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 19, 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)

ITEM 7. FINANCIAL STATEMENTS AND EXHIBITS

(c) Exhibits

| EXHIBIT NO. | DESCRIPTION |
|-------------|---|
| | |
| 99.1 | Press Release of Lexicon Genetics Incorporated dated February 19, 2004 |

ITEM 12. RESULTS OF OPERATIONS AND FINANCIAL CONDITION

On February 19, 2004, we issued a press release to report our financial results for the quarter and year ended December 31, 2003. A copy of the press release is attached to this current report on Form 8-K as Exhibit 99.1.

The information in this Form 8-K and the Exhibit attached to this Form 8-K shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934 (the "Exchange Act") or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933 or the Exchange Act, except as expressly set forth by specific reference in such a filing.

2

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 19, 2004

By: /s/ JEFFREY L. WADE

Jeffrey L. Wade Executive Vice President and General Counsel

3

dated

| EXHIBIT NO. | DESCRIPTION |
|-------------|---|
| | |
| 99.1 | Press Release of Lexicon Genetics Incorporated February 19, 2004 |

LEXICON GENETICS REPORTS 2003 FOURTH QUARTER AND FULL YEAR FINANCIAL RESULTS

Eighth Consecutive Year of Revenue Growth

THE WOODLANDS, TEXAS, FEBRUARY 19, 2004 - Lexicon Genetics Incorporated (Nasdaq: LEXG), a biopharmaceutical company focused on the discovery of breakthrough treatments for human disease, today reported financial results for the three months and year ended December 31, 2003.

REVENUES: Lexicon's revenues for the three months ended December 31, 2003 increased 35 percent to \$13.7 million from \$10.1 million for the corresponding period in 2002. The increase was primarily attributable to the completion of the first performance milestone under a drug discovery collaboration with Genentech, Inc. For the year ended December 31, 2003, revenues increased by 22 percent to \$42.8 million from \$35.2 million in 2002.

RESEARCH AND DEVELOPMENT EXPENSES: Research and development expenses for the three months ended December 31, 2003 increased six percent to \$20.3 million from \$19.2 million for the corresponding period in 2002. The increase primarily reflects the expansion of the Company's drug discovery programs and medicinal chemistry operations. For the year ended December 31, 2003, research and development expenses increased ten percent to \$82.2 million from \$74.9 million in 2002. Research and development expenses included non-cash, stock-based compensation expense of \$1.2 million and \$1.3 million for the three months ended December 31, 2003 and 2002, respectively, and \$5.0 million and \$5.2 million for the years ended December 31, 2003 and 2002, respectively.

GENERAL AND ADMINISTRATIVE EXPENSES: General and administrative expenses for the three months ended December 31, 2003 increased four percent to \$5.7 million from \$5.5 million for the corresponding period in 2002. For the year ended December 31, 2003, general and administrative expenses were \$23.2 million, unchanged from 2002. General and administrative expenses included non-cash, stock-based compensation expense of \$1.2 million and \$1.3 million for the three months ended December 31, 2003 and 2002, respectively, and \$5.1 million for each of the years ended December 31, 2003 and 2002.

NET LOSS: Net loss before cumulative effect of a change in accounting principle for the three months ended December 31, 2003 decreased to \$11.8 million from \$13.9 million for the corresponding period in 2002. Net loss before cumulative effect of a change in accounting principle for the year ended December 31, 2003 increased to \$61.1 million from \$59.7 million for the corresponding period in 2002. Net loss per share before cumulative effect of a change in accounting principle for the three months and year ended December 31, 2003 was \$0.19 and \$1.08, respectively, compared to \$0.26 and \$1.14, respectively, for the corresponding periods in 2002. Net loss before cumulative effect of a change in accounting principle includes non-cash, stock-based compensation expense of \$2.5 million and \$2.6 million for the three months ended December 31, 2003 and 2002, respectively, and \$10.1 million and \$10.3 million for the years ended December 31, 2003 and 2002, respectively.

The cumulative effect is a one time, non-cash charge of \$3.1 million related to the adoption of FIN 46, "Consolidation of Variable Interest Entities." This charge represents accumulated depreciation through December 31, 2003 on the properties under Lexicon's synthetic lease. The Company consolidated its synthetic lease on December 31, 2003 in accordance with FIN 46. As a result of FIN 46, Lexicon's balance sheet reflects additional property and equipment of \$54.8 million less the accumulated depreciation, \$52.3 million as long-term debt and \$2.5 million as other long-term liabilities. Net loss for the three months ended December 31, 2003 increased to \$14.9 million from a net loss of \$13.9 million in the corresponding period of 2002. For the year ended December 31, 2003, net loss increased to \$64.2 million compared to a net loss of \$59.7 million in 2002. Net loss per share for the three months and year ended December 31, 2003 was \$0.24 and \$1.13, respectively, compared to \$0.26 and \$1.14, respectively, for the corresponding periods in 2002. Net loss includes non-cash, stock-based compensation expense and the cumulative effect of a change in accounting principle.

