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, 2009

Lexicon Pharmaceuticals, Inc.

(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)

D 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, 2009, we issued a press release to report our financial results for the quarter ended June 30, 2009. 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							
(d)	Exhibits							
<u>Exhibit No.</u> 99.1	_	<u>Description</u> Press Release of Lexicon Pharmaceuticals, Inc. dated July 28, 2009						

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 Pharmaceuticals, Inc.

Date: July 28, 2009

/s/ Jeffrey L. Wade

By: Jeffrey L. Wade Executive Vice President and General Counsel

Index to Exhibits

Exhibit No. 99.1

<u>Description</u> Press Release of Lexicon Pharmaceuticals, Inc. dated July 28, 2009

LEXICON PHARMACEUTICALS PROVIDES CLINICAL PIPELINE UPDATE AND REPORTS 2009 SECOND QUARTER FINANCIAL RESULTS

Conference Call and Webcast at 11:00 a.m. Eastern Time

The Woodlands, Texas, July 28, 2009 – Lexicon Pharmaceuticals, Inc. (Nasdaq: LXRX), a biopharmaceutical company focused on discovering and developing breakthrough treatments for human disease, today updated its drug development progress and reported financial results for the three months and six months ended June 30, 2009.

"Our clinical development programs continue to progress, including the recent initiation of a Phase 2 study of LX1032 in patients with carcinoid syndrome," said Dr. Arthur T. Sands, president and chief executive officer of Lexicon. "We also expect to advance LX2931 for rheumatoid arthritis into a Phase 2 clinical trial in the very near future."

Key Developments

- Lexicon advanced its LX1032 drug candidate, which has received Fast Track status from the U.S. Food and Drug Administration (FDA), into a Phase 2a study in patients with carcinoid syndrome. The Phase 2 clinical trial is designed as a randomized, double-blind, placebo-controlled study to evaluate the safety and tolerability of LX1032 and its effects on symptoms associated with carcinoid syndrome. The study will include up to 28 patients with carcinoid syndrome who are symptomatic despite treatment with currently available therapy. In addition, Lexicon presented Phase 1 data for LX1032 at the Digestive Disease Week (DDW) annual meeting on June 1, 2009. Most recently, Lexicon received orphan drug designation for LX1032 from the European Medicines Agency.
- Lexicon completed the multiple ascending-dose portion of a Phase 1 study of its LX4211 drug candidate to evaluate the safety, tolerability, and pharmacokinetics of LX4211 in healthy volunteers over a seven-day dosing period. Top-line results from the Phase 1 clinical trial will be available later this quarter.
- Lexicon is preparing to initiate a Phase 2a study of LX2931 in patients with rheumatoid arthritis. Lexicon has identified the clinical trial sites for the Phase 2 study, and patient enrollment is expected to begin in the third quarter of 2009. In addition, Lexicon presented Phase 1 data for LX2931 at the European League Against Rheumatism (EULAR) annual meeting on June 13, 2009.
- Lexicon continues to enroll patients in a Phase 2a clinical trial of its LX1031 drug candidate for non-constipating irritable bowel syndrome (IBS). Enrollment is on track to be completed by year-end. The trial is designed as a double-blind, randomized, placebo-controlled study to evaluate the safety and tolerability of LX1031 and its effects on symptoms associated with IBS. In addition, Lexicon presented Phase 1 data for LX1031 at the Digestive Disease Week (DDW) annual meeting on May 31, 2009.
- Ajay Bansal, formerly of Tercica, Inc., was appointed executive vice president of corporate development and chief financial officer, responsible for leading the company's pharmaceutical partnering and licensing efforts. Mr. Bansal has more than 20 years of experience in the biotechnology and pharmaceutical industry in corporate finance, corporate and business development, strategic planning, and commercial operations.



Financial Results

Revenues: Lexicon's revenues for the three months ended June 30, 2009 decreased 69 percent to \$3.0 million from \$9.6 million for the corresponding period in 2008. The decrease for the three months ended June 30, 2009 was primarily attributable to lower revenue recognized under Lexicon's alliance agreements with Bristol-Myers Squibb, N.V. Organon and Genentech, Inc. For the six months ended June 30, 2009, revenues decreased 61 percent to \$7.2 million from \$18.5 million for the corresponding period in 2008.

Research and Development Expenses: Research and development expenses for the three months ended June 30, 2009 decreased 33 percent to \$20.2 million from \$30.1 million for the corresponding period in 2008. The decrease was primarily attributable to lower salary and benefit costs, due to reductions in personnel offset in part by associated severance costs, as well as lower external preclinical research and development costs. For the six months ended June 30, 2009, research and development expenses decreased 25 percent to \$43.1 million from \$57.5 million for the corresponding period in 2008.

General and Administrative Expenses: General and administrative expenses for the three months ended June 30, 2009 decreased six percent to \$5.6 million from \$5.9 million for the corresponding period in 2008. The decrease was primarily attributable to lower salary and benefit costs. For the six months ended June 30, 2009, general and administrative expenses decreased 11 percent to \$10.4 million from \$11.8 million for the corresponding period in 2008.

