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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 6, 2006

**Electro-Optical Sciences, Inc.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction  
of incorporation)

**333-125517**  
(Commission  
File Number)

**13-3986004**  
(IRS Employer  
Identification No.)

**3 West Main Street, Suite 201,**  
**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 7.01 — Regulation FD Disclosure**

On March 6, 2006 the Registrant issued a press release announcing that three studies evaluating the MelaFind® system in the detection of melanoma were presented at the 2006 Annual Meeting of the American Academy of Dermatology.

A copy of the press release is furnished as Exhibit 99.1 to this report. Exhibit 99.1 is furnished to, but not filed with, the Securities and Exchange Commission. Registration statements or other documents filed with the Securities and Exchange Commission shall not incorporate this information by reference, except as otherwise expressly stated in such filing.

**Item 9.01 — Financial Statements and Exhibits**

(b) Exhibits.

<b>Exhibit Number</b>	<b>Description</b>
99.1	Press Release of the Registrant dated March 6, 2006 titled “Electro-Optical Sciences Announces Melafind® Data Presented at American Academy of Dermatology Annual Meeting”

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**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.

Electro-Optical Sciences, Inc.

Date: March 6, 2006

By: /s/ Joseph V. Gulfo  
President & Chief Executive Officer  
(Principal Executive Officer)

EXHIBIT INDEX

<u>EXHIBIT NO.</u>	<u>DESCRIPTION</u>
99.1	Press Release of the Registrant dated March 6, 2006

## News Release

### Electro-Optical Sciences Announces MelaFind(R) Data Presented at American Academy of Dermatology Annual Meeting

SAN FRANCISCO, March 6 /PRNewswire-FirstCall/ — Electro-Optical Sciences, Inc. (“EOS”) (Nasdaq: MELA) today announced that three studies evaluating the MelaFind system in the detection of melanoma were presented at the American Academy of Dermatology 2006 Annual Meeting (“AAD”) taking place in San Francisco. MelaFind is a hand-held imaging device that uses visible and infrared light to capture images of suspicious pigmented skin lesions, which are then analyzed against a proprietary database of melanomas and benign lesions. EOS is preparing to commence a pivotal trial for MelaFind this year.

“The early detection of melanoma is critical to improving outcomes in patients with melanoma. Since early melanomas often appear clinically benign, early detection can be very difficult to achieve. The data from the ongoing studies of MelaFind suggest that MelaFind may provide doctors with an objective tool to assist in the early detection of melanoma,” said Dr. Martin C. Mihm, Co-Chairman, Melanoma Pathology Program of the World Health Organization, and Professor of Pathology and Dermatology, Harvard Medical School.

Dr. Dina Gutkowicz-Krusin, Director of Clinical and Algorithm Systems Development for EOS, presented the latest findings at the Annual Meeting of the International Dermoscopy Society held in conjunction with the AAD on Sunday, March 5, 2006. In the study, researchers initiated a blinded trial to evaluate the diagnostic performance of the current, not yet final, MelaFind system compared to visual examinations by expert dermatologists, the current standard of care for melanoma detection. The multi-center study evaluated 562 skin lesions including 54 melanomas. Fifty-three of fifty-four melanomas were detected by study dermatologists, who missed an invasive melanoma, and by MelaFind, which missed a melanoma in situ. The specificity achieved by MelaFind was 45.1% while the specificity achieved by study dermatologists was 20.0% ( $p < 0.0001$ ). The over-biopsy ratio for study dermatologists was 7.3:1, as compared to 5:1 for MelaFind.

Dr. Dina Gutkowicz-Krusin presented additional data in a poster entitled “Evaluation of Clinical and Quantitative ABCD Characteristics of Pigmented Skin Lesions in the Diagnosis of Melanoma.” In this technical study, clinical ABCD determination by experts who pioneered the ABCD criteria was compared with quantitative ABCD assessment by MelaFind. The authors concluded that there is appreciable but not complete overlap between the sets of lesions identified as being at risk for melanoma by clinical ABCD by expert dermatologists compared with quantitative ABCD using MelaFind. The study further demonstrated that quantitative ABCD characteristics have very high sensitivity to melanoma.

Included in a presentation made by Dr. Robert J. Friedman were results from a readers study of 99 small lesions (2mm to 6mm in maximum dimension), consisting of 49 melanomas and 50 non-melanomas from the MelaFind database. The study evaluated diagnostic performance of MelaFind compared to nine independent expert dermatologists. The sensitivity of MelaFind was 98.0%, compared with 70.1% for the experts. Dr. Friedman presented these results on Saturday, March 4, 2006 during his presentation entitled “Clinical Diagnosis of Early Melanoma: The ABCDEs.”

Dr. Friedman, Clinical Associate Professor, Department of Dermatology, New York University Medical School stated, “Dermatologists are increasingly looking to catch melanoma early, and as such, are biopsying lesions smaller than 6 mm. This study demonstrates how difficult it is to identify small, early melanomas and suggests that MelaFind may aid dermatologists in this effort.”

“The data suggests that there’s a role for more objective imaging methods such as MelaFind to increase our ability to identify suspicious lesions earlier and thus improve patient care,” said Dr. Darrell S. Rigel, Clinical Professor, Department of Dermatology New York University Medical School.

#### About Electro-Optical Sciences

EOS is a medical device company focused on designing and developing a non-invasive, point-of-care instrument to assist in the early diagnosis of melanoma. MelaFind, EOS’s flagship product, features a hand-held imaging device that emits multiple wavelengths of light to capture images of suspicious pigmented skin lesions and extract data. The data are then analyzed against EOS’s proprietary database of melanomas and benign lesions using sophisticated algorithms in order to provide information to the physician and produce a recommendation of whether the lesion should be biopsied.

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Melanoma is the deadliest of skin cancers, responsible for approximately 80% of all skin cancer deaths. Unless melanoma is detected early and excised with proper margins, the patient survival rate is poor, as there is currently no cure for advanced stage melanoma.

For more information on EOS, visit <http://www.eosciences.com>.

SOURCE Electro-Optical Sciences, Inc.

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