DISCOVERY LABORATORIES, INC. SUPPLEMENT DATED MARCH 21, 2006 TO PROSPECTUS DATED AUGUST 8, 2003

This Supplement should be read in conjunction with the Preliminary Prospectus, dated August 8, 2003, contained in Registration Statement No. 333-107836 (the "Registration Statement") of Discovery Laboratories, Inc., as amended and supplemented by (i) the Pre-Effective Amendment No. 1 to the Registration Statement filed with the Securities and Exchange Commission (the "Commission") on August 21, 2003, including the Preliminary Prospectus, dated August 20, 2003, contained therein, and including the exhibits thereto, (ii) the Prospectus Supplement, dated April 16, 2004, filed with the Commission on April 16, 2004, (iii) the Prospectus Supplement, dated May 9, 2005, filed with the Commission on May 9, 2005, and (iv) the Prospectus Supplement, dated February 17, 2006, filed with the Commission on February 17, 2006.

Three of the holders of our Class A Warrants have assigned their warrants: (i) Castle Creek Healthcare Partners LLC has assigned its Class A Warrant to purchase 20,000 shares of our common stock to Hudson Bay Fund LP, (ii) CC LifeScience Market Neutral Fund, Ltd. has assigned its Class A Warrant to purchase 7,514 shares of our common stock to D3 LifeScience Market Neutral Fund Ltd. and (iii) CC LifeScience, Ltd. has assigned its Class A Warrant to purchase 30,056 shares of our common stock to D3 LifeScience Ltd.

Accordingly, the Selling Stockholder table contained in the Prospectus, as amended and supplemented, is further amended, as set forth below, by (i) revising the entries for the assignors and (ii) adding entries for the assignees.

Our common stock, par value \$.001 per share, is listed on the Nasdaq National Market under the symbol "DSCO". On March 20, 2006, the closing sale price for the common stock, as reported on the Nasdaq National Market, was \$7.60.

Neither the SEC nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement is truthful or complete. Any representation to the contrary is a criminal offense.

The information appearing in the following table supplements or supersedes in part the information in the table under the heading "Selling Stockholders" in the Preliminary Prospectus, dated August 20, 2003, as amended and supplemented.

SELLING STOCKHOLDERS Number of Shares of Total common Number of Number of Number of Percentage stock, not Shares to be Number of Shares Shares of Percentage to be including Offered for Beneficially represented common Beneficially Shares to be Warrants, by Warrants Owned stock the Account Owned after Owned Beneficially Beneficially Before of Selling After this Beneficially this Offering Name Owned Owned Owned + Offering Stockholders Offering Castle Creek Healthcare Partners LLC 100,000 100,000 100,000 0 0 CC LifeScience, Ltd. 150,280 0 150,280 150,280 37,570 0 0 37,570 0 CC LifeScience Market Neutral Fund, Ltd. 37,570 D3 LifeScience Ltd. 0 30,056 0 0 30,056 0 D3 LifeScience Market Neutral Ltd 0 7,514 0 7,514

Hudson Bay Fund LP

0

0

20,000

0

20,000

0

Please keep this supplement with your Prospectus.

^{*} Less than 1%.

⁺ The information contained in this table reflects "beneficial" ownership of common stock within the meaning of Rule 13d-3 under the Securities Exchange Act of 1934. Beneficial ownership information reflected in the table includes shares of common stock issuable upon the exercise of outstanding warrants.