CASH AND INVESTMENTS: As of December 31, 2003, Lexicon had \$161.0 million in cash and investments, including restricted cash and investments, compared to \$133.6 million as of September 30, 2003 and \$123.1 million as of December 31, 2002. The increase in cash and investments from September 30, 2003 to December 31, 2003 was primarily attributable to the receipt of a \$36.0 million upfront payment related to Lexicon's neuroscience alliance for drug development with Bristol-Myers Squibb, which was established in December 2003. Restricted cash and investments were \$57.5 million at December 31, 2003 and September 30, 2003 and \$57.7 million at December 31, 2002.

"We are pleased with our financial performance in 2003. We realized our eighth consecutive year of revenue growth, continued to carefully control expenses and supplemented our strong cash position through corporate alliances and capital raising activities," said Julia P. Gregory, executive vice president, corporate development and chief financial officer of Lexicon. "Our solid balance sheet has enabled us to rapidly advance our drug discovery activities."

YEAR 2003 HIGHLIGHTS

"In 2003, Lexicon made significant progress on all fronts, with many notable scientific and corporate achievements," said Arthur T. Sands, M.D., Ph.D., president and chief executive officer of Lexicon. "Forty novel drug discovery programs have been harvested from our Genome5000(TM) program, which is now 30% complete. In addition, we achieved the first performance milestone under our drug discovery alliance with Genentech, Inc. and formed a broad drug discovery alliance with Bristol-Myers Squibb Company in the field of neuroscience. We believe our ability to systematically determine the physiological function of human genes provides Lexicon and its collaborators with a competitive advantage in the race to discover future breakthrough therapeutics."

Lexicon's key business and scientific accomplishments in 2003 include:

ESTABLISHED NEUROSCIENCE ALLIANCE WITH BRISTOL-MYERS SQUIBB: Lexicon Genetics and Bristol-Myers Squibb Company formed a broad alliance for drug discovery, development and commercialization in the neuroscience field in December 2003. The alliance is designed to accelerate the discovery and development of breakthrough therapies to address significant, unmet medical needs in psychiatry and neurology. Lexicon will contribute 13 drug discovery programs from its current neuroscience pipeline to the alliance. In addition, the alliance will have exclusive access to future neuroscience discoveries from Lexicon's Genome5000 program for drug development. Lexicon received an upfront payment of \$36 million from Bristol-Myers Squibb and will receive a minimum of \$30 million in research funding over the initial, three-year term of the agreement. Bristol-Myers Squibb has the option to extend the discovery portion of the alliance for two years in exchange for further committed research funding of up to \$50 million. Lexicon will receive additional cash payments for exceeding specified research productivity levels. Lexicon will also receive clinical and regulatory milestone payments and royalties for each novel drug target for which Bristol-Myers Squibb develops a drug under the alliance.

Achieved first performance milestone in Genentech alliance: Lexicon announced the achievement of the first performance milestone under its drug discovery alliance with Genentech, Inc. Lexicon established this alliance with Genentech in December 2002 to discover novel therapeutic proteins and antibody targets. Under the alliance agreement, Lexicon is using its target validation technologies to discover the functions of secreted proteins and potential antibody targets identified through Genentech's drug discovery research.

COMPLETION OF A COMMON STOCK OFFERING: Lexicon completed a public offering of 10,240,000 shares of common stock at \$5.25 per share in the third quarter of 2003. Net proceeds to the Company from the offering were \$50.1 million.

CONTINUED RECORD OF REVENUE GROWTH: Lexicon achieved \$42.8 million in annual revenues in 2003, marking the Company's eighth consecutive year of revenue growth.

Initiated more than 40 drug discovery programs: Lexicon's Genome5000 program for drug discovery has yielded more than 40 drug discovery programs in the fields of diabetes, obesity, cardiovascular disease, psychiatric and neurological disorders, cancer, immune system disorders and ophthalmic disease. In its Genome5000 program, Lexicon is analyzing 5,000 genes using its proprietary gene knockout technologies and its extensive physiological and behavioral analyses to discover novel drug targets from the human genome. To date, Lexicon has completed the analysis of more than 1,500 genes.

ESTABLISHED OPHTHALMIC DISEASE AS AN AREA OF THERAPEUTIC FOCUS: Lexicon's physiology-based analysis of gene function includes non-invasive tests to identify targets with potential for the development of drugs to treat diseases and conditions of the eye. Lexicon has discovered potential ophthalmic uses for several targets and will be evaluating their efficacy in areas such as glaucoma, macular degeneration and retinopathy. Lexicon believes that the combination of functional genomics with the assessment of the eye gives the Company unique opportunities for the discovery of drugs to address major unmet medical needs in the field of ophthalmology.

PUBLICATION OF HYPERTENSION DISCOVERY: Lexicon published a study identifying a novel gene target for the control of high blood pressure with a direct link to human hypertension in the Proceedings of the National Academy of Science in November 2003. The paper was entitled "Wnk1 kinase deficiency lowers blood pressure in mice: A gene-trap screen to identify potential targets for therapeutic intervention." Lexicon holds the patent on the human WNK1 gene sequence and has filed patent applications claiming its medical use as a target to develop new therapeutics for high blood pressure.

