

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

FORM 10-K

(Mark One)

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

For the Fiscal Year Ended December 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)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class
Common Stock, par value \$0.001 per share

Name of Each Exchange on which Registered
Nasdaq Global Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act of 1933. Yes o No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934. Yes o No

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 o

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes o No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Securities Exchange Act of 1934. (check one): Large accelerated filer o Accelerated filer Non-accelerated filer o Smaller reporting company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Securities Exchange Act of 1934). Yes o No

The aggregate market value of voting stock held by non-affiliates of the registrant as of the last day of the registrant's most recently completed second quarter was approximately \$99.1 million, based on the closing price of the common stock on the Nasdaq Global Market on June 30, 2009 of \$1.24 per share. For purposes of the preceding sentence only, all directors, executive officers and beneficial owners of ten percent or more of the registrant's common stock are assumed to be affiliates. As of March 1, 2010, 175,633,988 shares of common stock were outstanding.

Documents Incorporated by Reference

Certain sections of the registrant's definitive proxy statement relating to the registrant's 2010 annual meeting of stockholders, which proxy statement will be filed under the Securities Exchange Act of 1934 within 120 days of the end of the registrant's fiscal year ended December 31, 2009, are incorporated by reference into Part III of this annual report on Form 10-K.

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The Lexicon name and logo, OmniBank® and LexVision® are registered trademarks and Genome5000™ is a trademark of Lexicon Pharmaceuticals, Inc.

In this annual report on Form 10-K, “Lexicon Pharmaceuticals,” “Lexicon,” “we,” “us” and “our” refer to Lexicon Pharmaceuticals, Inc.

Factors Affecting Forward Looking Statements

This annual report on Form 10-K 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 “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 of 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 annual report on Form 10-K to conform these statements to actual results, unless required by law.

Item 1. Business**Overview**

Lexicon Pharmaceuticals is a biopharmaceutical company focused on the discovery and development of breakthrough treatments for human disease. We have used our proprietary gene knockout technologies and an integrated platform of advanced medical technologies to systematically study the physiological and behavioral functions of almost 5,000 genes in mice and assessed the utility of the proteins encoded by the corresponding human genes as potential drug targets. We have identified and validated in living animals, or *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.

We have announced positive results from Phase 2 clinical trials of each of our two most advanced drug candidates: LX1031, an orally-delivered small molecule compound that we are developing as a potential treatment for irritable bowel syndrome and other gastrointestinal disorders and LX4211, an orally-delivered small molecule compound that we are developing as a potential treatment for type 2 diabetes. We are presently conducting Phase 2 clinical trials of two other drug candidates: LX2931, an orally-delivered small molecule compound that we are developing as a potential treatment for rheumatoid arthritis and other autoimmune diseases and LX1032, an orally-delivered small molecule compound that we are developing as a potential treatment for the symptoms associated with carcinoid syndrome. We have advanced one other drug candidate into preclinical development: LX7101, a topically-delivered small molecule compound that we are developing as a potential treatment for glaucoma. We have small molecule compounds from a number of additional drug discovery programs in various stages of preclinical research and believe that our systematic, target biology-driven approach to drug discovery will enable us to continue to expand our clinical pipeline.

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 drug candidates from those programs internally and to collaborate with third parties with respect to the discovery, development and commercialization of small molecule and biotherapeutic 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 received 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.

Lexicon Pharmaceuticals was incorporated in Delaware in July 1995, and commenced operations in September 1995. Our corporate headquarters are located at 8800 Technology Forest Place, The Woodlands, Texas 77381, and our telephone number is (281) 863-3000.

Our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 are made available free of charge on our corporate website located at www.lexpharma.com as soon as reasonably practicable after the filing of those reports with the Securities and Exchange Commission. Information found on our website should not be considered part of this annual report on Form 10-K.

Our Drug Development Pipeline

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:

Drug Program	Potential Indication	Stage of Development				
		Preclinical Research	Preclinical Development	IND	Phase 1	Phase 2
LX1031	Irritable Bowel Syndrome					
LX4211	Type 2 Diabetes					
LX2931	Rheumatoid Arthritis					
LX1032	Carcinoid Syndrome					
LX7101	Glaucoma					

LX1031

LX1031 is an orally-delivered small molecule compound that we are developing for the potential treatment of irritable bowel syndrome and other gastrointestinal disorders. We reported top-line data in November 2009 from a Phase 2 clinical trial evaluating the safety and tolerability of LX1031 and its effects on symptoms associated with irritable bowel syndrome. The Phase 2 clinical trial, which began in December 2008, enrolled 155 patients suffering from either diarrhea-predominant or mixed irritable bowel syndrome in a randomized, double-blind, placebo-controlled study of 250mg and 1,000mg doses of LX1031, each administered four times daily over a four-week treatment period. The efficacy endpoints under evaluation in the trial included a global assessment of adequate relief, number of bowel movements, symptom severity evaluation (bloating, urgency and pain), and stool form. Top-line data from the study showed that treatment with 1,000mg of LX1031 four times daily produced a statistically significant improvement in the global assessment of relief of irritable bowel syndrome pain and discomfort over the four-week treatment period compared to placebo. Improvements in the global assessment were observed in the first week of treatment and were maintained in each of the four weeks of the study, achieving statistical significance relative to placebo at the end of the first and second week and showing an improved trend relative to placebo that did not reach statistical significance at the end of the third and fourth weeks. Improvements in the global assessment of adequate relief corresponded with statistically significant improvements in stool consistency in the same dose group. Increased clinical response correlated with a greater reduction in serotonin synthesis as reflected by measures of urinary 5-HIAA, the primary metabolite of serotonin and a biomarker for serotonin production. LX1031 was well tolerated with no notable differences in adverse events observed between placebo and either treatment group. We are presently seeking to develop an improved formulation of LX1031 in preparation for use in future clinical trials.

We previously completed a Phase 1a single ascending-dose study and two Phase 1b multiple ascending-dose studies exploring safety and tolerability and the effects of LX1031 on serotonin synthesis. In Phase 1 clinical trials, all dose levels were well tolerated, no dose-limiting toxicities were observed, and LX1031 was shown to reduce levels of urinary 5-HIAA.

