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 26, 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:

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

o 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

(d) Effective February 26, 2007, our board of directors elected Kathleen M. Wiltsey to serve as a member of our board of directors.

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

Ms. Wiltsey will receive compensation for her service as a director consistent with our standard arrangements for non-employee directors as follows:

- an annual retainer of \$15,000, prorated for partial years of service;
- a fee of \$2,500 for each meeting of the board of directors that she attends in person (\$500 for each telephonic meeting of the board of directors in which she participates);
- reimbursement for expenses in connection with attendance at meetings of the board of directors;
- an initial option under our 2000 Non-Employee Directors' Stock Option Plan to purchase 30,000 shares of common stock at an exercise price of \$4.26 per share, the fair market value of our common stock on the date of grant as determined in accordance with the plan; and
- commencing on the day following our 2008 annual meeting of stockholders, an annual option under the plan to purchase 10,000 shares of common stock at an exercise price equal to the fair market value of our common stock on the date of grant as determined in accordance with the plan.

Consistent with our standard arrangements for non-employee directors, Ms. Wiltsey will receive additional cash compensation if she is appointed to any committee of the board of directors. We have also entered into an indemnification agreement with Ms. Wiltsey in the standard form previously entered into with our other officers and directors.

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

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Item 9.01 Financial Statements and Exhibits

(d)	Exhibits	
Exhibit No.		Description
99.1	—	Press Release of Lexicon Genetics Incorporated dated February 28, 2007

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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 thereunto duly authorized.

Lexicon Genetics Incorporated

Date: February 28, 2007

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

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 Description

 Press Release of Lexicon Genetics Incorporated dated February 28, 2007

LEXICON GENETICS ELECTS KATHLEEN WILTSEY TO BOARD OF DIRECTORS

THE WOODLANDS, Texas, February 28, 2007 — Lexicon Genetics Incorporated (Nasdaq: LEXG) announced today that Kathleen Wiltsey has been elected to its board of directors.

Ms. Wiltsey brings to Lexicon extensive biotechnology entrepreneurial experience in marketing and business development from her 14-year tenure at Amgen Inc. Ms. Wiltsey joined Amgen in 1984 as business development manager, and was appointed co-product development team leader and marketing director for Amgen's first product launch, of EPOGEN^â, a breakthrough therapeutic that became the first multi-billion dollar biotechnology drug. Ms. Wiltsey also participated in engineering Amgen's \$84 million R&D limited partnership financing of NEUPOGEN^â, Amgen's second product, and in European licensing of NEUPOGEN. Promoted to vice president in 1991, Ms. Wiltsey started and led Amgen's product licensing function, where she was responsible for negotiating and managing numerous corporate collaborations and alliances as well as establishing the Amgen Venture Fund. Ms. Wiltsey retired from Amgen in 1998.

"Lexicon has developed a pipeline of drug discovery programs and potential breakthrough therapeutics that I believe to be among the most promising in the industry," said Kathleen Wiltsey. "I look forward to helping to guide the company in the next phase of development and commercialization of its exciting drug discoveries through my contribution as a member of the board of directors."

Ms. Wiltsey has served as an advisor to several biotechnology companies for business and corporate development. In 2006, Ms. Wiltsey joined the X PRIZE Foundation as executive director for the development and launch of the Archon X PRIZE for Genomics, a global technology competition to dramatically reduce the cost of sequencing human genomes and accelerate personalized medicine. Currently, Ms. Wiltsey serves as vice president of the board of The Associates of the California Institute of Technology. She has served as a member of the board of the Los Angeles Opera and other educational non-profit organizations. Ms. Wiltsey holds a Bachelor of Science degree from the Colorado School of Mines and an M.B.A. from Harvard University

"Ms. Wiltsey's experience with the launch and marketing of two leading biotechnology products will provide Lexicon with unique insight as we advance our own breakthrough products toward commercialization," said Arthur T. Sands, M.D., Ph.D., Lexicon's president and chief executive officer. "Kathy's career with a highly-successful biotechnology enterprise and her direct experience in entrepreneurial settings also will provide Lexicon with important perspective as we build our business."

About Lexicon Genetics

Lexicon is a biopharmaceutical company focused on the discovery and development of breakthrough treatments for human disease. Lexicon currently has clinical programs underway for such areas of major unmet medical need as irritable bowel syndrome and cognitive disorders. The company has used its proprietary gene knockout technology to discover more than 100 promising drug targets and create an extensive pipeline of clinical and preclinical programs in the therapeutic areas of diabetes and obesity, cardiovascular disease, psychiatric and neurological disorders, cancer, immune system disorders and ophthalmic disease. To advance the development and commercialization of its programs, Lexicon is working both independently and through collaborators which include Bristol-Myers Squibb Company, Genentech, Inc., N.V. Organon and Takeda Pharmaceutical Company Limited. For additional information about Lexicon and its programs, please visit www.lexicon-genetics.com.

Safe Harbor Statement

This press release contains "forward-looking statements," including statements relating to 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. All 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 successfully conduct preclinical and clinical development of its potential drug candidates, advance additional candidates into preclinical and clinical development, obtain necessary regulatory approvals, achieve its operational objectives, obtain patent protection for its discoveries and establish strategic alliances, as well as additional factors relating to manufacturing, intellectual property rights, and the therapeutic or commercial value of its drug candidates, 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, 2005, 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.

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