RETROSPECTIVE EVALUATION OF THE TARGETS OF THE 100 BEST-SELLING DRUGS: Lexicon published in the January 2003 issue of Nature Reviews Drug Discovery a retrospective evaluation of the targets of the 100 best-selling drugs of 2001 as modeled by mouse knockout phenotypes. The article concluded that, in most cases, there is a direct correlation between the knockout and the therapeutic effect of the drug. The 100 best-selling drugs of 2001 modulate a total of 43 host targets. Of those targets studied in mouse knockouts, eighty-five percent were informative with respect to the physiological function and pharmaceutical utility of the target.

KEY INTELLECTUAL PROPERTY DEVELOPMENTS: Lexicon announced the issuance of a new U.S. patent that broadly covers the most widely-practiced methods of producing genetically-engineered knockout mice by gene targeting. The issuance of this patent fortifies Lexicon's intellectual property position in the fields of gene targeting by homologous recombination and gene knockout technology. As a result of this patent, and a new gene targeting patent issued in February 2004, Lexicon has broad, exclusive rights in certain fields under eight issued U.S. patents covering aspects of gene targeting. The technologies covered by these eight patents are widely used in the pharmaceutical and biotechnology industries for drug discovery.

LEXICON CONFERENCE CALL:

Dr. Arthur T. Sands, president and chief executive officer, and Julia P. Gregory, executive vice president, corporate development and chief financial officer, will review Lexicon's operating highlights and financial results for the three months and year ended December 31, 2003 and discuss the Company's guidance for 2004 in a telephone conference call at 11:00 a.m. EST today, February 19, 2004.

Conference call participants may dial: 800/500-0311 (domestic USA), 719/457-2698 (international). Pass code for all callers: 404648.

The audio web cast can be heard by logging on to www.lexicon-genetics.com. It will be archived and available for review through February 24, 2004.

ABOUT LEXICON GENETICS

Lexicon Genetics is a biopharmaceutical company focused on the discovery of breakthrough treatments for human disease. Lexicon is using gene knockout technology to systematically discover in living mammals, or in vivo, the physiological functions and pharmaceutical utility of genes. The Company's gene function discoveries fuel therapeutic discovery programs in diabetes, obesity, cardiovascular disease, psychiatric and neurological disorders, cancer, immune system disorders and ophthalmic disease. Lexicon has established drug discovery alliances and functional genomics collaborations with leading pharmaceutical and biotechnology companies, research institutes and academic institutions throughout the world to commercialize its technology and turn its discoveries into drugs. 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, 2002, 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: Carol A. Schafer, Vice President Finance and Communications 281/863-3880 cschafer@lexgen.com

| LEXICON GENETICS INCORPORATED |
|---|
| SELECTED FINANCIAL DATA |
| YEAR ENDED DECEMBER 31, DECEMBER 31, |
| (UNAUDITED) (UNAUDITED) CONSOLIDATED STATEMENTS OF |
| OPERATIONS DATA (In thousands, except per share data) Revenues: Subscription and license fees |
| \$ 6,109 \$ 6,182 \$ 21,550 \$ 17,871 Collaborative research |
| 21,242 17,088 Compound libraries and other |
| 14 5 46 241 Total revenues |
| 10,120 42,838 35,200 Operating expenses: Research and development, including stock-based compensation of \$1,247, |
| <pre>\$1,293, \$5,048 and \$5,155, respectively 20,346 19,210 82,198 74,859 General and administrative, including stock- based compensation of \$1,240, \$1,277, \$5,067 and \$5,113,</pre> |
| respectively |
| Total operating expenses |
| operations |
| 626 725 1,796 |
| 3,230 Interest expense |
| (2) (325) (7) Net loss |
| before cumulative effect of a change in accounting principle (11,800) (13,862) (61,122) (59,670) Cumulative effect on |
| prior periods (to December 31, 2003) of a change in accounting |
| principle |
| loss |
| \$ (14,876) \$ (13,862) \$ (64,198) \$ (59,670) ==================================== |
| ====================================== |
| |
| (0.19) (0.26) (1.08) (1.14) Cumulative effect on prior periods (to December 31, 2003) of a change in accounting principle |
| (0.05) (0.05) Net loss per common share, |
| basic and diluted\$ (0.24) \$ |
| (0.26) \$ (1.13) \$ (1.14) ==================================== |
| |
| |
| ====================================== |
| DECEMBER 31, 2003 2002 (UNAUDITED) CONSOLIDATED BALANCE SHEET DATA (In thousands) Cash and investments, including restricted cash and investments of \$57,514 and \$57,710, |
| respectively\$ 161,001 \$ 123,096 Property and equipment, |
| net 83,676 37,362 Goodwill |
| 25,798 25,798 Intangible assets other than goodwill, net |
| assets |
| revenue |
| debt |
| compensation (899) (11,106) Accumulated |
| deficit |