
**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Form 8-K

Current Report

**Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): March 31, 2011

MEDICINOVA, INC.

(Exact name of registrant as specified in its charter)

DELAWARE
(State or other jurisdiction
of incorporation)

001-33185
(Commission
File Number)

33-0927979
(I.R.S. Employer
Identification No.)

**4350 LA JOLLA VILLAGE DRIVE,
SUITE 950, SAN DIEGO, CA**
(Address of principal executive offices)

92122
(Zip Code)

Registrant's telephone number, including area code: (858) 373-1500

Not applicable.

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 1.01 Entry into a Material Definitive Agreement.

On March 31, 2011, we entered into a pay-off letter (the "Pay-Off Letter") with Oxford Finance Corporation ("Oxford"), which provides for the full repayment in cash on April 1, 2011 of our \$15 million senior secured credit facility (the "Loan") pursuant to the loan and security agreement that we executed with Oxford on May 10, 2010 (the "Loan and Security Agreement"). The Pay-Off Letter provides that the repayment amount will be approximately \$15.2 million, which includes payment in full of all outstanding principal and accrued interest underlying the Loan and approximately \$454,000 in deferred interest and other fees. Oxford agreed to waive an early payment penalty of approximately \$437,000. Pursuant to the Pay-Off Letter, all of our indebtedness and obligations to Oxford will be discharged in full and all security interests and other liens held by Oxford as security for the Loan will be terminated upon Oxford's receipt of our repayment of the Loan, provided that the warrant to purchase shares of our common stock that we issued to Oxford in connection with the execution of the Loan and Security Agreement will remain in full force and effect in accordance with its terms. A detailed description of the terms and conditions of the Loan and Security Agreement appears in our Current Report on Form 8-K filed on May 14, 2010 and is incorporated herein by reference.

Item 1.02 Termination of a Material Definitive Agreement.

The information set forth in Item 1.01 regarding the Loan and Security Agreement is incorporated by reference into this Item 1.02.

On April 1, 2011, we used approximately \$15.2 million of our existing cash resources to fund the repayment in full of our loan from Oxford.

Item 2.04 Triggering Events That Accelerate or Increase a Direct Financial Obligation or an Obligation under an Off-Balance Sheet Arrangement.

The information set forth in Items 1.01 and 1.02 regarding the Loan and Security Agreement and our repayment of the loan thereunder is incorporated by reference into this Item 2.04.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

MEDICINOVA, INC.

By: /s/ Michael Coffee

Michael Coffee

Chief Business Officer and Interim Chief

Financial Officer

Date: April 3, 2011