We designed LX1031 to reduce production of serotonin in the gastrointestinal tract and therefore reduce the serotonin available for receptor activation without affecting serotonin levels in the brain. LX1031 was internally generated by our medicinal chemists as an inhibitor of tryptophan hydroxylase, or TPH, the rate-limiting enzyme for serotonin production found primarily in enterochromaffin, or EC, cells of the gastrointestinal tract. Our scientists found that mice lacking the non-neuronal form of this enzyme, TPH1, have virtually no serotonin in the gastrointestinal tract, but maintain normal levels of serotonin in the brain. In preclinical studies, LX1031 demonstrated a dose-dependent reduction of serotonin levels in the gastrointestinal tract of multiple species without affecting brain serotonin levels.

Clinical development of LX1031 is being funded through our product development collaboration with Symphony Icon Holdings LLC, or Holdings, pursuant to which we have licensed to a wholly-owned subsidiary of Holdings, Symphony Icon, Inc. or Symphony Icon, the intellectual property rights related to LX1031 and hold an exclusive option to acquire all the equity of Symphony Icon, thereby allowing us to reacquire LX1031. See “—Our Commercialization Strategy—Drug Development Financing Collaborations—Symphony Icon.”

LX4211

LX4211 is an orally-delivered small molecule compound that we are developing for the potential treatment of type 2 diabetes mellitus. We reported top-line data in January 2010 from a Phase 2 clinical trial evaluating the safety and tolerability of LX4211 and its effects on biomarkers associated with type 2 diabetes. The Phase 2 trial, which began in September 2009, enrolled 36 patients with non-insulin dependent type 2 diabetes in a double-blind, randomized, placebo-controlled study of 150mg and 300mg doses of LX4211, each administered once daily over a four-week treatment period. The efficacy endpoints under evaluation in the trial included urinary glucose excretion, fasting plasma glucose, response to oral glucose tolerance testing, and hemoglobin A1c, also known as HbA1c or A1c, a measure of blood glucose levels over time. Top-line data from the study showed that treatment with 150mg and 300mg of LX4211 provided improvements in glycemic control and demonstrated statistically significant benefits in the primary and multiple secondary efficacy endpoints. A marked and statistically significant decrease in fasting plasma glucose was observed throughout the treatment period in both dose groups relative to placebo. After four weeks of dosing, patients in both dose groups exhibited statistically significant reductions in HbA1c as compared to patients receiving placebo. Patients in both dose groups also exhibited statistically significant improvements in glucose tolerance in response to oral glucose tolerance testing. Consistent with the mechanism of action of LX4211, there was also a significant, dose-dependent increase in 24-hour urinary glucose excretion in both dose groups throughout the study period relative to placebo. Patients in both dose groups showed positive trends that did not reach statistical significance in broader metabolic and cardiovascular parameters, including weight reduction, decreased blood pressure and lower triglyceride levels. LX4211 demonstrated a favorable safety profile in the trial, with no dose-limiting toxicities observed. Adverse events were generally mild and equally distributed across all groups, including the placebo group. We are presently completing a 13-week preclinical toxicology study of LX4211 to permit longer-term clinical trials following which we intend to conduct a bioavailability study of a solid oral dose formulation of LX4211 in 2010 before initiating a Phase 2 dose-ranging study.

We previously completed a combined Phase 1 single ascending-dose and multiple ascending-dose study of LX4211. In the Phase 1 clinical trial, LX4211 was well tolerated at all dose levels and produced a dose-dependent increase in urinary glucose excretion.

LX4211 was internally generated by our medicinal chemists to target sodium-glucose cotransporter type 2, or SGLT2, a transporter responsible for most of the glucose reabsorption performed by the kidney. Our scientists discovered that mice lacking SGLT2 have improved glucose tolerance and increased urinary glucose excretion. LX4211 also inhibits sodium-glucose cotransporter type 1, or SGLT1, a transporter responsible for glucose and galactose absorption in the gastrointestinal tract, and to a lesser extent than SGLT2, glucose reabsorption in the kidney. In preclinical studies, animals treated with LX4211 demonstrated increased urinary glucose excretion and decreased HbA1c levels, with urinary glucose excretion returning to baseline after treatment was discontinued.

LX2931

LX2931 is an orally-delivered small molecule compound that we are developing for the potential treatment of autoimmune diseases such as rheumatoid arthritis. We initiated a Phase 2 clinical trial in August 2009 to evaluate the safety and tolerability of LX2931 and its effects on symptoms and signs associated with rheumatoid arthritis. The Phase 2 trial is expected to enroll up to 200 patients with rheumatoid arthritis who are also taking methotrexate, a standard therapy, in a double-blind, randomized, placebo-controlled study of three dose levels of LX2931 against placebo over a 12-week treatment period. The efficacy endpoints under evaluation in the trial include ACR20 at 12 weeks and ACR20/50/70 and DAS28 at four, eight and 12 weeks. Top-line data from this trial are expected to be available in late 2010 or shortly thereafter.

We previously completed a drug-drug interaction study of LX2931 in rheumatoid arthritis patients taking methotrexate. We also completed two Phase 1a single ascending-dose studies, a Phase 1b multiple ascending-dose study and a multiple dose study assessing the pharmacokinetics of a solid dose form of LX2931. In the Phase 1 clinical trials, LX2931 demonstrated a dose-dependent reduction in circulating lymphocytes similar to those associated with a beneficial response observed in animal arthritis models after treatment with LX2931 and produced a dose-dependent decrease in absolute lymphocyte counts, with systemic exposure plateauing at doses of 100 to 125 mg. An episode of acute abdominal pain resolving within 24 hours was observed in two out of 24 subjects in the single ascending-dose trials who received doses above 175 mg, potentially representing dose-limiting tolerability. All other doses were well tolerated with mild to moderate adverse events equally distributed across all groups, including the placebo group.

LX2931 was internally generated by our medicinal chemists to target sphingosine-1-phosphate lyase, or S1P lyase, an enzyme in the sphingosine-1 phosphate (S1P) pathway associated with the activity of lymphocytes. Lymphocytes are a cellular component and key driver of the immune system, and are involved in a number of autoimmune and inflammatory disorders. Our scientists discovered that mice lacking this enzyme have increased retention of immune cells in the thymus and spleen with a corresponding reduction in the deployment of T-cells and B-cells into the circulating blood. In preclinical studies, LX2931 produced a consistent reduction in circulating lymphocyte counts in multiple species, and reduced joint inflammation and prevented arthritic destruction of joints in mouse and rat models of arthritis.

