

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

For the Quarterly Period Ended March 31, 2009

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934

For the Transition Period from _____ to _____

Commission File Number: 000-30111

Lexicon Pharmaceuticals, Inc.
(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation or Organization)

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)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes No

As of April 27, 2009, 137,330,254 shares of the registrant's common stock, par value \$0.001 per share, were outstanding.

Lexicon Pharmaceuticals, Inc.

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Factors Affecting Forward Looking Statements

This quarterly report on Form 10-Q contains forward-looking statements. These statements relate to future events or our future financial performance. We have attempted to identify forward-looking statements by terminology including “anticipate,” “believe,” “can,” “continue,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “should” or “will” or the negative of these terms or other comparable terminology. These statements are only predictions and involve known and unknown risks, uncertainties and other factors, including the risks outlined under “Part II, Item 1A. – Risk Factors,” that may cause our or our industry’s actual results, levels of activity, performance or achievements to be materially different from any future results, levels or activity, performance or achievements expressed or implied by these forward-looking statements.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. We are not under any duty to update any of the forward-looking statements after the date of this quarterly report on Form 10-Q to conform these statements to actual results, unless required by law.

Part I – Financial Information**Item 1. Financial Statements****Lexicon Pharmaceuticals, Inc.****Consolidated Balance Sheets**
(In thousands, except par value)

Assets	As of March 31, 2009 (unaudited)	As of December 31, 2008
Current assets:		
Cash and cash equivalents	\$ 16,953	\$ 85,873
Short-term investments, including restricted investments of \$430	60,479	629
Short-term investments held by Symphony Icon, Inc.	11,832	16,610
Accounts receivable, net of allowances of \$35	1,248	568
Prepaid expenses and other current assets	3,703	5,487
Total current assets	94,215	109,167
Long-term investments	56,203	55,686
Property and equipment, net of accumulated depreciation and amortization of \$72,887 and \$71,102, respectively	63,027	65,087
Goodwill	25,798	25,798
Other assets	5,209	5,770
Total assets	<u>\$ 244,452</u>	<u>\$ 261,508</u>
Liabilities and Equity		
Current liabilities:		
Accounts payable	\$ 3,083	\$ 7,926
Accrued liabilities	5,106	6,615
Current portion of deferred revenue	3,109	5,672
Current portion of long-term debt	984	963
Total current liabilities	12,282	21,176
Deferred revenue, net of current portion	14,212	14,212
Long-term debt	43,939	29,529
Other long-term liabilities	727	764
Total liabilities	71,160	65,681
Commitments and contingencies		
Equity:		
Lexicon Pharmaceuticals, Inc. stockholders' equity:		
Preferred stock, \$.01 par value; 5,000 shares authorized; no shares issued and outstanding	—	—
Common stock, \$.001 par value; 300,000 shares authorized; 137,331 and 136,797 shares issued and outstanding, respectively	137	137
Additional paid-in capital	674,645	672,838
Accumulated deficit	(508,955)	(487,395)
Accumulated other comprehensive loss	(5)	—
Total Lexicon Pharmaceuticals, Inc. stockholders' equity	165,822	185,580
Noncontrolling interest in Symphony Icon, Inc.	7,470	10,247
Total equity	173,292	195,827
Total liabilities and equity	<u>\$ 244,452</u>	<u>\$ 261,508</u>

The accompanying notes are an integral part of these consolidated financial statements.

Lexicon Pharmaceuticals, Inc.

Consolidated Statements of Operations
(In thousands, except per share amounts)
(Unaudited)

	Three Months Ended March 31,	
	2009	2008
Revenues:		
Collaborative research	\$ 3,605	\$ 7,634
Subscription and license fees	563	1,259
Total revenues	4,168	8,893
Operating expenses:		
Research and development, including stock-based compensation of \$829 and \$1,127, respectively	22,976	27,802
General and administrative, including stock-based compensation of \$613 and \$652, respectively	4,762	5,529
Total operating expenses	27,738	33,331
Loss from operations	(23,570)	(24,438)
Gain on long-term investments, net	517	—
Interest income	327	2,781
Interest expense	(666)	(670)
Other expense, net	(945)	(547)
Consolidated net loss	(24,337)	(22,874)
Less: Net loss attributable to noncontrolling interest in Symphony Icon, Inc.	2,777	4,924
Net loss attributable to Lexicon Pharmaceuticals, Inc.	\$ (21,560)	\$ (17,950)
Net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	\$ (0.16)	\$ (0.13)
Shares used in computing net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	137,075	136,795

The accompanying notes are an integral part of these consolidated financial statements.

Lexicon Pharmaceuticals, Inc.

Consolidated Statements of Stockholders' Equity
(In thousands)

Lexicon Pharmaceuticals, Inc. Stockholders										
	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total	Noncontrolling Interest	Total Equity		
	Shares	Par Value								
Balance at December 31, 2007	136,796	\$ 137	\$ 666,702	\$ (410,535)	\$ (4)	\$ 256,300	\$ 30,271	\$ 286,571		
Stock-based compensation	—	—	1,779	—	—	1,779	—	1,779		
Net loss	—	—	—	(17,950)	—	(17,950)	(4,924)	(22,874)		
Unrealized loss on investments	—	—	—	—	(2,328)	(2,328)	—	(2,328)		
Comprehensive loss	—	—	—	—	—	(20,278)	—	(25,202)		
Balance at March 31, 2008	<u>136,796</u>	<u>\$ 137</u>	<u>\$ 668,481</u>	<u>\$ (428,485)</u>	<u>\$ (2,332)</u>	<u>\$ 237,801</u>	<u>\$ 25,347</u>	<u>\$ 263,148</u>		
Balance at December 31, 2008	136,797	\$ 137	\$ 672,838	\$ (487,395)	\$ —	\$ 185,580	\$ 10,247	\$ 195,827		
Stock-based compensation	—	—	1,807	—	—	1,807	—	1,807		
Grant of restricted stock	534	—	—	—	—	—	—	—		
Net loss	—	—	—	(21,560)	—	(21,560)	(2,777)	(24,337)		
Unrealized loss on investments	—	—	—	—	(5)	(5)	—	(5)		
Comprehensive loss	—	—	—	—	—	(21,565)	—	(24,342)		
Balance at March 31, 2009	<u>137,331</u>	<u>\$ 137</u>	<u>\$ 674,645</u>	<u>\$ (508,955)</u>	<u>\$ (5)</u>	<u>\$ 165,822</u>	<u>\$ 7,470</u>	<u>\$ 173,292</u>		

The accompanying notes are an integral part of these consolidated financial statements.

Lexicon Pharmaceuticals, Inc.
Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Three Months Ended March 31,	
	2009	2008
Cash flows from operating activities:		
Net loss attributable to Lexicon Pharmaceuticals, Inc.	\$ (21,560)	\$ (17,950)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	1,772	2,058
Impairment of fixed assets	406	—
Amortization of Symphony Icon, Inc. purchase option	535	535
Loss attributable to noncontrolling interest	(2,777)	(4,924)
Stock-based compensation	1,442	1,779
Impairment of long-term investments	41	—
Gain on ARS Rights	(558)	—
Loss on disposal of property and equipment	2	—
Changes in operating assets and liabilities:		
(Increase) decrease in accounts receivable	(680)	519
Decrease in prepaid expenses and other current assets	1,784	489
Decrease in other assets	26	22
Decrease in accounts payable and other liabilities	(6,024)	(2,787)
Decrease in deferred revenue	(2,563)	(6,296)
Net cash used in operating activities	<u>(28,154)</u>	<u>(26,555)</u>
Cash flows from investing activities:		
Purchases of property and equipment	(156)	(879)
Proceeds from disposal of property and equipment	36	—
Maturities of investments held by Symphony Icon, Inc.	4,778	3,245
Purchases of short-term investments	(59,955)	(39,848)
Maturities of short-term investments	100	100,773
Net cash provided by (used in) investing activities	<u>(55,197)</u>	<u>63,291</u>
Cash flows from financing activities:		
Proceeds from debt borrowings	14,800	—
Repayment of debt borrowings	(369)	(217)
Net cash provided by (used in) financing activities	<u>14,431</u>	<u>(217)</u>
Net increase (decrease) in cash and cash equivalents	(68,920)	36,519
Cash and cash equivalents at beginning of period	85,873	22,938
Cash and cash equivalents at end of period	<u>\$ 16,953</u>	<u>\$ 59,457</u>
Supplemental disclosure of cash flow information:		
Cash paid for interest	\$ 626	\$ 656
Supplemental disclosure of non-cash investing and financing activities:		
Unrealized loss on investments	\$ (5)	\$ (2,328)

The accompanying notes are an integral part of these consolidated financial statements.

