\_\_\_\_\_\_

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): NOVEMBER 2, 2004

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))

\_\_\_\_\_

### ITEM 5.02 DEPARTURE OF DIRECTORS OR PRINCIPAL OFFICERS; ELECTION OF DIRECTORS; APPOINTMENT OF PRINCIPAL OFFICERS

(d) Effective November 2, 2004, our board of directors elected Frank Palantoni to serve as a member of our board of directors.

The election of Mr. Palantoni as a director was not made pursuant to any arrangement or understanding between Mr. Palantoni and any other person. Mr. Palantoni will not initially serve on any committees of the board of directors and we have no current expectation as to which committees, if any, Mr. Palantoni may ultimately be appointed. There are no current or proposed transactions or series of transactions in which Mr. Palantoni has, or will have, a direct or indirect material interest which would require disclosure under Item 404(a) of Regulation S-K.

A copy of our press release announcing Mr. Palantoni's election to our board of directors is attached to this current report on Form 8-K as Exhibit 99.1.

ITEM 9.01 FINANCIAL STATEMENTS AND EXHIBITS

(c) Exhibits

EXHIBIT NO.

# DESCRIPTION

99.1	 Press Release of Lexicon Genetics Incorporated dated
	November 4, 2004

2

## 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: November 5, 2004

By: /s/ JEFFREY L. WADE Jeffrey L. Wade Executive Vice President and General Counsel

3

EXHIBIT NO.

DESCRIPTION

99.1 -- Press Release of Lexicon Genetics Incorporated dated November 4, 2004

### LEXICON GENETICS ELECTS FRANK PALANTONI TO BOARD OF DIRECTORS

THE WOODLANDS, TEXAS, NOVEMBER 4, 2004 - Lexicon Genetics Incorporated (Nasdaq: LEXG) announced today that Frank Palantoni has been elected to its board of directors.

Mr. Palantoni brings extensive management, business development and consumer and health products marketing experience to the Lexicon board of directors. From 1998 to 2004, Mr. Palantoni held a variety of executive management positions with Novartis AG, most recently as president and chief executive officer, worldwide of its \$1.4 billion (2003 sales) Gerber Products Company, Novartis Infant and Baby Division. From 2000 to 2001, Mr. Palantoni was president and chief executive officer for the North American operations of Novartis Consumer Health Division, with responsibility for its over-the-counter pharmaceuticals, infant and baby and medical nutrition businesses. Mr. Palantoni joined Novartis in 1998 as president and chief executive officer, U.S.A. of Gerber Products. During the ten years before he joined Novartis, Mr. Palantoni held senior management positions with The Danone Group. Mr. Palantoni is currently a member of the board of directors of Gerber Life Insurance Company. He holds an M.B.A. degree from Columbia University and a B.S. degree from Tufts University.

"Frank Palantoni's leadership experience in consumer health products businesses will help guide Lexicon as we develop our own pharmaceutical products," said Arthur T. Sands, M.D., Ph.D., president and chief executive officer of Lexicon. "Mr. Palantoni's business and marketing background is an excellent complement to the scientific, clinical and financial expertise represented on Lexicon's board of directors."

#### ABOUT LEXICON GENETICS

Lexicon Genetics is a biopharmaceutical company focused on the discovery of breakthrough treatments for human disease. Lexicon is systematically discovering the physiological and behavioral functions of genes to identify potential points of therapeutic intervention, or drug targets. Lexicon makes these discoveries using its proprietary gene knockout technology to model the physiological effects that could be expected from prospective drugs directed against novel targets. The Company has advanced knockout-validated targets into drug discovery programs in six therapeutic areas: diabetes and obesity, cardiovascular disease, cancer, immune system disorders, ophthalmic disease, and psychiatric and neurological disorders. Lexicon is working both independently and through strategic collaborations and alliances to accelerate the development and commercialization of its discoveries. Additional information about Lexicon is available through its corporate website, www.lexicon-genetics.com.

#### SAFE HARBOR STATEMENT

This press release contains "forward-looking statements," including statements about Lexicon's growth and future operating results, discovery and development of products, strategic alliances and intellectual property, as well as other matters that are not historical facts or information. These forward-looking statements are based on management's current assumptions and expectations and involve risks, uncertainties and other important factors, specifically including those relating to Lexicon's ability to develop drug candidates from its discoveries, achieve its operational objectives, obtain patent protection for its discoveries and establish strategic alliances, that may cause Lexicon's actual results to be materially different from any future results expressed or implied by such forward-looking statements. Information identifying such important factors is contained under "Factors Affecting Forward-Looking Statements" and "Business - Risk Factors" in Lexicon's annual report on Form 10-K for the year ended December 31, 2003, as filed with the Securities and Exchange Commission. Lexicon undertakes no obligation to update or revise any such forward-looking statements, whether as a result of new information, future events or otherwise.

# # #

CONTACT FOR LEXICON GENETICS: Bobbie Faulkner Investor Relations 281/863-3503 bfaulkner@lexgen.com