Net Loss Attributable to Lexicon Pharmaceuticals, Inc.: Net loss for the three months ended June 30, 2009 was \$20.1 million, or \$0.15 per share, compared to a net loss of \$20.0 million, or \$0.15 per share, in the corresponding period in 2008. Net loss for the six months ended June 30, 2009 was \$41.6 million, or \$0.30 per share, compared to a net loss of \$38.0 million, or \$0.28 per share, for the corresponding period in 2008. For the three and six months ended June 30, 2009, net loss included non-cash, stock-based compensation expense of \$1.4 million and \$2.8 million, respectively. For the three and six months ended June 30, 2008, net loss included non-cash, stock-based compensation expense of \$1.6 million and \$3.4 million, respectively.

Cash and Investments: As of June 30, 2009, Lexicon had \$106.9 million in cash and investments net of its obligations under the credit line secured by its auction rate securities, as compared to \$130.8 million as of March 31, 2009 and \$158.8 million as of December 31, 2008.

Lexicon Conference Call:

Lexicon management will hold a conference call to discuss its clinical development progress and financial results for the second quarter of 2009 at 11:00 a.m. Eastern Time on July 28, 2009. The dial-in number for the conference call is 888-220-1244 (within the US/Canada) or 706-679-5615 (international). The conference ID for all callers is 17788499. Investors can access a live webcast of the call at www.lexpharma.com. An archived version of the webcast will be available on the website through August 4, 2009.

About Lexicon

Lexicon is a biopharmaceutical company focused on discovering and developing breakthrough treatments for human disease. Lexicon currently has five drug candidates in development for autoimmune disease, carcinoid syndrome, diabetes, glaucoma and irritable bowel syndrome, all of which were discovered by Lexicon's research team. Lexicon has used its proprietary gene knockout technology to identify more than 100 promising drug targets. Lexicon has focused drug discovery efforts on these biologically-validated targets to create its extensive pipeline of clinical and preclinical programs. For additional information about Lexicon and its programs, please visit www.lexpharma.com.

Safe Harbor Statement

This press release contains "forward-looking statements," including statements relating to Lexicon's clinical development of LX1031, LX1032, LX2931, and LX4211 and the potential therapeutic and commercial potential of LX1031, LX1032, LX2931, and LX4211. This press release also contains forward-looking 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 clinical development of LX1031, LX1032, LX2931, and LX4211 and preclinical and clinical development of its other 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 "Risk Factors" in Lexicon's annual report on Form 10-K for the year ended December 31, 2008, 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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Lexicon Pharmaceuticals, Inc. Selected Financial Data

	Three Months Ended					Six Months Ended June 30,			
Consolidated Statements of Operations Data		June 30, 2009		2008 20		2009	: 30,	2008	
(In thousands, except per share data)		(unau	(unaudited)						
Revenues:									
Collaborative research	\$	2,787	\$	7,953	\$	6,392	\$	15,587	
Subscription and license fees		202		1,613		765		2,872	
Total revenues		2,989		9,566		7,157		18,459	
Operating expenses: Research and development, including stock-based compensation of \$766, \$950, \$1,595 and \$2,077, respectively		20,220		30,075		43,084		57,524	
General and administrative, including stock-based compensation of \$590, \$633, \$1,203 and \$1,285, respectively		5,551		5,877		10,425		11,759	
Total operating expenses		25,771		35,952		53,509		69,283	
Loss from operations		(22,782)		(26,386)		(46,352)		(50,824)	
Gain on long-term investments		306		—		823		—	
Interest income		239		1,418		566		4,199	
Interest expense		(729)		(675)		(1,395)		(1,345	
Other expense, net		(576)		(539)		(1,521)		(1,086	
Consolidated net loss		(23,542)		(26,182)		(47,879)		(49,056	
Loss attributable to noncontrolling interest in Symphony Icon, Inc.		3,469		6,148		6,246		11,072	
Net loss attributable to Lexicon Pharmaceuticals, Inc.	\$	(20,073)	\$	(20,034)	\$	(41,633)	\$	(37,984)	
Net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	\$	(0.15)	\$	(0.15)	\$	(0.30)	\$	(0.28)	
Shares used in computing net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted		137,331		136,796		137,203		136,795	
Consolidated Balance Sheet Data (In thousands)				As of June 3 2009		80, As of	As of December 31, 2008		
				(unau		,			
Cash and investments, including cash and investments held by Symphony Icon, Ir	1C.			\$,814 \$		158,798	
Obligations under line of credit					(36	,957)			
Cash and investments, net of obligations under line of credit					106	,857		158,798	
Property and equipment, net				61,526			65,087		
Goodwill					25	,798		25,798	
Total assets					244	,333		261,508	

Deferred revenue	15,486	19,884
Current and long-term debt, including line of credit	66,974	30,492
Noncontrolling interest in Symphony Icon, Inc.	4,001	10,247
Accumulated deficit	(529,028)	(487,395)
Total Lexicon Pharmaceuticals, Inc. stockholders' equity	147,109	185,580