Lexicon Pharmaceuticals, Inc.**Notes to Consolidated Financial Statements
(Unaudited)****1. Basis of Presentation**

The accompanying unaudited consolidated financial statements of Lexicon Pharmaceuticals, Inc. (“Lexicon” or the “Company”) have been prepared in accordance with generally accepted accounting principles for interim financial information and pursuant to the rules and regulations of the Securities and Exchange Commission (“SEC”). Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements.

In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation have been included. Operating results for the three-month period ended March 31, 2009 are not necessarily indicative of the results that may be expected for the year ended December 31, 2009.

The accompanying consolidated financial statements include the accounts of Lexicon and its wholly-owned subsidiaries, as well as one variable interest entity, Symphony Icon, Inc. (“Symphony Icon”), for which the Company is the primary beneficiary as defined by the Financial Accounting Standards Board (“FASB”) Interpretation No. 46 (revised 2003), “Consolidation of Variable Interest Entities” (“FIN 46R”). Intercompany transactions and balances are eliminated in consolidation.

For further information, refer to the financial statements and footnotes thereto included in Lexicon’s annual report on Form 10-K for the year ended December 31, 2008, as filed with the SEC.

2. Net Loss Per Share

Net loss per share is computed using the weighted average number of shares of common stock outstanding during the applicable period. Shares associated with stock options and warrants are not included because they are antidilutive. There are no differences between basic and diluted net loss per share for all periods presented.

3. Stock-Based Compensation

Under the provisions of Statement of Financial Accounting Standards (“SFAS”) No. 123 (Revised), “Share-Based Payment,” the Company recorded \$1.4 million and \$1.8 million of stock-based compensation expense for the three months ended March 31, 2009 and 2008, respectively. The Company utilized the Black-Scholes valuation model for estimating the fair value of the stock options granted, with the following weighted-average assumptions for options granted in the three months ended March 31, 2009 and 2008, respectively.

	<u>Expected Volatility</u>	<u>Risk-free Interest Rate</u>	<u>Expected Term</u>	<u>Estimated Forfeitures</u>	<u>Dividend Rate</u>
March 31, 2009:					
Employees	78%	1.9%	5	23%	0%
Officers and non-employee directors	76%	2.6%	8	6%	0%
March 31, 2008:					
Employees	66%	2.9%	6	20%	0%
Officers and non-employee directors	66%	3.8 %	9	4%	0 %

The following is a summary of option activity under Lexicon's stock option plans for the three months ended March 31, 2009:

	<u>Options</u> (in thousands)	<u>Weighted Average</u> <u>Exercise Price</u>
Outstanding at December 31, 2008	16,898	\$ 5.13
Granted	4,448	1.45
Expired	(539)	4.37
Forfeited	(392)	2.73
Outstanding at March 31, 2009	<u>20,415</u>	4.39
Exercisable at March 31, 2009	<u>12,068</u>	\$ 6.01

During the three months ended March 31, 2009, Lexicon granted its officers restricted stock bonus awards under the 2000 Equity Incentive Plan in lieu of cash bonus awards. The shares subject to the awards vest in two installments over the one-year period following the date of grant. The following is a summary of restricted stock activity under Lexicon's stock option plans for the three months ended March 31, 2009:

	<u>Shares</u> (in thousands)	<u>Weighted Average</u> <u>Grant Date</u> <u>Fair Value</u>
Outstanding at December 31, 2008	—	\$ —
Granted	534	1.45
Nonvested at March 31, 2009	<u>534</u>	\$ 1.45

4. Recent Accounting Pronouncements

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements." The statement defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles, and expands disclosures about fair value measurements. This statement applies under other accounting pronouncements that require or permit fair value measurements, the FASB having previously concluded in those accounting pronouncements that fair value is the relevant measurement attribute. Accordingly, this statement does not require any new fair value measurements. More specifically, SFAS No. 157 emphasizes that fair value is a market-based measurement, not an entity-specific measurement, and sets out a fair value hierarchy, which ranks the quality and reliability of the information used to determine fair values. SFAS No. 157 was effective January 1, 2008 for financial assets and liabilities and January 1, 2009 for non-financial assets and liabilities. The adoption of SFAS No. 157 did not have an effect on the Company's financial position or results of operations.

In December 2007, the FASB issued SFAS No. 141(Revised), "Business Combinations," which replaces SFAS No. 141, "Business Combinations," and requires an acquirer to recognize the assets acquired, the liabilities assumed, and any non-controlling interest in the acquiree at the acquisition date, measured at their fair values as of that date, with limited exceptions. This statement also requires the acquirer in a business combination achieved in stages to recognize the identifiable assets and liabilities, as well as the non-controlling interest in the acquiree, at the full amounts of their fair values. SFAS No. 141(R) makes various other amendments to authoritative literature intended to provide additional guidance or to confirm the guidance in that literature to that provided in this statement. This statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. The adoption of SFAS No. 141(R) did not have an effect on the Company's financial position or results of operations.

In December 2007, the FASB issued SFAS No. 160, “Noncontrolling Interests in Consolidated Financial Statements,” which amends Accounting Research Bulletin No. 51, “Consolidated Financial Statements,” to improve the relevance, comparability, and transparency of the financial information that a reporting entity provides in its consolidated financial statements. SFAS No. 160 establishes accounting and reporting standards that require the ownership interests in subsidiaries not held by the parent to be clearly identified, labeled and presented in the consolidated statement of financial position within equity, but separate from the parent’s equity. This statement also requires the amount of consolidated net income attributable to the parent and to the non-controlling interest to be clearly identified and presented on the face of the consolidated statement of income. Changes in a parent’s ownership interest while the parent retains its controlling financial interest must be accounted for consistently, and when a subsidiary is deconsolidated, any retained non-controlling equity investment in the former subsidiary must be initially measured at fair value. The gain or loss on the deconsolidation of the subsidiary is measured using the fair value of any non-controlling equity investment. The statement also requires entities to provide sufficient disclosures that clearly identify and distinguish between the interests of the parent and the interests of the non-controlling owners. This statement applies prospectively to all entities that prepare consolidated financial statements and applies prospectively for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. The Company’s adoption of SFAS No. 160 on January 1, 2009 did not materially affect its financial position or results of operations, other than reclassifying the noncontrolling interest in Symphony Icon to equity for all periods presented.

In December 2007, the FASB ratified Emerging Issues Task Force (“EITF”) Issue No. 07-01, “Accounting for Collaborative Arrangements,” which provides guidance on how the parties to a collaborative agreement should account for costs incurred and revenue generated on sales to third parties, how sharing payments pursuant to a collaboration agreement should be presented in the income statement and certain related disclosure requirements. The adoption of EITF No. 07-01 did not have an effect on the Company’s financial position or results of operations, other than requiring additional disclosures. Most of the required disclosures were included in the Company’s annual report on Form 10-K for the year ended December 31, 2008. See note 12, “Collaboration and License Agreements,” for additional required disclosures.

5. Cash and Cash Equivalents and Investments

The fair value of cash and cash equivalents and investments held at March 31, 2009 and December 31, 2008 are as follows:

	As of March 31, 2009			Estimated Fair Value
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	
	(In Thousands)			
Cash and cash equivalents	\$ 16,953	\$ —	\$ —	\$ 16,953
Securities maturing within one year:				
Certificates of deposit	509	—	—	509
U.S. treasury securities	59,975	—	(5)	59,970
Total short-term investments	\$ 60,484	\$ —	\$ (5)	\$ 60,479
Securities maturing after one year through five years:				
ARS Rights	—	12,618	—	12,618
Securities maturing after ten years:				
Auction rate securities	57,000	—	(13,415)	43,585
Total long-term investments	\$ 57,000	\$ 12,618	\$ (13,415)	\$ 56,203
Short-term investments held by Symphony Icon, Inc.:				
Cash and cash equivalents	11,832	—	—	11,832
Total short-term investments held by Symphony Icon, Inc.	\$ 11,832	\$ —	\$ —	\$ 11,832
Total cash and cash equivalents and investments	\$ 146,269	\$ 12,618	\$ (13,420)	\$ 145,467

	As of December 31, 2008			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(In thousands)			
Cash and cash equivalents	\$ 85,873	\$ —	\$ —	\$ 85,873
Securities maturing within one year:				
Certificates of deposit	629	—	—	629
Total short-term investments	<u>\$ 629</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 629</u>
Securities maturing after one year through five years:				
ARS Rights	—	12,060	—	12,060
Securities maturing after ten years:				
Auction rate securities	57,000	—	(13,374)	43,626
Total long-term investments	<u>\$ 57,000</u>	<u>\$ 12,060</u>	<u>\$ (13,374)</u>	<u>\$ 55,686</u>
Short-term investments held by Symphony Icon, Inc.:				
Cash and cash equivalents	16,610	—	—	16,610
Total short-term investments held by Symphony Icon, Inc.	<u>\$ 16,610</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 16,610</u>
Total cash and cash equivalents and investments	<u>\$ 160,112</u>	<u>\$ 12,060</u>	<u>\$ (13,374)</u>	<u>\$ 158,798</u>

There were no realized gains or losses for the three months ended March 31, 2009. There were \$31,000 of realized gains for the three months ended March 31, 2008.