LX1032

LX1032 is an orally-delivered small molecule compound that we are developing for the potential treatment of symptoms associated with carcinoid syndrome. We initiated a Phase 2 clinical trial in July 2009 to evaluate the safety and tolerability of LX1032 and its effects on symptoms associated with carcinoid syndrome. The Phase 2 trial is expected to enroll up to 28 patients with symptomatic carcinoid syndrome refractory to octreotide therapy in a double-blind, randomized, placebo-controlled study assessing a series of escalating doses of LX1032 against placebo over a 28-day treatment period, followed by cohort expansion at optimal dose. The efficacy endpoints under evaluation in the trial include the number of daily bowel movements, stool form, urgency, a global assessment of symptoms associated with carcinoid syndrome, flushing episodes and an assessment of pain and discomfort. Top-line data from this trial are expected to be available in the second half of 2010. We also intend to initiate a complementary open-label clinical trial of LX1032 in the first half of 2010, which is expected to enroll up to 16 additional patients.

We previously completed a Phase 1a single ascending-dose study and a Phase 1b multiple ascending-dose study of LX1032. In Phase 1 clinical trials, LX1032 was generally well tolerated at all dose levels, and results demonstrated a potent dose-dependent reduction in both blood serotonin levels and urinary 5-HIAA which was consistent with the reductions observed in preclinical animal models.

LX1032 was internally generated by our medicinal chemists as an inhibitor of TPH, the same target as LX1031, but LX1032 is chemically distinct and, unlike LX1031, was specifically designed to achieve enhanced systemic exposure to address disorders such as carcinoid syndrome that require regulation of serotonin levels beyond the enterochromaffin cells in the gastrointestinal tract without impacting brain serotonin production. In preclinical studies, LX1032 was able to reduce peripheral serotonin levels in several different species without affecting serotonin levels in the brain. LX1032 has received Fast Track status from the United States Food and Drug Administration, or FDA, which provides for an expedited review process that may shorten FDA approval times.

Clinical development of LX1032 is being funded through our product development collaboration with Holdings, pursuant to which we have licensed to Symphony Icon the intellectual property rights related to LX1032 and hold an exclusive option to acquire all the equity of Symphony Icon, thereby allowing us to reacquire LX1032. See “—Our Commercialization Strategy—Drug Development Financing Collaborations—Symphony Icon.”

LX7101

LX7101 is a topically-delivered small molecule compound that we are developing for the potential treatment of glaucoma. We have commenced preclinical studies of LX7101 and certain associated back-up molecules.

LX7101 was internally generated by our medicinal chemists to target a kinase responsible for regulating intraocular pressure and is designed to lower intraocular pressure by enhancing the fluid outflow facility of the eye. Our scientists discovered that mice lacking the gene encoding the target of LX7101 exhibited lower intraocular pressure compared to normal mice. In preclinical studies, LX7101 significantly reduced intraocular pressure in an animal model of ocular hypertension.

Discovery Programs

We have advanced a number of additional drug discovery programs into various stages of preclinical research in preparation for formal preclinical development studies. Through the end of 2009, we had identified and validated, *in vivo*, more than 100 targets with promising profiles for drug discovery.

Our Drug Discovery and Development Process

Our drug discovery and development process began with our Genome5000 program, in which we used our gene knockout and medical evaluative technologies to discover the putative physiological and behavioral functions of almost 5,000 human genes through analysis of the corresponding mouse knockout models. In our Genome5000 program, we used our patented gene knockout technologies to generate knockout mice – mice whose DNA has been modified to disrupt, or knock out, the function of the altered gene – by altering the DNA of genes in a special variety of mouse cells, called embryonic stem cells, which were then cloned and used to generate mice with the altered gene. We then studied the physiology and behavior of the knockout mice using a comprehensive battery of advanced medical technologies, each of which was adapted specifically for the analysis of mouse physiology. This systematic use of these evaluative technologies allowed us to discover, *in vivo*, the physiological and behavioral functions of the genes we knocked out and assess the prospective pharmaceutical utility of the potential drug targets encoded by the corresponding human genes. The study of the effects of knocking out genes in mice has historically proven to be a powerful tool for understanding human genes because of the close similarity of gene function and physiology between mice and humans, with approximately 99% of all human genes having a counterpart in the mouse genome.

We engage in programs for the discovery of potential small molecule drugs for those *in vivo*-validated drug targets that we consider to have high pharmaceutical value. We have established extensive internal small molecule drug discovery capabilities, in which we use our own sophisticated libraries of drug-like chemical compounds in high-throughput screening assays to identify “hits,” or chemical compounds demonstrating activity, against these targets. We then employ medicinal chemistry efforts to optimize the potency and selectivity of these hits and to identify lead compounds for potential development. We have established extensive internal capabilities to characterize the absorption, distribution, metabolism and excretion of our potential drug candidates and otherwise evaluate their safety in mammalian models in preparation for preclinical and clinical development. In all of our drug discovery programs, we use a parallel physiological analysis technology platform that we used in the discovery of gene function to analyze the *in vivo* activity and safety profiles of drug candidates in mice as part of our preclinical research efforts.

Once we identify a potential drug candidate, we initiate formal preclinical development studies in preparation for regulatory filings for the commencement of human clinical trials. We have established internal expertise in each of the critical areas of preclinical and clinical development, including clinical trial design, study implementation and oversight, and regulatory affairs, with demonstrated experience by members of our clinical development team in the successful implementation of Phase 1, 2 and 3 clinical trials and regulatory approval for the commercialization of therapeutic products.

We believe that our systematic, biology-driven approach and our underlying technology platform provide us with substantial advantages over alternative approaches to drug target discovery. In particular, we believe that the comprehensive nature of our approach has allowed us to identify potential drug targets within the context of mammalian physiology that might have been missed by more narrowly focused efforts. We also believe our approach is more likely to reveal those side effects that may be a direct result of inhibiting or otherwise modulating the drug target and may limit the utility of potential therapeutics directed at the drug target. We believe these advantages have contributed to better target selection and, therefore, to a greater likelihood of success for our drug discovery and development efforts.

Our Technology

The core elements of our technology platform include our patented technologies for the generation of knockout mice, our integrated platform of advanced medical technologies for the systematic and comprehensive biological analysis of *in vivo* behavior and physiology, and our specialized approach to medicinal chemistry and the generation of high-quality, drug-like compound libraries.

