

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SEC FILE NUMBER:
000-26422

CUSIP NUMBER:
254668 10 6

FORM 12b-25

NOTIFICATION OF LATE FILING

(Check one):

Form 10-K
 Form N-SAR

Form 20-F
 Form N-CSR

Form 11-K

Form 10-Q

Form 10-D

For Period Ended: September 30, 2010

Transition Report on Form 10-K
 Transition Report on Form 20-F
 Transition Report on Form 11-K
 Transition Report on Form 10-Q
 Transition Report on Form N-SAR

For the Transition Period Ended: _____

Nothing in this form shall be construed to imply that the Commission has verified any information contained herein.

If the notification relates to a portion of the filing checked above, identify the Item(s) to which the notification relates: N/A

PART I — REGISTRANT INFORMATION

Discovery Laboratories, Inc.

Full Name of Registrant

N/A

Former Name if Applicable

2600 Kelly Road, Suite 100

Address of Principal Executive Office (*Street and Number*)

Warrington, Pennsylvania 18976-3622

City, State and Zip Code

PART II — RULES 12b-25(b) AND (c)

If the subject report could not be filed without unreasonable effort or expense and the registrant seeks relief pursuant to Rule 12b-25(b), the following should be completed. (Check box if appropriate.)

- (a) The reason described in reasonable detail in Part III of this form could not be eliminated without unreasonable effort or expense;
- (b) The subject annual report, semi-annual report, transition report on Form 10-K, Form 20-F, Form 11-K, Form N-SAR or Form N-CSR, or portion thereof, will be filed on or before the fifteenth calendar day following the prescribed due date; or the subject quarterly report or transition report on Form 10-Q or subject distribution report on Form 10-D, or portion thereof, will be filed on or before the fifth calendar day following the prescribed due date; and
- (c) The accountant's statement or other exhibit required by Rule 12b-25(c) has been attached if applicable.

PART III — NARRATIVE

State below in reasonable detail the reasons why Forms 10-K, 20-F, 11-K, 10-Q, 10-D, N-SAR, N-CSR, or the transition report or portion thereof, could not be filed within the prescribed time period. (Attach extra sheets if needed.)

Discovery Laboratories, Inc. (the “Company”) is not timely filing its Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2010 (“Third Quarter 10-Q”). The principal reasons for the Company’s inability to file at this time are as follows:

In connection with a review of the Company’s Annual Report on 2009 Form 10-K among the Audit Committee of the Company’s Board of Directors (the “Audit Committee”), and the Company’s management, with the assistance of Ernst & Young LLP (“Ernst & Young”), the Company’s independent registered public accounting firm, and the Company’s outside legal advisors, the Audit Committee has reassessed the accounting classification of certain registered warrants issued by the Company in May 2009 and February 2010 with respect to ASC 815 “Derivatives and Hedging — Contracts in Entity’s Own Equity” (“ASC 815,” formerly known as Emerging Issues Task Force Issue 00-19, “Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company’s Own Stock”). The reassessment was necessitated by the fact that ASC 815, as interpreted, establishes a presumption that, in the absence of express language to the contrary, registered warrants may be subject to net cash settlement, as it is not within the absolute control of the Company to provide freely-tradable shares in all circumstances, and therefore, such warrants should be booked as liabilities. The review was conducted to respond to certain comments raised by the Staff of the Securities and Exchange Commission (“SEC”) following its periodic review of the Company’s Annual Report on Form 10-K for the year ended December 31, 2009.

As detailed in the Company’s Current Report on Form 8-K, which the Company filed with the SEC on November 9, 2010, the Audit Committee determined that, notwithstanding the highly-remote and theoretical possibility of net cash settlement of the Company’s warrants, the warrants identified above should have been recorded as liabilities, measured at fair value on the date of issue, with changes in the fair values recognized in the Company’s quarterly statement of operations in its quarterly financial reports. Accordingly, the Audit Committee also concluded on November 8, 2010 that the Company’s previously-filed consolidated financial statements for the fiscal year ended December 31, 2009 on Form 10-K; Ernst & Young’s reports on the financial statements and the effectiveness of internal control over financial reporting as of and for the fiscal year ended December 31, 2009; each of the consolidated financial statements included in the Company’s Quarterly Reports on Form 10-Q for the periods ended June 30, 2009, September 30, 2009, March 31, 2010 and June 30, 2010; and all related earnings releases and similar communications issued by the Company with respect to the foregoing, should no longer be relied upon.

The Company is diligently undertaking to restate and file amendments to its previously-filed financial statements before finalizing and filing the financial information for the third quarter 2010, in order to reflect the consolidated balance sheet for December 31, 2009 as audited and to allow for the Third Quarter 10-Q to include a meaningful comparison between the three and nine months ended September 30, 2010 and the corresponding prior-year periods (as restated). On or before November 15, 2010, the Company anticipates filing an amended Annual Report on Form 10-K for the fiscal year ended December 31, 2009 and amended Quarterly Reports on Form 10-Q for the quarterly periods ended March 31, 2010 and June 30, 2010, each with restated financial statements reflecting the reclassification of the warrants identified above, together with the Third Quarter 10-Q.

PART IV — OTHER INFORMATION

(1) Name and telephone number of person to contact in regard to this notification

John Tattory
Vice President, Finance and Controller

(Name)
(Title)

(215)

(Area Code)

488-9300

(Telephone Number)

(2) Have all other periodic reports required under Section 13 or 15(d) of the Securities Exchange Act of 1934 or Section 30 of the Investment Company Act of 1940 during the preceding 12 months or for such shorter period that the registrant was required to file such report(s) been filed? If answer is no, identify report(s).

Yes No

(3) Is it anticipated that any significant change in results of operations for the corresponding period for the last fiscal year will be reflected by the earnings statements to be included in the subject report or portion thereof?

Yes No*

If so: attach an explanation of the anticipated change, both narratively and quantitatively, and, if appropriate, state the reasons why a reasonable estimate of the results cannot be made.

* The restatements described in Part III above will reflect the reclassification of the warrants from equity to a liability in an amount equal to the fair value of the warrants, as of the dates of issuance, calculated using the Black Scholes option pricing model. Thereafter, the revaluation of the fair value of the warrants at each subsequent balance sheet date following the respective dates of issuance, results in a change in the carrying value of the liability, which change is recorded as "Change in fair value of common stock warrant liability" in the consolidated statement of operations. The net effect of this change in fair value of common stock warrant liability for the consolidated financial statement for the quarter ended September 30, 2009 is currently estimated to be a loss of approximately \$1.6 million, or approximately \$0.01 per share.

The restatements will have no impact on amounts previously reported for Assets; Revenues; Operating Expenses; Cash Flows; Loans, Equipment Loan and Accounts Payables; and Contractual Obligations.

Discovery Laboratories, Inc.

(Name of Registrant as Specified in Charter)

has caused this notification to be signed on its behalf by the undersigned hereunto duly authorized.

DISCOVERY LABORATORIES, INC.

Date: November 10, 2010

By: /s/ John G. Cooper
Name: John G. Cooper
Title: President and Chief Financial Officer