At March 31, 2009, Lexicon held \$57.0 million (par value), with an estimated fair value of \$43.6 million, of investments with an auction interest rate reset feature, known as auction rate securities. These notes are issued by various state agencies for the purpose of financing student loans. The securities have historically traded at par and are redeemable at par plus accrued interest at the option of the issuer. Interest is typically paid at the end of each auction period or semiannually. Until February 2008, the market for Lexicon's auction rate securities was highly liquid. Starting in February 2008, a substantial number of auctions "failed," meaning that there was not enough demand to sell all of the securities that holders desired to sell at auction. The immediate effect of a failed auction is that such holders cannot sell the securities at auction and the interest rate on the security generally resets to a maximum interest rate. In the case of funds invested by Lexicon in auction rate securities which are the subject of a failed auction, Lexicon may not be able to access the funds without a loss of principal, unless a future auction on these investments is successful or the issuer redeems the security. Lexicon has classified its entire auction rate security investment balance as long-term investments on its consolidated balance sheets because of the Company's inability to determine when its investments in auction rate securities will be sold. Lexicon has also modified its current investment strategy to reallocate its investments more into U.S. treasury securities and U.S. treasury-backed money market investments.

At March 31, 2009, observable auction rate securities market information was not available to determine the fair value of Lexicon's investments. Lexicon has estimated the fair value of these securities at \$43.6 million as of March 31, 2009 using models of the expected future cash flows related to the securities and taking into account assumptions about the cash flows of the underlying student loans, as well as secondary market trading data. The assumptions used in preparing the discounted cash flow model include estimates of interest rates, timing and amount of cash flows, liquidity premiums and expected holding periods of the auction rate securities, based on data available as of March 31, 2009. The underlying assumptions are volatile and are subject to change as market conditions change.

In November 2008, Lexicon accepted an offer from UBS AG, the investment bank that sold Lexicon the auction rate securities, providing Lexicon with rights related to its auction rate securities ("ARS Rights"). The ARS Rights permit Lexicon to require UBS to purchase its \$57.0 million (par value) of auction rate securities at par value during the period from June 30, 2010 through July 2, 2012. Conversely, UBS has the right, in its discretion, to purchase or sell the securities at any time by paying Lexicon the par value of such securities. Management expects to exercise the ARS Rights and sell Lexicon's auction rate securities back to UBS on June 30, 2010, the earliest date allowable under the ARS Rights. Lexicon is also eligible to borrow from an affiliate of UBS at no net cost up to 75% of the market value of the securities, as determined by such affiliate, which loans would become payable upon the investment bank's purchase or sale of the securities (see note 8).

The enforceability of the ARS Rights results in a separate asset that will be measured at its fair value. Lexicon elected to measure the ARS Rights under the fair value option of SFAS No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities – including an amendment of FASB Statement No. 115." As a result of accepting the ARS Rights, Lexicon elected in 2008 to classify the ARS Rights and reclassify its investments in auction rate securities as trading securities, as defined by SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities." As a result, Lexicon will be required to assess the fair value of these two individual assets and record changes each period until the ARS Rights are exercised and the auction rate securities are redeemed. During the three months ended March 31, 2009, Lexicon recorded a loss of \$41,000 to reflect the decline in fair value of the auction rate securities, and recorded a gain of \$558,000 to reflect the increase in fair value of the ARS Rights, which are reflected in gain on long-term investments, net, in the accompanying consolidated statement of operations. Lexicon expects that subsequent changes in the value of the ARS Rights will largely offset the subsequent fair value movements of the auction rate securities, subject to the continued expected performance by the investment bank of its obligations under the agreement.

Excluding auction rate securities and the ARS Rights, at March 31, 2009, Lexicon had approximately \$89.3 million in cash and cash equivalents and short-term investments, including \$11.8 million in investments held by Symphony Icon. Management believes that the working capital available to Lexicon excluding the funds held in auction rate securities and the UBS credit line entered into in January 2009 will be sufficient to meet its cash requirements for at least the next 12 months.

6. Fair Value Measurements

The Company uses various inputs in determining the fair value of its investments and measures these assets on a recurring basis. Financial assets recorded at fair value in the consolidated balance sheets are categorized by the level of objectivity associated with the inputs used to measure their fair value. SFAS No. 157 defines the following levels directly related to the amount of subjectivity associated with the inputs to fair valuation of these financial assets:

- Level 1 – quoted prices in active markets for identical investments
- Level 2 – other significant observable inputs (including quoted prices for similar investments, market corroborated inputs, etc.)
- Level 3 – significant unobservable inputs (including the Company's own assumptions in determining the fair value of investments)

The inputs or methodology used for valuing securities are not necessarily an indication of the credit risk associated with investing in those securities. The following table provides the fair value measurements of applicable Company financial assets that are measured at fair value on a recurring basis according to the fair value levels defined by SFAS No. 157 as of March 31, 2009 and December 31, 2008.

Financial Assets at Fair Value as of March 31, 2009

	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash and cash equivalents	\$ 16,953	\$ —	\$ —	\$ 16,953
Short-term investments	60,479	—	—	60,479
Short-term investments held by Symphony Icon, Inc.	11,832	—	—	11,832
Long-term investments	—	—	56,203	56,203
Total cash and cash equivalents and investments	\$ 89,264	\$ —	\$ 56,203	\$ 145,467

Financial Assets at Fair Value as of December 31, 2008

	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash and cash equivalents	\$ 85,873	\$ —	\$ —	\$ 85,873
Short-term investments	629	—	—	629
Short-term investments held by Symphony Icon, Inc.	16,610	—	—	16,610
Long-term investments	—	—	55,686	55,686
Total cash and cash equivalents and investments	\$ 103,112	\$ —	\$ 55,686	\$ 158,798

The table presented below summarizes the change in consolidated balance sheet carrying value associated with Level 3 financial assets for the three months ended March 31, 2009.

	Long-term Investments (in thousands)
Balance at December 31, 2008	\$ 55,686
Unrealized gains included in earnings as gain on long-term investments, net	517
Balance at March 31, 2009	\$ 56,203

The Company also has assets that under certain conditions are subject to measurement at fair value on a non-recurring basis. These assets include goodwill associated with the acquisition of Coelacanth Corporation in 2001. For these assets, measurement at fair value in periods subsequent to their initial recognition is applicable if one or more is determined to be impaired.

7. Goodwill

On July 12, 2001, Lexicon completed the acquisition of Coelacanth Corporation in a merger. Coelacanth, now Lexicon Pharmaceuticals (New Jersey), Inc., forms the core of the Company's division responsible for small molecule compound discovery. The results of Lexicon Pharmaceuticals (New Jersey), Inc. are included in the Company's results of operations for the periods subsequent to the acquisition.

Goodwill associated with the acquisition of \$25.8 million, which represents the excess of the \$36.0 million purchase price over the fair value of the underlying net identifiable assets, was assigned to the consolidated entity, Lexicon. In accordance with SFAS No. 142, "Goodwill and Other Intangible Assets," the goodwill balance is not subject to amortization, but is tested at least annually for impairment at the reporting unit level, which is the Company's single operating segment. During 2008, the Company performed an impairment test of goodwill on its annual impairment assessment date. This test did not result in an impairment of goodwill.

As of March 31, 2009, given the current global economic downturn and decrease in the price of the Company's common stock as listed on the Nasdaq Global Market on such date, the Company performed an impairment test of goodwill and determined that the goodwill balance is not impaired. However, if in the future the Company's common stock price decreases further, the Company will reassess the carrying value of goodwill and may record an impairment charge at that time.