Gene Knockout Technologies

Our gene targeting technology, which we have licensed from third parties for the life of the licensed patents, enables us to generate highly-specific alterations in targeted genes. The technology replaces DNA of a gene in a mouse embryonic stem cell through a process known as homologous recombination to disrupt the function of the targeted gene, permitting the generation of knockout mice. By using this technology in combination with one or more additional technologies, we are able to generate alterations that selectively disrupt, or conditionally regulate, the function of the targeted gene for the analysis of the gene’s function in selected tissues, at selected stages in the animal’s development or at selected times in the animal’s life. We can also use this technology to replace the targeted gene with its corresponding human gene for use for preclinical research in our drug programs.

Our gene trapping technology, which we invented and is covered by issued patents that we own, is a high-throughput method of generating knockout mouse clones. The technology uses genetically engineered retroviruses that infect mouse embryonic stem cells *in vitro*, integrate into the chromosome of the cell and disrupt the function of the gene into which it integrates, permitting the generation of knockout mice. This process also allows us to identify and catalogue each embryonic stem cell clone by DNA sequence from the trapped gene and to select embryonic stem cell clones by DNA sequence for the generation of knockout mice. We have used our gene trapping technology in an automated process to create our OmniBank library of more than 270,000 frozen gene knockout embryonic stem cell clones, each identified by DNA sequence in a relational database.

Physiological Analysis Technologies

We have employed an integrated platform of advanced analytical technologies to rapidly and systematically discover the physiological and behavioral effects resulting from loss of gene function in the knockout mice we have generated using our gene knockout technologies and catalogued those effects in our comprehensive and relational LexVision database. These analyses include many of the most sophisticated diagnostic technologies and tests currently available, many of which might be found in a major medical center. Each of these technologies was adapted specifically for the analysis of mouse physiology. This state-of-the-art technology platform has enabled us to assess the consequences of loss of gene function in a living mammal across a wide variety of parameters relevant to human disease.

We employ portions of this same physiological analysis technology to analyze the *in vivo* efficacy and safety profiles of drug candidates in mice. We believe that this approach will allow us, at an early stage, to identify and optimize drug candidates for further preclinical and clinical development that demonstrate *in vivo* efficacy and to distinguish side effects caused by a specific compound from the target-related side effects that we defined using the same comprehensive series of tests.

Chemistry Technologies

We have used solution-phase chemistry to generate our own diverse libraries of optically pure compounds that are targeted against the same pharmaceutically-relevant gene families that we addressed in our Genome5000 program. These libraries have been built using highly robust and scalable organic reactions that allow us to generate compound collections of great diversity and to specially tailor the compound collections to address various therapeutic target families. We designed these libraries by analyzing the chemical structures of drugs that have been proven safe and effective against human disease and using that knowledge in the design of scaffolds and chemical building blocks for the generation of large numbers of new drug-like compounds. When we identify a hit against one of our *in vivo*-validated targets, we can rapidly reassemble these building blocks to create hundreds or thousands of variations around the structure of the initial compound, enabling us to accelerate our medicinal chemistry efforts. We have supplemented our internally-generated compound libraries with collections of compounds acquired from third parties. We have also established an alliance with Nuevolution A/S providing us with access to Nuevolution's Chemetics® platform chemistry technology, allowing us to screen our targets against ultra-large libraries of fragment-based chemical compounds.

Our Commercialization Strategy

We are working both independently and through strategic collaborations and alliances with leading pharmaceutical and biotechnology companies, research institutes and academic institutions 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 programs by developing drug candidates from those programs internally and to collaborate with third parties with respect to the discovery, development and commercialization of small molecule and biotherapeutic 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.

Drug Discovery and Development Collaborations

Bristol-Myers Squibb. We established a drug discovery alliance with Bristol-Myers Squibb Company in December 2003 to discover, develop and commercialize small molecule drugs in the neuroscience field. Bristol-Myers Squibb extended the target discovery term of the alliance in May 2006. We initiated the alliance with a number of neuroscience drug discovery programs at various stages of development and have used our gene knockout technologies to identify additional drug targets with promise in the neuroscience field. For those targets that were selected for the alliance, we and Bristol-Myers Squibb are working together, on an exclusive basis, to identify, characterize and carry out the preclinical development of small molecule drugs, and share equally both in the costs and in the work attributable to those efforts. As drugs resulting from the alliance enter clinical trials, Bristol-Myers Squibb will have the first option to assume full responsibility for clinical development and commercialization.

We received \$86 million in upfront payments and research funding under the agreement during the target discovery portion of the alliance, which expired in October 2009. In addition, we are entitled to receive clinical and regulatory milestone payments ranging, depending on the timing and extent of our efforts in the alliance, up to \$76 million for each drug developed by Bristol-Myers Squibb under the alliance. We will also earn royalties on sales of drugs commercialized by Bristol-Myers Squibb under the alliance.

Genentech. We established a drug discovery alliance with Genentech, Inc. in December 2002 to discover novel therapeutic proteins and antibody targets. We and Genentech expanded the alliance in November 2005 for the advanced research, development and commercialization of new biotherapeutic drugs. Under the original alliance agreement, we used our target validation technologies to discover the functions of secreted proteins and potential antibody targets identified through Genentech's internal drug discovery research. In the expanded alliance, we conducted additional, advanced research on a broad subset of those proteins and targets. We have exclusive rights to develop and commercialize biotherapeutic drugs for two of these targets, while Genentech has exclusive rights to develop and commercialize biotherapeutic drugs for the other targets. We retain certain other rights to discoveries made in the alliance, including non-exclusive rights, along with Genentech, for the development and commercialization of small molecule drugs addressing the targets included in the alliance.

We received \$58 million in upfront payments, research funding and research milestone payments under the agreement during the research collaboration term, which expired in November 2008. In addition, we are entitled to receive clinical and regulatory milestone payments ranging, depending on the extent of our efforts in the alliance, up to \$25 million for each drug target for which Genentech develops a biotherapeutic drug under the alliance. We will also earn royalties on sales of biotherapeutic drugs commercialized by Genentech under the alliance. Genentech is entitled to receive milestone payments and royalties on sales of biotherapeutic drugs which we develop or commercialize under the alliance.

