

=====

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): JULY 28, 2005

LEXICON GENETICS INCORPORATED
(EXACT NAME OF REGISTRANT AS SPECIFIED IN ITS CHARTER)

DELAWARE 000-
30111 76-
0474169
(STATE OR
OTHER
JURISDICTION
OF
(COMMISSION
FILE NUMBER)
(I.R.S.
EMPLOYER
INCORPORATION
OR
ORGANIZATION)
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 2.02 RESULTS OF OPERATIONS AND FINANCIAL CONDITION

On July 28, 2005, we issued a press release to report our financial results for the quarter ended June 30, 2005. 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.

ITEM 9.01 FINANCIAL STATEMENTS AND EXHIBITS

(c) Exhibits

EXHIBIT NO.	DESCRIPTION
-----	-----
99.1	-- Press Release of Lexicon Genetics Incorporated dated July 28, 2005

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: July 28, 2005

By: /s/ JEFFREY L. WADE

Jeffrey L. Wade
Executive Vice President and
General Counsel

INDEX TO EXHIBITS

EXHIBIT NO.

DESCRIPTION

99.1

--

Press Release of Lexicon Genetics Incorporated dated
July 28, 2005

LEXICON GENETICS REPORTS 2005
SECOND QUARTER FINANCIAL RESULTS

REVENUE GROWTH OF 29% OVER PRIOR YEAR PERIOD EXCEEDS FINANCIAL GUIDANCE

THE WOODLANDS, TEXAS, JULY 28, 2005 - Lexicon Genetics Incorporated (Nasdaq: LEXG), a biopharmaceutical company focused on discovering and developing breakthrough treatments for human disease, today reported financial results for the three and six months ended June 30, 2005.

REVENUES: Lexicon's revenues for the three months ended June 30, 2005 increased 29 percent to \$13.9 million from \$10.8 million for the corresponding period in 2004. The increase was primarily attributable to collaborative research revenue recognized under Lexicon's alliances with Organon and Takeda Pharmaceutical Company Limited, entered in May 2005 and July 2004, respectively, partially offset by a decline in technology and license fees related to the termination in 2004 of the remaining subscriptions to our LexVision(R) database. For the six months ended June 30, 2005, revenues increased 23 percent to \$27.8 million from \$22.6 million for the corresponding period of 2004.

RESEARCH AND DEVELOPMENT EXPENSES: Research and development expenses for the three months ended June 30, 2005 increased five percent to \$23.7 million from \$22.6 million for the corresponding period in 2004. The increase was primarily the result of increased personnel required to support the expansion and advancement of Lexicon's drug discovery programs and the cost of external research associated with preclinical and scale-up activities for Lexicon's lead drug development programs. It was partially offset by the elimination of expenses associated with Lexicon's subscription to Incyte Corporation's LifeSeq(R) Gold database. For the six months ended June 30, 2005, research and development expenses increased three percent to \$46.4 million from \$45.0 million for the corresponding period in 2004.

GENERAL AND ADMINISTRATIVE EXPENSES: General and administrative expenses for the three months ended June 30, 2005 increased two percent to \$4.8 million from \$4.6 million for the corresponding period in 2004. For the six months ended June 30, 2005, general and administrative expenses decreased five percent to \$9.2 million from \$9.7 million for the corresponding period in 2004.

NET LOSS: Net loss for the three months ended June 30, 2005 decreased to \$14.8 million, or \$0.23 per share, from a net loss of \$16.8 million, or \$0.26 per share, in the corresponding period in 2004. Net loss for the six months ended June 30, 2005 decreased to \$28.1 million, or \$0.44 per share, from a net loss of \$32.3 million, or \$0.51 per share, in the corresponding period in 2004.

CASH AND INVESTMENTS: As of June 30, 2005, Lexicon had \$72.8 million in cash and investments, including restricted cash and investments, compared to \$70.7 million as of March 31, 2005 and \$87.6 million as of December 31, 2004. Restricted cash and investments were \$0.4 million on June 30, 2005, March 31, 2005 and December 31, 2004.

SUBSEQUENT EVENT: On July 16, 2005, Lexicon announced it was awarded \$35 million from the Texas Enterprise Fund for the creation of a knockout mouse embryonic stem cell library containing 350,000 cell lines. Lexicon will create this new library using its proprietary gene trapping technology for the Texas Institute for Genomic Medicine, a newly formed non-profit institute whose founding members are Texas A&M University, the Texas A&M University System Health Science Center and Lexicon. In addition, Lexicon will equip the Institute with the bioinformatics software required for the management and analysis of data relating to the library. The \$35 million award will be paid to Lexicon in August 2005.

"Cash received thus far in 2005 related to collaborations and license agreements, together with our award from the Texas Enterprise Fund, provide us with approximately \$80 million in non-dilutive new funding," said Julia P. Gregory, executive vice president, corporate development and chief financial officer of Lexicon. "We continue to demonstrate the value of our genetic systems and financial flexibility provided by our diverse asset base."

SECOND QUARTER 2005 HIGHLIGHTS

ALLIANCE WITH ORGANON TO DEVELOP BIOTHERAPEUTIC DRUGS: Lexicon and Organon, the human healthcare business of Akzo Nobel, announced the formation of a collaboration to jointly discover, develop and commercialize novel biotherapeutics. The alliance encompasses up to 300 genes encoding secreted proteins or potential antibody targets that were jointly selected for the collaboration, including two of Lexicon's existing biotherapeutics discovery programs. Lexicon will create and analyze mouse knockouts of each of the 300 genes to identify promising human drug targets. Organon and Lexicon will jointly select targets for further research and development and will share costs and responsibility for research, preclinical and clinical activities. Organon and Lexicon will jointly determine the manner in which collaboration products will be commercialized and will each benefit from collaboration product revenue. Organon will have principal responsibility for the manufacturing of biotherapeutic products resulting from the collaboration.