To perform an impairment test, the Company uses the market capitalization approach to measure fair value of the reporting unit. Under this approach, fair value is calculated as the average closing price of Lexicon's common stock on the Nasdaq Global Market for the 30 days preceding the date that the impairment test is performed, multiplied by the number of outstanding shares on that date. A control premium, which is representative of premiums paid in the marketplace to acquire a controlling interest in a company, is then added to the market capitalization to determine the fair value of the reporting unit. The inputs used to calculate fair value are classified as Level 3 under SFAS No. 157 due to the subjectivity in the determination of the control premium. The average closing price of Lexicon's common stock is a Level 1 input; however the control premium is a Level 3 input as the control premium is determined using transactions within the Company's industry in the market. If the fair value exceeds the carrying value, no further action is required and no impairment loss is recognized. There was no impairment of goodwill in the three months ended March 31, 2009.

8. Debt Obligations

In April 2004, Lexicon obtained a \$34.0 million mortgage on its facilities in The Woodlands, Texas. The mortgage loan has a ten-year term with a 20-year amortization and bears interest at a fixed rate of 8.23%.

In January 2009, Lexicon entered into a credit line agreement with UBS Bank USA that provides up to an aggregate amount of \$37.9 million in the form of an uncommitted, demand, revolving line of credit. Lexicon entered into the credit line in connection with its acceptance of an offer from UBS AG, the investment bank that sold Lexicon its auction rate securities, providing Lexicon with rights to require UBS to purchase its \$57.0 million (par value) of auction rate securities at par value during the period from June 30, 2010 through July 2, 2012. The credit line is secured only by these auction rate securities and advances under the credit line will be made on a "no net cost" basis, meaning that the interest paid by Lexicon on advances will not exceed the interest or dividends paid to Lexicon by the issuer of the auction rate securities. As of March 31, 2009, Lexicon had \$14.7 million outstanding under this credit line.

9. Arrangements with Symphony Icon, Inc.

On June 15, 2007, Lexicon entered into a series of related agreements providing for the financing of the clinical development of certain of our drug candidates, including LX1031 and LX1032, along with any other pharmaceutical compositions modulating the same targets as those drug candidates (the "Programs"). The agreements include a Novated and Restated Technology License Agreement pursuant to which the Company licensed to Symphony Icon, a wholly-owned subsidiary of Symphony Icon Holdings LLC ("Holdings"), the Company's intellectual property rights related to the Programs. Holdings contributed \$45 million to Symphony Icon in order to fund the clinical development of the Programs.

Under a Share Purchase Agreement, dated June 15, 2007, between the Company and Holdings, the Company issued and sold to Holdings 7,650,622 shares of its common stock on June 15, 2007 in exchange for \$15 million and the Purchase Option (as defined below).

Under a Purchase Option Agreement, dated June 15, 2007, among the Company, Symphony Icon and Holdings, the Company received from Holdings an exclusive purchase option (the "Purchase Option") that gives the Company the right to acquire all of the equity of Symphony Icon, thereby allowing the Company to reacquire all of the Programs. The Purchase Option is exercisable by the Company at any time, in its sole discretion, until June 15, 2011 at an exercise price of (i) \$72 million, if the Purchase Option is exercised before June 15, 2009, (ii) \$81 million, if the Purchase Option is exercised on or after June 15, 2009 and before June 15, 2010 and (iii) \$90 million, if the Purchase Option is exercised on or after June 15, 2010 and before June 15, 2011. The Purchase Option exercise price may be paid in cash or a combination of cash and common stock, at the Company's sole discretion, provided that the common stock portion may not exceed 40% of the Purchase Option exercise price. Lexicon has calculated the value of the Purchase Option as the difference between the fair value of the common stock issued to Holdings of \$23.6 million (calculated at the time of issuance) and the \$15.0 million in cash received from Holdings for the issuance of the common stock. Lexicon has recorded the value of the Purchase Option as an asset, and is amortizing this asset over the four-year option period. The unamortized balance of \$4.7 million and \$5.3 million is recorded in other assets in the accompanying consolidated balance sheets as of March 31, 2009 and December 31, 2008, respectively, and the amortization expense of \$535,000 is recorded in other expense, net in the accompanying consolidated statements of operations for the three months ended March 31, 2009 and 2008.

Under an Amended and Restated Research and Development Agreement, dated June 15, 2007, among the Company, Symphony Icon and Holdings (the "R&D Agreement"), Symphony Icon and the Company are developing the Programs in accordance with a specified development plan and related development budget. The R&D Agreement provides that the Company will continue to be primarily responsible for the development of the Programs. The Company's development activities are supervised by Symphony Icon's Development Committee, which is comprised of an equal number of representatives from the Company and Symphony Icon. The Development Committee reports to Symphony Icon's Board of Directors, which is currently comprised of five members, including one member designated by the Company and two independent directors.

Under a Research Cost Sharing, Payment and Extension Agreement, dated June 15, 2007, among the Company, Symphony Icon and Holdings, upon the recommendation of the Development Committee, Symphony Icon's Board of Directors may require the Company to pay Symphony Icon up to \$15 million for Symphony Icon's use in the development of the Programs in accordance with the specified development plan and related development budget. The Development Committee's right to recommend that Symphony Icon's Board of Directors submit such funding requirement to the Company will terminate on the one-year anniversary of the expiration of the Purchase Option, subject to limited exceptions.

In accordance with FIN 46R, Lexicon has determined that Symphony Icon is a variable interest entity for which it is the primary beneficiary. This determination was based on Holdings' lack of controlling rights with respect to Symphony Icon's activities and the limitation on the amount of expected residual returns Holdings may expect from Symphony Icon if Lexicon exercises its Purchase Option. Lexicon has determined it is a variable interest holder of Symphony Icon due to its contribution of the intellectual property relating to the Programs and its issuance of shares of its common stock in exchange for the Purchase Option, which Lexicon intends to exercise if the development of the Programs is successful. Lexicon has determined that it is a primary beneficiary as a result of certain factors, including its primary responsibility for the development of the Programs and its contribution of the intellectual property relating to the Programs. As a result, Lexicon has included the financial condition and results of operations of Symphony Icon in its consolidated financial statements. Symphony Icon's cash and cash equivalents have been recorded on Lexicon's consolidated financial statements as short-term investments held by Symphony Icon. The noncontrolling interest in Symphony Icon on Lexicon's consolidated balance sheet initially reflected the \$45 million proceeds contributed into Symphony Icon less \$2.3 million of structuring and legal fees. As the collaboration progresses, this line item will be reduced by Symphony Icon's losses, which were \$2.8 million and \$4.9 million in the three months ended March 31, 2009 and 2008, respectively. The reductions to the noncontrolling interest in Symphony Icon will be reflected in Lexicon's consolidated statements of operations using a similar caption and will reduce the amount of Lexicon's reported net loss. Through March 31, 2009, Lexicon has not charged any license fees and has not recorded any revenue from Symphony Icon, and does not expect to do so based on the current agreements with Symphony Icon and Holdings.

10. Commitments and Contingencies

Operating Lease Obligations: A Lexicon subsidiary leases laboratory and office space in Hopewell, New Jersey under an agreement which expires in June 2013. The lease provides for two five-year renewal options at 95% of the fair market rent and includes escalating lease payments. Rent expense is recognized on a straight-line basis over the original lease term. Lexicon is the guarantor of the obligations of its subsidiary under this lease. The maximum potential amount of future payments the Company could be required to make under this agreement is \$10.9 million. The Company is required to maintain restricted investments to collateralize a standby letter of credit for this lease. The Company had \$0.4 million in restricted investments as collateral as of March 31, 2009 and December 31, 2008.

Legal Proceedings: On October 20, 2008, Lexicon received correspondence from counsel to the University of Utah Research Foundation (“UURF”) alleging that Lexicon was in breach of certain obligations purported to exist under its license agreement with GenPharm International, Inc., under which Lexicon obtained a sublicense under certain patents exclusively licensed from UURF by GenPharm, and related letter agreements between Lexicon and UURF governing the payment of royalties. The correspondence alleged that Lexicon breached the relevant agreements by, among other things, purportedly failing to pay all required royalties and ignoring obligations that UURF contends are expressed or implied in the relevant agreements. On December 16, 2008, Lexicon filed a complaint against UURF in the District Court of Montgomery County, Texas seeking a declaration that Lexicon is in full compliance with its license and royalty obligations. On January 26, 2009, UURF filed a notice seeking to remove the case to the United States District Court for the Southern District of Texas. UURF filed an answer and counterclaims on February 2, 2009 asserting breach of contract claims consistent with the claims made by UURF in its October 2008 correspondence and patent infringement which it claims has occurred since approximately December 17, 2008. On February 23, 2009, Lexicon filed an answer to UURF’s counterclaims.