Schering-Plough/Organon. We established a drug discovery alliance with N.V. Organon in May 2005 to discover, develop and commercialize novel biotherapeutic drugs. In the collaboration, we created and analyzed knockout mice for 300 genes selected by the parties that encode secreted proteins or potential antibody targets, including two of our preexisting drug discovery programs. We and Organon agreed to equally share costs of and responsibility for research, preclinical and clinical activities, jointly determine the manner in which collaboration products would be commercialized, and equally benefit from product revenue. Organon, formerly a subsidiary of Akzo Nobel N.V., was acquired by Schering-Plough Corporation in November 2007, which subsequently merged with Merck & Co., Inc. in November 2009. In February 2010, we entered into a revised collaboration and license agreement with Organon and Schering Corporation, acting through its Schering-Plough Research Institute division, amending the terms of the alliance to provide that Schering-Plough will assume the full cost of research activities conducted by either party in the alliance, and will assume the full cost of and responsibility for preclinical, clinical and commercialization activities with respect to biotherapeutic drugs resulting from the alliance.

We received \$52.5 million in upfront payments and research funding under the agreement during the target discovery portion of the alliance, which expired in December 2009, and may receive additional research funding for any future work we do under the alliance. In addition, we are entitled to receive clinical and regulatory milestone payments of up to \$39 million for each drug target for which Schering-Plough develops a biotherapeutic drug under the alliance. We will also earn royalties on sales of biotherapeutic drugs commercialized by Schering-Plough under the alliance.

Takeda. We established a drug discovery alliance with Takeda Pharmaceutical Company Limited in July 2004 to discover new drugs for the treatment of high blood pressure. In the collaboration, we used our gene knockout technologies to identify drug targets that control blood pressure. Takeda is responsible for the screening, medicinal chemistry, preclinical and clinical development and commercialization of drugs directed against targets selected for the alliance, and bears all related costs.

We received \$18.5 million in upfront payments and research milestone payments under the agreement during the target discovery portion of the alliance, which expired in July 2007. In addition, we are entitled to receive clinical development and product launch milestone payments of up to \$29 million for each drug developed by Takeda under the alliance. We will also earn royalties on sales of drugs commercialized by Takeda under the alliance.

Drug Development Financing Collaborations

Symphony Icon. In June 2007, we entered into a series of related agreements providing for the financing of the clinical development of certain drug programs, 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 Holdings, 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 shares of our common stock in exchange for \$15 million and we received 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) \$81 million, if the purchase option is exercised before June 15, 2010 and (b) \$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.

We and Symphony Icon are developing the programs in accordance with a specified development plan and related development budget. We are the party primarily responsible for the development of the programs. Our development activities are supervised by Symphony Icon's development committee, which is comprised of an equal number of representatives from us and Symphony Icon. The development committee reports to Symphony Icon's board of directors, which is currently comprised of five members, including one member we designated, two members designated by Holdings, and two independent directors whom we and Holdings selected mutually.

Upon the recommendation of Symphony Icon's development committee, 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 any further funding requirements to us will terminate on the one-year anniversary of the expiration of the purchase option, subject to limited exceptions. Through December 31, 2009, Symphony Icon's board of directors has requested us to pay Symphony Icon \$4.3 million under the agreement, all of which has been paid, and we expect that additional funding will be needed in the future.

Other Collaborations and Licenses

Texas Institute for Genomic Medicine. In July 2005, we received an award from the Texas Enterprise Fund for the creation of a knockout mouse embryonic stem cell library containing 350,000 cell lines for the Texas Institute for Genomic Medicine, or TIGM, using our proprietary gene trapping technology, which we completed in 2007. We also equipped TIGM with the bioinformatics software required for the management and analysis of data relating to the library. The Texas Enterprise Fund made an additional award to the Texas A&M University System for the creation of facilities and infrastructure to house the library. Under the terms of our award, we are responsible for the creation of a specified number of jobs beginning in 2012, but will receive credits against those job obligations based on funding received by TIGM and certain related parties. We may be required to repay the state a portion of the award if we fail to meet those job obligations.

Taconic Farms. We established a collaboration with Taconic Farms, Inc. in November 2005 for the marketing, distribution and licensing of certain lines of our knockout mice and entered into an expanded collaboration with Taconic in July 2009. Taconic is an industry leader in the breeding, housing, quality control and global marketing and distribution of rodent models for medical research and drug discovery. Under the terms of the collaboration, we are presently making available through Taconic more than 3,600 distinct lines of knockout mice, and in some cases, phenotypic data relating to such lines of knockout mice, for use by pharmaceutical and biotechnology companies, academic and non-profit institutions and other researchers. We receive license fees and royalties from payments received by Taconic from customers obtaining access to knockout mice and any related phenotypic data.

Research Collaborations. We have established research collaborations with a number of leading pharmaceutical and biotechnology companies, research institutes and academic institutions under which we received fees in exchange for generating knockout mice for genes requested by the collaborator, providing phenotypic data with respect to such knockout mice or otherwise granting access to some of our technologies and discoveries. In some cases, we are also eligible to receive milestone and royalty payments on products that our collaborators discover or develop using our technology.

Technology Licenses. We have granted non-exclusive, internal research-use sublicenses under certain of our gene targeting patent rights to a number of leading pharmaceutical and biotechnology companies. Many of these agreements extend for the life of the patents. Others have terms of one to three years, in some cases with provisions for subsequent renewals. We have typically received up-front license fees and, in some cases, received additional license fees or milestone payments on products that the sublicensee discovers or developed using our technology.

Our Executive Officers

Our executive officers and their ages and positions are listed below.

<u>Name</u>	<u>Age</u>	<u>Position with the Company</u>
Arthur T. Sands, M.D., Ph.D.	48	President and Chief Executive Officer and Director
Alan J. Main, Ph.D.	56	Executive Vice President of Pharmaceutical Research
Jeffrey L. Wade, J.D.	45	Executive Vice President and General Counsel
Brian P. Zambrowicz, Ph.D.	47	Executive Vice President and Chief Scientific Officer
Philip M. Brown, M.D., J.D.	48	Senior Vice President of Clinical Development
Steven A. Tragash	63	Senior Vice President of Corporate Affairs
James F. Tessmer	50	Vice President, Finance and Accounting

Arthur T. Sands, M.D., Ph.D. co-founded our company and has been our president and chief executive officer and a director since September 1995. At Lexicon, Dr. Sands pioneered the development of large-scale gene knockout technology for use in drug discovery. Before founding our company, Dr. Sands served as an American Cancer Society postdoctoral fellow in the Department of Human and Molecular Genetics at Baylor College of Medicine. Dr. Sands received his B.A. in economics and political science from Yale University and his M.D. and Ph.D. from Baylor College of Medicine.

