
**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): February 13, 2007

Lexicon Genetics Incorporated
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

000-30111
(Commission File Number)

76-0474169
(I.R.S. Employer
Identification Number)

**8800 Technology Forest Place
The Woodlands, Texas 77381**
(Address of principal executive
offices and Zip Code)

(281) 863-3000
(Registrant's telephone number,
including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligations of the registrant under any of the following provisions:

- 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 5.02 Departure of Directors or Certain Officers; Election of Directors; Appointment of Certain Officers; Compensatory Arrangements of Certain Officers

(e) On February 13, 2007, the Compensation Committee of our Board of Directors approved 2007 base salaries and a process for the determination of 2007 cash bonuses for our named executive officers. The 2007 salary information and a description of the 2007 cash bonus determination process is attached to this current report on Form 8-K as Exhibit 10.1 and incorporated herein by reference.

The Compensation Committee also approved the payment of 2006 cash bonuses to our named executive officers as described below:

<u>Name and Position</u>	<u>2006 Cash Bonus</u>
Arthur T. Sands, M.D., Ph.D. <i>President and Chief Executive Officer</i>	\$300,000
Julia P. Gregory <i>Executive Vice President, Corporate Development and Chief Financial Officer</i>	\$80,000
Alan J. Main, Ph.D. <i>Executive Vice President of Pharmaceutical Research</i>	\$90,000
Jeffrey L. Wade, J.D. <i>Executive Vice President and General Counsel</i>	\$80,000
Brian P. Zambrowicz, Ph.D. <i>Executive Vice President and Chief Scientific Officer</i>	\$120,000

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
10.1	— Summary of 2007 Named Executive Officer Cash Compensation

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 thereunto duly authorized.

Lexicon Genetics Incorporated

Date: February 16, 2007

By: /s/ JEFFREY L. WADE

Jeffrey L. Wade

Executive Vice President and General Counsel

Index to Exhibits

<u>Exhibit No.</u>	<u>Description</u>
10.1	— Summary of 2007 Named Executive Officer Cash Compensation

Summary of 2007 Named Executive Officer Cash Compensation

The Compensation Committee of our Board of Directors has approved 2007 base salaries for our named executive officers as set forth below.

The Compensation Committee has also approved a process for the determination of 2007 cash bonuses for our named executive officers, pursuant to which bonuses will be determined in the discretion of the Compensation Committee based on the achievement of certain corporate and individual goals in 2007. The corporate goals include objectives relating to the development of drug candidates and the achievement of specified financial targets. The achievement of these goals will be evaluated by the Compensation Committee in making determinations regarding bonuses for 2007 performance. The Compensation Committee has established a bonus target, expressed as a percentage of base salary, for each of our named executive officers, assuming that corporate and individual goals are fully achieved. The bonus target percentage for each of our named executive officers is set forth below.

<u>Name and Position</u>	<u>2007 Base Salary</u>	<u>2007 Bonus Target</u>
Arthur T. Sands, M.D., Ph.D. <i>President and Chief Executive Officer</i>	\$530,000	50%
Julia P. Gregory <i>Executive Vice President, Corporate Development and Chief Financial Officer</i>	\$335,000	35%
Alan J. Main, Ph.D. <i>Executive Vice President of Pharmaceutical Research</i>	\$325,000	35%
Jeffrey L. Wade, J.D. <i>Executive Vice President and General Counsel</i>	\$320,000	35%
Brian P. Zambrowicz, Ph.D. <i>Executive Vice President and Chief Scientific Officer</i>	\$345,000	40%