Lexicon believes that it has materially complied with all of its obligations under the relevant agreements, including those relating to royalty payments due to UURF, and that UURF’s claims are inconsistent with the express provisions of the relevant agreements. Lexicon accordingly believes UURF’s claims are without merit. While the litigation of these matters is at a very early stage, Lexicon intends to vigorously pursue its complaint against UURF and dispute UURF’s counterclaims.

Lexicon is from time to time party to other claims and legal proceedings that it believes will not have, individually or in the aggregate, a material adverse effect on its results of operations, financial condition or liquidity.

11. Comprehensive Loss

Comprehensive loss consists of:

	Three Months Ended March 31,	
	2009	2008
	(in thousands)	
Net loss attributable to Lexicon Pharmaceuticals, Inc.	\$ (21,560)	\$ (17,950)
Unrealized gain (loss) on short-term investments	(5)	209
Unrealized loss on long-term investments	—	(2,537)
Net comprehensive loss attributable to Lexicon Pharmaceuticals, Inc.	<u>\$ (21,565)</u>	<u>\$ (20,278)</u>

12. Collaboration and License Agreements

Lexicon has derived substantially all of its revenues from drug discovery and development collaborations, target validation collaborations for the development and, in some cases, analysis of the physiological effects of genes altered in knockout mice, government grants and contracts, technology licenses, subscriptions to its databases and compound library sales. Revenues generated from third parties under collaborative arrangements are recorded on a gross basis on the consolidated statements of operations as Lexicon is the principal participant for these transactions as defined by EITF No. 99-19, "Reporting Revenue Gross as a Principal versus Net as an Agent."

Lexicon established an alliance with Bristol-Myers Squibb in December 2003 to discover, develop and commercialize small molecule drugs in the neuroscience field. Revenue recognized under this agreement was \$0.8 million and \$2.5 million for the three months ended March 31, 2009 and 2008, respectively.

Lexicon established an alliance with Genentech in December 2002 to discover novel therapeutic proteins and antibody targets. Revenue recognized under this agreement was none and \$1.1 million for the three months ended March 31, 2009 and 2008, respectively.

Lexicon established an alliance with Organon in May 2005 to jointly discover, develop and commercialize novel biotherapeutic drugs. Revenue recognized under this agreement was \$1.5 million and \$2.8 million for the three months ended March 31, 2009 and 2008, respectively.

Overview

We are a biopharmaceutical company focused on the discovery and development of breakthrough treatments for human disease. We have used our proprietary gene knockout technology and an integrated platform of advanced medical technologies to identify and validate, *in vivo*, more than 100 targets with promising profiles for drug discovery. For targets that we believe have high pharmaceutical value, we engage in programs for the discovery and development of potential new drugs, focusing in the core therapeutic areas of immunology, metabolism, cardiology and ophthalmology. Human clinical trials are currently underway for four of our drug candidates, with one additional drug candidate in preclinical development and compounds from a number of additional programs in various stages of preclinical research.

We are working both independently and through strategic collaborations and alliances to capitalize on our technology, drug target discoveries and drug discovery and development programs. Consistent with this approach, we seek to retain exclusive rights to the benefits of certain of our small molecule drug programs by developing and commercializing drug candidates from such programs internally and to collaborate with third parties with respect to the discovery, development and commercialization of small molecule and biotherapeutics drug candidates for other targets, particularly when the collaboration provides us with access to expertise and resources that we do not possess internally or are complementary to our own. We have established drug discovery and development collaborations with a number of leading pharmaceutical and biotechnology companies which have enabled us to generate near-term cash while offering us the potential to retain economic participation in products our collaborators develop through the collaboration. In addition, we have established collaborations and license agreements with other leading pharmaceutical and biotechnology companies, research institutes and academic institutions under which we receive fees and, in some cases, are eligible to receive milestone and royalty payments, in return for granting access to some of our technologies and discoveries for use in the other organization's own drug discovery efforts.

We derive substantially all of our revenues from drug discovery and development collaborations and other collaborations and technology licenses. To date, we have generated a substantial portion of our revenues from a limited number of sources.

Our operating results and, in particular, our ability to generate additional revenues are dependent on many factors, including our success in establishing new collaborations and technology licenses, expirations of our existing collaborations and alliances, the success rate of our discovery and development efforts leading to opportunities for new collaborations and licenses, as well as milestone payments and royalties, the timing and willingness of collaborators to commercialize products which may result in royalties, and general and industry-specific economic conditions which may affect research and development expenditures. Our future revenues from collaborations and technology licenses are uncertain because our existing agreements have fixed terms or relate to specific projects of limited duration and we depend, in part, on securing new agreements. Our ability to secure future revenue-generating agreements will depend upon our ability to address the needs of our potential future collaborators and licensees, and to negotiate agreements that we believe are in our long-term best interests. We may determine that our interests are better served by retaining rights to our discoveries and advancing our therapeutic programs to a later stage, which could limit our near-term revenues. Because of these and other factors, our operating results have fluctuated in the past and are likely to do so in the future, and we do not believe that period-to-period comparisons of our operating results are a good indication of our future performance.

Since our inception, we have incurred significant losses and, as of March 31, 2009, we had an accumulated deficit of \$509.0 million. Our losses have resulted principally from costs incurred in research and development, general and administrative costs associated with our operations, and non-cash stock-based compensation expenses associated with stock options granted to employees and consultants. Research and development expenses consist primarily of salaries and related personnel costs, external research costs related to our preclinical and clinical efforts, material costs, facility costs, depreciation on property and equipment, legal expenses resulting from intellectual property prosecution and other expenses related to our drug discovery and development programs, the development and analysis of knockout mice and our other target validation research efforts, and the development of compound libraries. General and administrative expenses consist primarily of salaries and related expenses for executive and administrative personnel, professional fees and other corporate expenses including information technology, facilities costs and general legal activities. In connection with the expansion of our drug discovery and development programs, we expect to continue to incur significant research and development costs. As a result, we will need to generate significantly higher revenues to achieve profitability.

Critical Accounting Policies

The preparation of financial statements in conformity with generally accepted accounting principles requires us to make judgments, estimates and assumptions in the preparation of our consolidated financial statements and accompanying notes. Actual results could differ from those estimates. We believe there have been no significant changes in our critical accounting policies as discussed in our Annual Report on Form 10-K for the year ended December 31, 2008.

Recent Accounting Pronouncements

In September 2006, the FASB issued Statement of Financial Accounting Standards, or SFAS, No. 157, "Fair Value Measurements." The statement defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles, and expands disclosures about fair value measurements. This statement applies under other accounting pronouncements that require or permit fair value measurements, the FASB having previously concluded in those accounting pronouncements that fair value is the relevant measurement attribute. Accordingly, this statement does not require any new fair value measurements. More specifically, SFAS No. 157 emphasizes that fair value is a market-based measurement, not an entity-specific measurement, and sets out a fair value hierarchy, which ranks the quality and reliability of the information used to determine fair value. SFAS No. 157 was effective January 1, 2008 for financial assets and liabilities and January 1, 2009 for non-financial assets and liabilities. The adoption of SFAS No. 157 did not have an effect on our financial position or results of operations.

In December 2007, the FASB issued SFAS No. 141(Revised), "Business Combinations," which replaces SFAS No. 141, "Business Combinations," and requires an acquirer to recognize the assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at the acquisition date, measured at their fair values as of that date, with limited exceptions. This statement also requires the acquirer in a business combination achieved in stages to recognize the identifiable assets and liabilities, as well as the noncontrolling interest in the acquiree, at the full amounts of their fair values. SFAS No. 141(R) makes various other amendments to authoritative literature intended to provide additional guidance or to confirm the guidance in that literature to that provided in this statement. This statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. Our adoption of SFAS No. 141(R) on January 1, 2009 did not have an effect on our financial position or results of operations.

In December 2007, the FASB issued SFAS No. 160, “Noncontrolling Interests in Consolidated Financial Statements,” which amends Accounting Research Bulletin No. 51, “Consolidated Financial Statements,” to improve the relevance, comparability, and transparency of the financial information that a reporting entity provides in its consolidated financial statements. SFAS No. 160 establishes accounting and reporting standards that require the ownership interests in subsidiaries not held by the parent to be clearly identified, labeled and presented in the consolidated statement of financial position within equity, but separate from the parent’s equity. This statement also requires the amount of consolidated net income attributable to the parent and to the noncontrolling interest to be clearly identified and presented on the face of the consolidated statement of income. Changes in a parent’s ownership interest while the parent retains its controlling financial interest must be accounted for consistently, and when a subsidiary is deconsolidated, any retained noncontrolling equity investment in the former subsidiary must be initially measured at fair value. The gain or loss on the deconsolidation of the subsidiary is measured using the fair value of any noncontrolling equity investment. The statement also requires entities to provide sufficient disclosures that clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners. This statement applies prospectively to all entities that prepare consolidated financial statements and applies prospectively for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. Our adoption of SFAS No. 160 on January 1, 2009 did not materially affect our financial position or results of operations, other than reclassifying the noncontrolling interest in Symphony Icon to equity for all periods presented.