Alan J. Main, Ph.D. has been our executive vice president of pharmaceutical research since February 2007 and served as our senior vice president, Lexicon Pharmaceuticals from July 2001 until February 2007. Dr. Main was president and chief executive officer of Coelacanth Corporation, a leader in using proprietary chemistry technologies to rapidly discover new chemical entities for drug development, from January 2000 until our acquisition of Coelacanth in July 2001. Dr. Main was formerly senior vice president, U.S. Research at Novartis Pharmaceuticals Corporation, where he worked for 20 years before joining Coelacanth. Dr. Main holds a B.S. from the University of Aberdeen, Scotland and a Ph.D. in organic chemistry from the University of Liverpool, England and completed postdoctoral studies at the Woodward Research Institute.

Jeffrey L. Wade, J.D. has been our executive vice president and general counsel since February 2000 and was our senior vice president and chief financial officer from January 1999 to February 2000. From 1988 through December 1998, Mr. Wade was a corporate securities and finance attorney with the law firm of Andrews & Kurth L.L.P., for the last two years as a partner, where he represented companies in the biotechnology, information technology and energy industries. Mr. Wade is a member of the boards of directors of the Texas Healthcare and Bioscience Institute and the Texas Life Science Center for Innovation and Commercialization. He received his B.A. and J.D. from the University of Texas.

Brian P. Zambrowicz, Ph.D. co-founded our company and has been our executive vice president and chief scientific officer since February 2007. Dr. Zambrowicz served as our executive vice president of research from August 2002 until February 2007, senior vice president of genomics from February 2000 to August 2002, vice president of research from January 1998 to February 2000 and senior scientist from April 1996 to January 1998. From 1993 to April 1996, Dr. Zambrowicz served as a National Institutes of Health postdoctoral fellow at the Fred Hutchinson Cancer Center in Seattle, Washington, where he studied gene trapping and gene targeting technology. Dr. Zambrowicz received his B.S. in biochemistry from the University of Wisconsin. He received his Ph.D. from the University of Washington, where he studied tissue-specific gene regulation using transgenic mice.

Philip M. Brown, M.D., J.D. has been our senior vice president of clinical development since February 2008 and was our vice president of clinical development from April 2003 to February 2008. Dr. Brown served as vice president of clinical development for Encysive Pharmaceuticals Inc. (formerly Texas Biotechnology Corporation), a biopharmaceutical company, from June 2000 until April 2003, and was senior medical director within the organization from December 1998 until June 2000. From July 1994 to December 1998, Dr. Brown served as associate vice president of medical affairs for Pharmaceutical Research Associates, a clinical research organization. He has conducted numerous clinical trials as an investigator in a variety of therapeutic areas, as well as managed programs from IND through NDA and product commercialization. He is a fellow of the American College of Legal Medicine and serves as an adjunct faculty member at the Massachusetts General Hospital, Institute of Health Professions in Boston. He received his B.A. from Hendrix College, his M.D. from Texas Tech University School of Medicine, and his J.D. from the University of Texas.

Steven A. Tragash has been our senior vice president of corporate affairs since February 2010 and previously served as our vice president of corporate affairs from February 2009 to February 2010 and executive director of corporate affairs from March 2008 to February 2009. Mr. Tragash was vice president and director of Guidant Corporation from February 2001 to July 2007 and previously served as president and chief executive officer of Strategica Management Consulting and executive vice president, corporate relations and marketing of Glendale Federal Savings Bank. Mr. Tragash received his B.S. from Bowling Green University.

James F. Tessmer has been our vice president, finance and accounting since November 2007 and previously served as our senior director of finance from February 2004 to November 2007 and director of finance from April 2001 to February 2004. From January 1997 to April 2001, Mr. Tessmer was assistant controller for Mariner Health Network, Inc. and prior to that served in a variety of financial and accounting management positions for HWC Distribution Corp. and American General Corporation. Mr. Tessmer is a certified public accountant and received his B.B.A. from the University of Wisconsin – Milwaukee and his M.B.A. from the University of Houston.

Patents and Proprietary Rights

We will be able to protect our proprietary rights from unauthorized use by third parties only to the extent that those rights are covered by valid and enforceable patents or are effectively maintained as trade secrets. Accordingly, patents and other proprietary rights are an essential element of our business. We seek patent protection for all chemical compounds, antibodies and other potential therapeutic agents that we discover and their use in treating human diseases and conditions. We own patent applications, and in some cases issued patents, covering each of our drug candidates in clinical and preclinical development, including:

- patent applications pending worldwide that claim LX1031 and associated crystalline forms, pharmaceutical compositions, and methods of manufacture and use, which we have exclusively licensed to Symphony Icon pursuant to our product development collaboration with Symphony Icon.
- patent applications pending worldwide that claim LX4211 and associated crystalline forms, pharmaceutical compositions, and methods of manufacture and use.
- patent applications pending worldwide that claim LX2931 and associated crystalline forms, pharmaceutical compositions, and methods of manufacture and use, from which one U.S. patent has issued to date.
- patent applications pending worldwide that claim LX1032 and associated crystalline forms, pharmaceutical compositions, and methods of manufacture and use, from which one U.S. patent has issued to date, which we have exclusively licensed to Symphony Icon pursuant to our product development collaboration with Symphony Icon.
- patent applications pending worldwide that claim LX7101 and associated pharmaceutical compositions, and methods of manufacture and use.

We additionally seek patent protection for:

- the sequences of genes that we believe to be novel, the proteins they encode and their predicted utility as a drug target or therapeutic protein;
- the utility of genes and the drug targets or proteins they encode based on our discoveries of their biological functions using knockout mice;
- drug discovery assays for our *in vivo*-validated targets; and
- various enabling technologies in the fields of mutagenesis, embryonic stem cell manipulation and transgenic or knockout mice.

Additionally, we hold rights to a number of patents and patent applications under license agreements with third parties. Many of these licenses are nonexclusive, although some are exclusive in specified fields. Most of the licenses have terms that extend for the life of the licensed patents.

