ernst & Young LLP

Philadelphia, Pennsylvania
February 15, 2005

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in this Registration Statement (Form S-3 No. 333-111360) filed pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, and related prospectus of Discovery Laboratories, Inc. of our report dated February 25, 2000, with respect to our audit of the consolidated financial statements of Discovery Laboratories, Inc. for the period from May 18, 1993 (inception) through December 31, 1999, not presented separately, included in the Annual Report on Form 10-K of Discovery Laboratories, Inc. for the fiscal year ended December 31, 2002, as filed with the Securities and Exchange Commission. We hereby consent to the incorporation by reference in this Registration Statement of the reference to our firm under the caption "Experts" in the Registration Statement (Form S-3 No. 333-111360) and related prospectus of Discovery Laboratories, Inc., filed with the Securities and Exchange Commission on December 19, 2003.

Eisner LLP

New York, New York
February 15, 2005