In December 2007, the FASB ratified Emerging Issues Task Force (“EITF”) Issue No. 07-01, “Accounting for Collaborative Arrangements,” which provides guidance on how the parties to a collaborative agreement should account for costs incurred and revenue generated on sales to third parties, how sharing payments pursuant to a collaboration agreement should be presented in the income statement and certain related disclosure requirements. The adoption of EITF No. 07-01 did not have an effect on our financial position or results of operations, other than requiring additional disclosures. Most of the required disclosures were included in our annual report on Form 10-K for the year ended December 31, 2008. See note 12, “Collaboration and License Agreements,” in the accompanying footnotes for additional required disclosures.

Results of Operations

Revenues

Total revenues and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	Three Months Ended March 31,	
	2009	2008
Total revenues	\$ 4.2	\$ 8.9
Dollar decrease	\$ (4.7)	
Percentage decrease	(53)%	

- *Collaborative research* – Revenue from collaborative research decreased 53% to \$3.6 million, primarily due to reduced revenues in the three months ended March 31, 2009 under our alliance with Bristol-Myers Squibb, reduced revenues under our alliance with N.V. Organon due to our progress towards completing the target discovery portion of the alliance, and the completion in 2008 of the target discovery portion of our alliance with Genentech.
- *Subscription and license fees* – Revenue from subscriptions and license fees decreased 55% to \$0.6 million, primarily due to a decrease in technology license fees.

Research and Development Expenses

Research and development expenses and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	Three Months Ended March 31,	
	2009	2008
Total research and development expense	\$ 23.0	\$ 27.8
Dollar decrease	\$ (4.8)	
Percentage decrease	(17)%	

Research and development expenses consist primarily of salaries and other personnel-related expenses, facility and equipment costs, laboratory supplies, third-party and other services and stock-based compensation expenses.

- *Personnel* – Personnel costs decreased 11% to \$10.6 million, primarily due to reductions in our personnel in May 2008 and January 2009, offset in part by associated severance costs. Salaries, bonuses, employee benefits, payroll taxes, recruiting and relocation costs are included in personnel costs.
- *Facilities and equipment* – Facilities and equipment costs decreased 12% to \$4.1 million, primarily due to a decrease in depreciation expense.
- *Laboratory supplies* – Laboratory supplies expense decreased 35% to \$1.7 million, primarily as a result of reductions in our personnel in May 2008 and January 2009.
- *Third-party and other services* – Third-party and other services decreased 23% to \$4.9 million, primarily due to a decrease in external preclinical research and development costs.
- *Stock-based compensation* – Stock-based compensation expense decreased 26% to \$0.8 million.
- *Other* – Other costs decreased 27% to \$0.8 million.

General and Administrative Expenses

General and administrative expenses and dollar and percentage changes as compared to the corresponding period in the prior year are as follows (dollar amounts are presented in millions):

	Three Months Ended March 31,	
	2009	2008
Total general and administrative expense	\$ 4.8	\$ 5.5
Dollar decrease	\$ (0.8)	
Percentage decrease	(14)%	

General and administrative expenses consist primarily of personnel costs to support our research activities, facility and equipment costs, professional fees such as legal fees, and stock-based compensation expenses.

- *Personnel* – Personnel costs decreased 12% to \$2.5 million, primarily due to reductions in our personnel in May 2008 and January 2009. Salaries, bonuses, employee benefits, payroll taxes, recruiting and relocation costs are included in personnel costs.
- *Facilities and equipment* – Facilities and equipment costs increased 11% to \$0.7 million.

- *Professional fees* – Professional fees decreased 25% to \$0.6 million, primarily due to decreased legal fees and market research costs.
- *Stock-based compensation* – Stock-based compensation expense decreased 6% to \$0.6 million.
- *Other* – Other costs decreased 42% to \$0.3 million.

Gain on Long-Term Investments, Net, Interest Income, Interest Expense and Other Expense, Net

Gain on Long-Term Investments, Net. Gain on long-term investments was \$558,000 for the three months ended March 31, 2009, representing the increase in fair value of the rights obtained from UBS AG, the investment bank that sold us our auction rate securities. This gain was partially offset by a loss on long-term investments of \$41,000 for the three months ended March 31, 2009, representing the decline in fair value of our student loan auction rate securities.

Interest Income. Interest income decreased 88% to \$0.3 million in the three months ended March 31, 2009 from \$2.8 million in the corresponding period in 2008, due to lower yields on our investments as well as lower average cash and investment balances.

Interest Expense. Interest expense was \$0.7 million in the three months ended March 31, 2009, consistent with the prior year.

Other Expense, Net. Other expense, net increased 73% to \$0.9 million in the three months ended March 31, 2009 from \$0.5 million in the corresponding period in 2008, primarily due to an impairment of surplus equipment as a result of our restructuring in January 2009.

Noncontrolling Interest in Symphony Icon, Inc.

For the three months ended March 31, 2009 and 2008, the losses attributable to the noncontrolling interest holders of Symphony Icon were \$2.8 million and \$4.9 million, respectively.

Net Loss Attributable to Lexicon Pharmaceuticals, Inc. and Net Loss Attributable to Lexicon Pharmaceuticals, Inc. per Common Share

Net Loss Attributable to Lexicon Pharmaceuticals, Inc. and Net Loss Attributable to Lexicon Pharmaceuticals, Inc. per Common Share. Net loss attributable to Lexicon Pharmaceuticals, Inc. increased to \$21.6 million in the three months ended March 31, 2009 from \$18.0 million in the corresponding period in 2008. Net loss attributable to Lexicon Pharmaceuticals, Inc. per common share increased to \$0.16 in the three months ended March 31, 2009 from \$0.13 in the corresponding period in 2008.

Our quarterly operating results have fluctuated in the past and are likely to do so in the future, and we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance.

Liquidity and Capital Resources

We have financed our operations from inception primarily through sales of common and preferred stock, contract and milestone payments to us under our drug discovery and development collaborations, target validation, database subscription and technology license agreements, government grants and contracts, and financing obtained under debt and lease arrangements. We have also financed certain of our research and development activities under our agreements with Symphony Icon, Inc. From our inception through March 31, 2009, we had received net proceeds of \$550.0 million from issuances of common and preferred stock, including \$203.2 million of net proceeds from the initial public offering of our common stock in April 2000, \$50.1 million from our July 2003 common stock offering, \$37.5 million from our October 2006 common stock offering and \$198.0 million from our August 2007 sale of common stock to Invus, L.P. In addition, from our inception through March 31, 2009, we received \$443.9 million in cash payments from drug discovery and development collaborations, target validation, database subscription and technology license agreements, sales of compound libraries and reagents, and government grants and contracts, of which \$428.2 million had been recognized as revenues through March 31, 2009.

As of March 31, 2009, we had \$133.6 million in cash, cash equivalents and investments, including \$56.2 million in auction rate securities and related rights as discussed below under “Disclosure about Market Risk,” and \$11.8 million in investments held by Symphony Icon. As of December 31, 2008, we had \$142.2 million in cash, cash equivalents and investments, including \$55.7 million of auction rate securities and related rights, and \$16.6 million in investments held by Symphony Icon. We used cash of \$28.2 million in operations in the three months ended March 31, 2009. This consisted primarily of the net loss for the period of \$21.6 million, a net increase in other operating assets net of liabilities of \$4.9 million, a \$2.8 million loss attributable to noncontrolling interest, and a \$2.6 million decrease in deferred revenue, partially offset by non-cash charges of \$1.8 million related to depreciation expense, \$1.4 million related to stock-based compensation expense and \$0.5 million related to the amortization of the Symphony Icon purchase option. Investing activities used cash of \$55.2 million in the three months ended March 31, 2009, primarily due to purchases of short-term investments of \$60.0 million, partially offset by maturities of short-term investments of \$4.9 million. Financing activities provided cash of \$14.4 million due to proceeds from debt borrowings of \$14.8 million, partially offset by repayment of debt borrowings of \$0.4 million.