Patents extend for varying periods according to the date of patent filing or grant and the legal term of patents in the various countries where patent protection is obtained. The actual protection afforded by a patent, which can vary from country to country, depends on the type of patent, the scope of its coverage and the availability of legal remedies in the country. We have filed patent applications and, in some cases, hold issued patents covering each of our drug candidates in clinical and preclinical development. While the patents issued under such applications have or will have a variety of expiration dates, depending on, among other things, the date of filing and possible patent term extension, no U.S. patent that has issued or may issue based on a patent application we have filed relating to one of our drug candidates in clinical or preclinical development has a normal expiration date earlier than 2026.

All of our employees, consultants and advisors are required to execute a proprietary information agreement upon the commencement of employment or consultation. In general, the agreement provides that all inventions conceived by the employee or consultant, and all confidential information developed or made known to the individual during the term of the agreement, shall be our exclusive property and shall be kept confidential, with disclosure to third parties allowed only in specified circumstances. We cannot assure you, however, that these agreements will provide useful protection of our proprietary information in the event of unauthorized use or disclosure of such information.

Competition

The biotechnology and pharmaceutical industries are highly competitive and characterized by rapid technological change. We face significant competition in each of the aspects of our business from other pharmaceutical and biotechnology companies. In addition, a large number of universities and other not-for-profit institutions, many of which are funded by the U.S. and foreign governments, are also conducting research to discover genes and their functions and to identify potential therapeutic products. Many of our competitors have substantially greater research and product development capabilities and financial, scientific, marketing and human resources than we do. As a result, our competitors may succeed in developing products earlier than we do, obtaining approvals from the FDA or other regulatory agencies for those products more rapidly than we do, or developing products that are more effective than those we propose to develop. Similarly, our collaborators face similar competition from other competitors who may succeed in developing products more quickly, or developing products that are more effective, than those developed by our collaborators. Any products that we may develop or discover are likely to be in highly competitive markets.

The competition for our drug candidates includes both marketed products and drug candidates that are being developed by others, including drug candidates that are currently in a more advanced stage of clinical development than are our own drug candidates. These competitive marketed products and drug candidates include compounds that employ different mechanisms of action in addressing diseases and conditions for which we are developing our own drug candidates and, in some cases such as LX4211, that employ the same or similar mechanisms of action.

We believe that our ability to successfully compete with these potentially competitive drug candidates and other competitive products currently on the market will depend on, among other things:

- the efficacy, safety and reliability of our drug candidates;
- our ability, and the ability of our collaborators, to complete preclinical testing and clinical development and obtain regulatory approvals for our drug candidates;
- the timing and scope of regulatory approvals for our drug candidates;
- our ability, and the ability of our collaborators, to obtain product acceptance by physicians and other health care providers and reimbursement for product use in approved indications;
- our ability, and the ability of our collaborators, to manufacture and sell commercial quantities of our products;
- the skills of our employees and our ability to recruit and retain skilled employees;
- protection of our intellectual property; and
- the availability of substantial capital resources to fund development and commercialization activities.

Government Regulation

Regulation of Pharmaceutical Products

The development, manufacture and sale of any drug or biologic products developed by us or our collaborators will be subject to extensive regulation by United States and foreign governmental authorities, including federal, state and local authorities. In the United States, new drugs are subject to regulation under the Federal Food, Drug and Cosmetic Act and the regulations promulgated thereunder, or the FDC Act, and biologic products are subject to regulation both under certain provisions of the FDC Act and under the Public Health Services Act and the regulations promulgated thereunder, or the PHS Act. The FDA regulates, among other things, the development, preclinical and clinical testing, manufacture, safety, efficacy, record keeping, reporting, labeling, storage, approval, advertising, promotion, sale, distribution and export of small molecule and biotherapeutic drugs.

The standard process required by the FDA before a drug candidate may be marketed in the United States includes:

- preclinical laboratory and animal tests performed under the FDA's current Good Laboratory Practices regulations;
- submission to the FDA of an Investigational New Drug application, or IND, which must become effective before human clinical trials may commence;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the drug candidate for its intended use;
- for drug candidates regulated as small molecule drugs, submission of a New Drug Application, or NDA, and, for drug candidates regulated as biotherapeutic drugs, submission of a Biologic License Application, or BLA, with the FDA; and
- FDA approval of the NDA or BLA prior to any commercial sale or shipment of the product.

This process for the testing and approval of drug candidates requires substantial time, effort and financial resources. Preclinical development of a drug candidate can take from one to several years to complete, with no guarantee that an IND based on those studies will become effective to even permit clinical testing to begin. Before commencing the first clinical trial of a drug candidate in the United States, we must submit an IND to the FDA. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises concerns or questions about the conduct of the clinical trial. In such a case, we and the FDA must resolve any outstanding concerns before the clinical trial may begin. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development, and the FDA must grant permission for each clinical trial to start and continue. Further, an independent institutional review board for each medical center proposing to participate in the clinical trial must review and approve the plan for any clinical trial before it commences at that center. Regulatory authorities or an institutional review board or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk.

For purposes of NDA or BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1 clinical trials are conducted in a limited number of healthy human volunteers or, in some cases, patients, to evaluate the safety, dosage tolerance, absorption, metabolism, distribution and excretion of the drug candidate;
- Phase 2 clinical trials are conducted in groups of patients afflicted with a specified disease or condition to obtain preliminary data regarding efficacy as well as to further evaluate safety and optimize dosing of the drug candidate; and
- Phase 3 clinical trials are conducted in larger patient populations at multiple clinical trial sites to obtain statistically significant evidence of the efficacy of the drug candidate for its intended use and to further test for safety in an expanded patient population.

In addition, the FDA may require, or companies may pursue, additional clinical trials after a product is approved. These so-called Phase 4 studies may be made a condition to be satisfied after a drug receives approval.

Completion of the clinical trials necessary for an NDA or BLA submission typically takes many years, with the actual time required varying substantially based on, among other things, the nature and complexity of the drug candidate and of the disease or condition. Success in earlier-stage clinical trials does not ensure success in later-stage clinical trials. Furthermore, data obtained from clinical activities is not always conclusive and may be susceptible to varying interpretations, which could delay, limit or prevent proceeding with further clinical trials, filing or acceptance of an NDA or BLA, or obtaining marketing approval.

