
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): April 8, 2011

MELA Sciences, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

000-51481
(Commission
File Number)

13-3986004
(IRS Employer
Identification No.)

50 South Buckhout Street, Suite 1
Irvington, New York
(Address of principal executive offices)

10533
(Zip Code)

Registrant's telephone number, including area code **(914) 591-3783**

(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 Instructions 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 April 8, 2011, MELA Sciences, Inc. (the “Company”) entered into a supply agreement with Arrow Electronics, Inc. (“Arrow”), pursuant to which the Company agreed to purchase complementary metal—oxide—semiconductor (“CMOS”) sensors over a period of 12 months for an aggregate purchase price of \$1,265,039.40, with the first shipment expected in about 5 months. As part of the agreement, the Company deposited \$500,000 with Arrow to be applied against future deliveries of the CMOS sensors.

The CMOS sensor, which is a critical part of the Company’s MelaFind® system, is currently manufactured by ON Semiconductor Corp. (“ON”). ON has informed the Company that it will no longer be manufacturing this specific type of CMOS sensor and has agreed to manufacture these CMOS Sensors for the Company as part of a “Last Time Buy.” The Company believes that these CMOS sensors will be sufficient to meet the Company’s needs until an alternative is found.

SIGNATURES

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.

MELA Sciences, Inc.

Date: April 11, 2011

By: /s/ Richard Steinhart

Chief Financial Officer
(Principal Financial Officer)