In January 2009, we entered into a credit line agreement with UBS Bank USA that provides up to an aggregate amount of \$37.9 million in the form of an uncommitted, demand, revolving line of credit. We entered into the credit line in connection with our acceptance of an offer from UBS AG, the investment bank that sold us our auction rate securities, providing us with rights to require UBS to purchase our \$57.0 million (par value) of auction rate securities at par value during the period from June 30, 2010 through July 2, 2012. The credit line is secured only by these auction rate securities and advances under the credit line will be made on a “no net cost” basis, meaning that the interest paid by us on advances will not exceed the interest or dividends paid to us by the issuer of the auction rate securities. As of March 31, 2009, we had \$14.7 million outstanding under this credit line.

In June 2007, we entered into a securities purchase agreement with Invus, L.P, pursuant to which Invus purchased 50,824,986 shares of our common stock for approximately \$205.4 million in August 2007. This purchase resulted in Invus’ ownership of 40% of the post-transaction outstanding shares of our common stock. Pursuant to the securities purchase agreement, Invus, at its option, also has the right to require us to initiate up to two pro rata rights offerings to our stockholders, which would provide all stockholders with non-transferable rights to acquire shares of our common stock, in an aggregate amount of up to \$344.5 million, less the proceeds of any “qualified offerings” that we may complete in the interim involving the sale of our common stock at prices above \$4.50 per share. Invus may exercise its right to require us to conduct the first rights offering by giving us notice within a period of 90 days beginning on November 28, 2009 (which we refer to as the first rights offering trigger date), although we and Invus may agree to change the first rights offering trigger date to as early as August 28, 2009 with the approval of the members of our board of directors who are not affiliated with Invus. Invus may exercise its right to require us to conduct the second rights offering by giving us notice within a period of 90 days beginning on the date that is 12 months after Invus’ exercise of its right to require us to conduct the first rights offering or, if Invus does not exercise its right to require us to conduct the first rights offering, within a period of 90 days beginning on the first anniversary of the first rights offering trigger date. The initial investment and subsequent rights offerings, combined with any qualified offerings, were designed to achieve up to \$550 million in proceeds to us. Invus would participate in each rights offering for up to its pro rata portion of the offering, and would commit to purchase the entire portion of the offering not subscribed for by other stockholders.

In connection with the securities purchase agreement, we entered into a stockholders' agreement with Invus under which Invus (a) has specified rights with respect to designation of directors and participation in future equity issuances by us, (b) is subject to certain standstill restrictions, as well as restrictions on transfer and the voting of the shares of common stock held by it and its affiliates, and (c), as long as Invus holds at least 15% of the total number of outstanding shares of our common stock, is entitled to certain minority protections.

In June 2007, we entered into a series of related agreements providing for the financing of the clinical development of certain of our drug candidates, including LX1031 and LX1032, along with any other pharmaceutical compositions modulating the same targets as those drug candidates. Under the financing arrangement, we licensed to Symphony Icon, a wholly-owned subsidiary of Symphony Icon Holdings LLC, our intellectual property rights related to the programs and Holdings contributed \$45 million to Symphony Icon in order to fund the clinical development of the programs. We also entered into a share purchase agreement with Holdings under which we issued and sold to Holdings 7,650,622 shares of our common stock in exchange for \$15 million and an exclusive option to acquire all of the equity of Symphony Icon, thereby allowing us to reacquire the programs. The purchase option is exercisable by us at any time, in our sole discretion, until June 15, 2011 at an exercise price of (a) \$72 million, if the purchase option is exercised before June 15, 2009, (b) \$81 million, if the purchase option is exercised on or after the June 15, 2009 and before June 15, 2010 and (c) \$90 million, if the purchase option is exercised on or after June 15, 2010 and before June 15, 2011. The purchase option exercise price may be paid in cash or a combination of cash and common stock, at our sole discretion, provided that the common stock portion may not exceed 40% of the purchase option exercise price.

Upon the recommendation of Symphony Icon's development committee, which is comprised of an equal number of representatives from us and Symphony Icon, Symphony Icon's board of directors may require us to pay Symphony Icon up to \$15 million for Symphony Icon's use in the development of the programs in accordance with the specified development plan and related development budget. The development committee's right to recommend that Symphony Icon's board of directors submit such funding requirement to us will terminate on the one-year anniversary of the expiration of the purchase option, subject to limited exceptions.

In April 2004, we obtained a \$34.0 million mortgage on our facilities in The Woodlands, Texas. The mortgage loan has a ten-year term with a 20-year amortization and bears interest at a fixed rate of 8.23%. In May 2002, our subsidiary Lexicon Pharmaceuticals (New Jersey), Inc. leased a 76,000 square-foot laboratory and office space in Hopewell, New Jersey. The term of the lease extends until June 30, 2013. The lease provides for an escalating yearly base rent payment of \$1.3 million in the first year, \$2.1 million in years two and three, \$2.2 million in years four to six, \$2.3 million in years seven to nine and \$2.4 million in years ten and eleven. We are the guarantor of the obligations of our subsidiary under the lease.

Our future capital requirements will be substantial and will depend on many factors, including our ability to obtain drug discovery and development collaborations and other collaborations and technology license agreements, the amount and timing of payments under such agreements, the level and timing of our research and development expenditures, market acceptance of our products, the resources we devote to developing and supporting our products and other factors. Our capital requirements will also be affected by any expenditures we make in connection with license agreements and acquisitions of and investments in complementary technologies and businesses. We expect to devote substantial capital resources to continue our research and development efforts, to expand our support and product development activities, and for other general corporate activities. We believe that our current unrestricted cash and investment balances, the UBS credit line entered into in January 2009 and cash and revenues we expect to derive from drug discovery and development collaborations and other collaborations and technology licenses will be sufficient to fund our operations for at least the next 12 months. During or after this period, if cash generated by operations is insufficient to satisfy our liquidity requirements, we will need to sell additional equity or debt securities or obtain additional credit arrangements. Additional financing may not be available on terms acceptable to us or at all. The sale of additional equity or convertible debt securities may result in additional dilution to our stockholders.

Disclosure about Market Risk

We are exposed to limited market and credit risk on our cash equivalents which have maturities of three months or less at the time of purchase. We maintain a short-term investment portfolio which consists of U.S. Treasury bills, money market accounts, corporate debt securities and certificates of deposit that mature three to 12 months from the time of purchase and a long-term investment portfolio which consists of auction rate securities that mature greater than 12 months from the time of purchase, which we believe are subject to limited market and credit risk, other than as discussed below. We currently do not hedge interest rate exposure or hold any derivative financial instruments in our investment portfolio.

At March 31, 2009, we held \$57.0 million (par value), with an estimated fair value of \$43.6 million, of investments with an auction interest rate reset feature, known as auction rate securities. These notes are issued by various state agencies for the purpose of financing student loans. The securities have historically traded at par and are redeemable at par plus accrued interest at the option of the issuer. Interest is typically paid at the end of each auction period or semiannually. Until February 2008, the market for our auction rate securities was highly liquid. Starting in February 2008, a substantial number of auctions “failed,” meaning that there was not enough demand to sell all of the securities that holders desired to sell at auction. The immediate effect of a failed auction is that such holders cannot sell the securities at auction and the interest rate on the security generally resets to a maximum interest rate. In the case of funds invested by us in auction rate securities which are the subject of a failed auction, we may not be able to access the funds without a loss of principal, unless a future auction on these investments is successful or the issuer redeems the security. As of March 31, 2009, we classified the entire auction rate security investment balance as long-term investments on our consolidated balance sheet because of our inability to determine when our investments in auction rate securities would be sold. We have also modified our current investment strategy to reallocate our investments more into U.S. treasury securities and U.S. treasury-backed money market investments.

At March 31, 2009, observable auction rate securities market information was not available to determine the fair value of our investments. We have estimated the fair value of these securities at \$43.6 million as of March 31, 2009 using models of the expected future cash flows related to the securities and taking into account assumptions about the cash flows of the underlying student loans, as well as secondary market data. The assumptions used in preparing the discounted cash flow model include estimates of interest rates, timing and amount of cash flows, liquidity premiums and expected holding periods of the auction rate securities, based on data available as of March 31, 2009. The underlying sources of these assumptions are volatile and the assumptions are subject to change as those sources and market conditions change.

In November 2008, we accepted an offer from UBS AG, the investment bank that sold us our auction rate securities, providing us with rights related to our auction rate securities. The rights permit us to require UBS to purchase our \$57.0 million (par value) of auction rate securities at par value during the period from June 30, 2010 through July 2, 2012. Conversely, UBS has the right, in its discretion, to purchase or sell the securities at any time by paying us the par value of such securities. We expect to exercise the rights and sell our auction rate securities back to UBS on June 30, 2010, the earliest date allowable under the rights.