Lexicon received an upfront payment of \$22.5 million from Organon in exchange for access to Lexicon's drug target discovery capabilities and the exclusive right to co-develop biotherapeutic products that modulate the 300 genes selected for the collaboration. Organon will also provide research funding totaling up to \$50 million to Lexicon for Organon's 50% share of the collaboration's costs during the four-year target function discovery portion of the alliance.

ALLIANCE WITH XOMA FOR ANTIBODY DRUG DEVELOPMENT AND COMMERCIALIZATION: Lexicon established an alliance with XOMA Ltd. to jointly develop and commercialize antibody drugs for certain targets discovered by Lexicon in its Genome5000(TM) program. During the three-year initial term of the alliance, Lexicon will select at least three targets for submission to the collaboration and XOMA will generate or engineer antibodies that modulate the collaboration's targets using phage display libraries and its proprietary Human Engineering(TM) technology. Lexicon and XOMA will jointly develop and commercialize novel antibodies directed at these targets and will share the responsibility and costs for research, preclinical, clinical and commercialization activities. Costs and profits will be allocated 65% to Lexicon and 35% to XOMA. XOMA will have principal responsibility for manufacturing antibodies for use in clinical trials and commercial sales.

"Our new collaborations with Organon and XOMA reflect the significant value of our developing biotherapeutics portfolio," said Arthur T. Sands, M.D., Ph.D., president and chief executive officer. "We expect each of these alliances to provide access to antibody technologies, process development and biologics manufacturing capabilities which can accelerate the development of Lexicon's biotherapeutics programs."

LEXICON CONFERENCE CALL:

Dr. Arthur T. Sands, president and chief executive officer, Julia P. Gregory, executive vice president of corporate development and chief financial officer, and Dr. Brian P. Zambrowicz, executive vice president of research, will host a conference call at 11:00 a.m. Eastern Time on Thursday, July 28, 2005. They will review Lexicon's recent operating highlights, the status of its drug discovery programs and its financial results for the six months ended June 30, 2005 and will discuss the company's third quarter financial guidance.

The dial-in number for the conference call is 800-930-1344 (within the United States) or 312-461-0644 (international). The pass code for all callers is 2937184. Investors can access www.lexicon-genetics.com to listen to a live webcast of the call. The webcast will be archived and available for review through August 2, 2005.

ABOUT LEXICON GENETICS

Lexicon Genetics is a biopharmaceutical company focused on the discovery and development 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, psychiatric and neurological disorders, cancer, immune system disorders and ophthalmic disease. 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.

LEXICON GENETICS 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 successfully conduct preclinical development of its drug candidates and advance such candidates into clinical development, achieve its operational objectives, obtain patent protection for its discoveries and establish strategic alliances, as well as those relating to manufacturing, the regulatory process, 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, 2004, 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
Manager, Investor Relations
281/863-3503
bfaulkner@lexgen.com

LEXICON GENETICS INCORPORATED

SELECTED FINANCIAL DATA

		----- THREE MONTHS			
		----- ENDED SIX MONTHS ENDED CONSOLIDATED STATEMENTS OF OPERATIONS DATA JUNE			
		----- 30, JUNE 30, ----- (In			
		----- thousands, except per share data) 2005 2004 2005 2004 -----			
		----- (UNAUDITED) (UNAUDITED) Revenues:			
		----- Collaborative			
research.....	\$ 13,771	\$			
	8,211	\$22,654	\$16,505	Subscription and license	
fees.....	127	2,567	5,169	6,115	
		----- Total			
revenues.....	13,898	10,778	27,823	22,620	Operating expenses: Research and
development.....	23,667	22,580	46,427	44,981	General and
administrative.....	4,750				
4,642	9,182	9,686			----- Total
operating expenses.....	28,417	27,222	55,609	54,667	-----
		----- Loss from			
operations.....	(14,519)	(16,444)	(27,786)	(32,047)	Interest
income.....	361	997	793	Interest	506
expense.....	(827)	(705)	(1,632)	(996)	Other income,
net.....	313	(4)			(2) -
		----- Net			
loss.....	\$(14,842)	\$(16,788)	\$(28,108)	\$(32,254)	=====
		===== Net loss per common share, basic and			
diluted.....	\$ (0.51)	\$ (0.23)	\$ (0.26)	\$ (0.44)	\$
		===== Shares used in			
computing net loss per common share.....	63,369	63,581	63,217		

		----- CONSOLIDATED BALANCE SHEET DATA			
		----- AS OF JUNE 30, AS OF DECEMBER 31, (In thousands) 2005 2004 -----			
		----- (UNAUDITED) Cash and investments, including			
restricted cash and investments of \$430.....	\$ 72,792	\$ 87,558	Property and		
equipment, net.....	84,573			86,051	
Goodwill.....	25,798	25,798	Intangible assets other than goodwill,		
net.....	1,240	1,840	Total		
assets.....	192,149	211,980	Deferred		
revenue.....	37,592	Current and long-term		50,162	
debt.....	37,289	37,631	Accumulated		
deficit.....	(261,115)	Total stockholders' equity		(289,223)	
				93,902	121,594