The enforceability of the rights results in a separate asset that will be measured at its fair value. We elected to measure the rights under the fair value option of SFAS No. 159. As a result of accepting the rights, we elected in 2008 to classify the rights and reclassify our investments in auction rate securities as trading securities, as defined by SFAS No. 115. As a result, we will be required to assess the fair value of these two individual assets and record changes each period until the rights are exercised and the auction rate securities are redeemed. During the three months ended March 31, 2009, we recorded a loss of \$41,000 to reflect the decline in fair value of the auction rate securities, and recorded a gain of \$558,000 to reflect the increase in fair value of the rights, which are reflected in gain on long-term investments, net, in the accompanying consolidated statement of operations. We expect that subsequent changes in the value of the rights will largely offset the subsequent fair value movements of the auction rate securities, subject to the continued expected performance by the investment bank of its obligations under the agreement.

Excluding auction rate securities and the related rights, at March 31, 2009, we had approximately \$89.3 million in cash and cash equivalents and short-term investments, including \$11.8 million in investments held by Symphony Icon. We believe that the working capital available to us excluding the funds held in auction rate securities and the UBS credit line entered into in January 2009 will be sufficient to meet our cash requirements for at least the next 12 months.

We have operated primarily in the United States and substantially all sales to date have been made in U.S. dollars. Accordingly, we have not had any material exposure to foreign currency rate fluctuations.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

See “Disclosure about Market Risk” under “Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations” for quantitative and qualitative disclosures about market risk.

Item 4. Controls and Procedures

Our principal executive officer and principal financial officer have concluded that our disclosure controls and procedures (as defined in rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) are sufficiently effective to ensure that the information required to be disclosed by us in the reports we file under the Securities Exchange Act is gathered, analyzed and disclosed with adequate timeliness, accuracy and completeness, based on an evaluation of such controls and procedures as of the end of the period covered by this report.

Subsequent to our evaluation, there were no significant changes in internal controls or other factors that could significantly affect internal controls, including any corrective actions with regard to significant deficiencies and material weaknesses.

Part II Other Information**Item 1A. Risk Factors**

The following risks and uncertainties are important factors that could cause actual results or events to differ materially from those indicated by forward-looking statements. The factors described below are not the only ones we face and additional risks and uncertainties not presently known to us or that we currently deem immaterial also may impair our business operations.

Risks Related to Our Need for Additional Financing and Our Financial Results

- we will need additional capital in the future; if it is unavailable, we will be forced to significantly curtail or cease operations and, if it is not available on reasonable terms, we will be forced to obtain funds by entering into financing agreements on unattractive terms
- we have a history of net losses, and we expect to continue to incur net losses and may not achieve or maintain profitability
- we have licensed the intellectual property, including commercialization rights, to our drug candidates LX1031 and LX1032 to Symphony Icon and will not receive any future royalties or revenues with respect to these drug candidates unless we exercise our option to purchase Symphony Icon
- at March 31, 2009, we held \$57.0 million (par value), with an estimated fair value of \$43.6 million, of auction rate securities for which auctions have failed and, as a result, we may not be able to access at least the portion of these funds for which alternative funding is not available through our credit line with UBS Bank USA without a loss of principal
- our operating results have been and likely will continue to fluctuate, and we believe that period-to-period comparisons of our operating results are not a good indication of our future performance

Risks Related to Discovery and Development of Our Drug Candidates

- we are an early-stage company, and have not proven our ability to successfully develop and commercialize drug candidates based on our drug target discoveries
- clinical testing of our drug candidates in humans is an inherently risky and time-consuming process that may fail to demonstrate safety and efficacy, which could result in the delay, limitation or prevention of regulatory approval

Risks Related to Our Relationships with Third Parties

- multiple or alternative approaches may provide advantages or benefits in the development of certain drug candidates and disagreements with Symphony Icon regarding the development of our drug candidates LX1031 or LX1032 could negatively affect or delay their development
- we are dependent in many ways upon our collaborations with major pharmaceutical companies, and if we are unable to achieve milestones under those collaborations or if our collaborators' efforts fail to yield pharmaceutical products on a timely basis, our opportunities to generate revenues and earn royalties will be reduced

- conflicts with our collaborators could jeopardize the success of our collaborative agreements and harm our product development efforts
- we lack the capability to manufacture materials for preclinical studies, clinical trials or commercial sales and rely on third parties to manufacture our drug candidates, which may harm or delay our product development and commercialization efforts
- we rely on third parties to carry out drug development activities

Risks Related to Regulatory Approval of Our Drug Candidates

- our drug candidates are subject to a lengthy and uncertain regulatory process that may not result in the necessary regulatory approvals, which could adversely affect our ability to commercialize products
- if our potential products receive regulatory approval, we or our collaborators will remain subject to extensive and rigorous ongoing regulation

Risks Related to Commercialization of Products

- the commercial success of any products that we may develop will depend upon the degree of market acceptance of our products among physicians, patients, health care payors, private health insurers and the medical community
- if we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our drug candidates, we may be unable to generate product revenues
- if we are unable to obtain adequate coverage and reimbursement from third-party payors for any products that we may develop, our revenues and prospects for profitability will suffer
- our competitors may develop products and technologies that make our products and technologies obsolete
- we may not be able to manufacture our drug candidates in commercial quantities, which would prevent us from commercializing our drug candidates

Risks Related to Our Intellectual Property

- if we are unable to adequately protect our intellectual property, third parties may be able to use our technology, which could adversely affect our ability to compete in the market
- we may be involved in patent litigation and other disputes regarding intellectual property rights and may require licenses from third parties for our discovery and development and planned commercialization activities, and we may not prevail in any such litigation or other dispute or be able to obtain required licenses
- we use intellectual property that we license from third parties, and if we do not comply with these licenses, we could lose our rights under them
- we have not sought patent protection outside of the United States for some of our inventions, and some of our licensed patents only provide coverage in the United States, and as a result, our international competitors could be granted foreign patent protection with respect to our discoveries

- we may be subject to damages resulting from claims that we, our employees or independent contractors have wrongfully used or disclosed alleged trade secrets of their former employers

Risks Related to Employees, Growth and Facilities Operations

- the loss of key personnel or the inability to attract and retain additional personnel could impair our ability to expand our operations
- our collaborations with outside scientists may be subject to restriction and change
- security breaches may disrupt our operations and harm our operating results
- because most of our operations are located at a single facility, the occurrence of a disaster could significantly disrupt our business

Risks Related to Environmental and Product Liability

- we use hazardous chemicals and radioactive and biological materials in our business, and any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly
- we may be sued for product liability

Risks Related to Our Common Stock

- our stock price may be extremely volatile
- we may engage in future acquisitions, which may be expensive and time consuming and from which we may not realize anticipated benefits
- future sales of our common stock may depress our stock price
- Invus' ownership of our common stock and its other rights under the stockholders' agreement we entered into in connection with Invus' \$205.4 million initial investment in our common stock provide Invus with substantial influence over matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions, as well as other corporate matters

For additional discussion of the risks and uncertainties that affect our business, see "Item 1A. Risk Factors" included in our annual report on Form 10-K for the year ended December 31, 2008, as filed with the Securities and Exchange Commission.

Item 6. Exhibits

Exhibit No.	Description
31.1	— Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	— Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	— Certification of Principal Executive and Principal Financial Officers Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

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: April 29, 2009

By: /s/ Arthur T. Sands
Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

Date: April 29, 2009

By: /s/ James F. Tessmer
James F. Tessmer
Vice President, Finance and Accounting

Index to Exhibits

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CERTIFICATIONS

I, Arthur T. Sands, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lexicon Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 29, 2009

/s/ Arthur T. Sands

Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

CERTIFICATIONS

I, James F. Tessmer, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Lexicon Pharmaceuticals, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: April 29, 2009

/s/ James F. Tessmer

James F. Tessmer
Vice President, Finance and Accounting

CERTIFICATION

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (18 U.S.C. 1350, as adopted), Arthur T. Sands, M.D., Ph.D., Principal Executive Officer of Lexicon Pharmaceuticals, Inc. ("Lexicon"), and James F. Tessmer, Principal Financial Officer of Lexicon, each hereby certify that:

1. Lexicon's Quarterly Report on Form 10-Q for the period ended March 31, 2009, and to which this Certification is attached as Exhibit 32.1 (the "Periodic Report"), fully complies with the requirements of section 13(a) or section 15(d) of the Securities Exchange Act of 1934, and
2. The information contained in the Periodic Report fairly presents, in all material respects, the financial condition and results of operations of Lexicon.

IN WITNESS WHEREOF, the undersigned have set their hands hereto as of the 29th day of April, 2009.

By: /s/ Arthur T. Sands
Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

By: /s/ James F. Tessmer
James F. Tessmer
Vice President, Finance and Accounting