After completion of clinical trials, FDA approval of an NDA or BLA must be obtained before a new drug may be marketed in the United States. An NDA or BLA, depending on the submission, must contain, among other things, information on chemistry, manufacturing controls and potency and purity, non-clinical pharmacology and toxicology, human pharmacokinetics and bioavailability and clinical data. There can be no assurance that the FDA will accept an NDA or BLA for filing and, even if filed, that approval will be granted. Among other things, the FDA reviews an NDA to determine whether a product is safe and effective for its intended use and a BLA to determine whether a product is safe, pure and potent and the facility in which it is manufactured, processed, packed, or held meets standards designed to assure the product's continued safety, purity and potency. The FDA may deny approval of an NDA or BLA if the applicable regulatory criteria are not satisfied, or it may require additional clinical data or an additional pivotal Phase 3 clinical trial. Even if such data are submitted, the FDA may ultimately decide that the NDA or BLA does not satisfy the criteria for approval. Once issued, the FDA may withdraw product approval if ongoing regulatory standards are not met or if safety problems occur after the product reaches the market. In addition, the FDA may require testing and surveillance programs to monitor the effect of approved products which have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs. Limited indications for use or other conditions could also be placed on any approvals that could restrict the commercial applications of a product or impose costly procedures in connection with the commercialization or use of the product.

In addition to obtaining FDA approval for each product, each drug manufacturing establishment must be inspected and approved by the FDA. All manufacturing establishments are subject to inspections by the FDA and by other federal, state and local agencies and must comply with current Good Manufacturing Practices requirements. Non-compliance with these requirements can result in, among other things, total or partial suspension of production, failure of the government to grant approval for marketing and withdrawal, suspension or revocation of marketing approvals.

Once the FDA approves a product, a manufacturer must provide certain updated safety and efficacy information. Product changes as well as certain changes in a manufacturing process or facility would necessitate additional FDA review and approval. Other post-approval changes may also necessitate further FDA review and approval. Additionally, a manufacturer must meet other requirements including those related to adverse event reporting and record keeping.

The FDA closely regulates the marketing and promotion of drugs. A company can make only those claims relating to safety and efficacy that are approved by the FDA. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties.

Violations of the FDC Act, the PHS Act or regulatory requirements may result in agency enforcement action, including voluntary or mandatory recall, license suspension or revocation, product seizure, fines, injunctions and civil or criminal penalties.

In addition to regulatory approvals that must be obtained in the United States, drugs are also subject to regulatory approval in other countries in which they are marketed. The conduct of clinical trials of drugs in countries other than the United States is likewise subject to regulatory oversight in such countries. The requirements governing the conduct of clinical trials, product licensing, pricing, and reimbursement vary widely from country to country. No action can be taken to market any drug in a country until the regulatory authorities in that country have approved an appropriate application. FDA approval does not assure approval by other regulatory authorities. The current approval process varies from country to country, and the time spent in gaining approval varies from that required for FDA approval. In some countries, the sale price of a drug or biologic product must also be approved. The pricing review period often begins after marketing approval is granted. Even if a foreign regulatory authority approves a drug, it may not approve satisfactory prices for the product.

Other Regulations

In addition to the foregoing, our business is and will be subject to regulation under various state and federal environmental laws, including the Occupational Safety and Health Act, the Resource Conservation and Recovery Act and the Toxic Substances Control Act. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in and wastes generated by our operations. We believe that we are in material compliance with applicable environmental laws and that our continued compliance with these laws will not have a material adverse effect on our business. We cannot predict, however, whether new regulatory restrictions will be imposed by state or federal regulators and agencies or whether existing laws and regulations will adversely affect us in the future.

Research and Development Expenses

In 2009, 2008 and 2007, respectively, we incurred expenses of \$81.2 million, \$107.2 million and \$103.2 million in company-sponsored as well as collaborative research and development activities, including \$3.0 million, \$3.9 million and \$5.2 million of stock-based compensation expense in 2009, 2008 and 2007, respectively.

Employees and Consultants

We believe that our success will be based on, among other things, achieving and retaining scientific and technological superiority and identifying and retaining capable management. We have assembled a highly qualified team of scientists as well as executives with extensive experience in the biotechnology industry.

As of February 28, 2010, we employed 345 persons, of whom 91 hold M.D., Ph.D. or D.V.M. degrees and another 51 hold other advanced degrees. We believe that our relationship with our employees is good.

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 and, if it is unavailable, we will be forced to significantly curtail or cease our operations. If it is not available on reasonable terms, we will be forced to obtain funds by entering into financing agreements on unattractive terms.

As of December 31, 2009, we had \$157.1 million in cash, cash equivalents and investments, including \$56.0 million of auction rate securities and related rights, and \$5.4 million in investments held by Symphony Icon. We anticipate that our existing capital resources and the cash and revenues we expect to derive from collaborations, technology licenses and other sources will enable us to fund our currently planned operations for at least the next 12 months. Our currently planned operations for that time period consist of the completion of our ongoing clinical trials, the initiation and conduct of additional clinical trials and the continuation of our small molecule drug discovery and preclinical research efforts. However, we caution you that we may generate less cash and revenues or incur expenses more rapidly than we currently anticipate.

Although difficult to accurately predict, the amount of our future capital requirements will be substantial and will depend on many factors, including:

- our ability to obtain additional funds from collaborations, technology licenses and other sources;
- the amount and timing of payments under such agreements;
- the level and timing of our research and development expenditures;
- the timing and progress of the clinical development of our drug candidates LX1031, LX4211, LX2931 and LX1032;
- our election whether to exercise our exclusive option to acquire all of the equity of Symphony Icon, thereby allowing us to reacquire LX1031 and LX1032;
- future results from clinical trials of our drug candidates;
- the cost and timing of regulatory approvals of drug candidates that we successfully develop;
- market acceptance of products that we successfully develop and commercially launch;
- the effect of competing programs and products, and of technological and market developments;
- the filing, maintenance, prosecution, defense and enforcement of patent claims and other intellectual property rights; and
- the cost and timing of establishing or contracting for sales, marketing and distribution capabilities.

Our capital requirements will increase substantially as we advance our drug candidates into more advanced stage clinical development. Our capital requirements will also be affected by any expenditures we make in connection with license agreements and acquisitions of and investments in complementary products and technologies. For all of these reasons, our future capital requirements cannot easily be quantified.

If our capital resources are insufficient to meet future capital requirements, we will need to raise additional funds to continue our currently planned operations. If we raise additional capital by issuing equity securities, our then-existing stockholders will experience dilution and the terms of any new equity securities may have preferences over our common stock. We cannot be certain that additional financing, whether debt or equity, will be available in amounts or on terms acceptable to us, if at all. We may be unable to raise sufficient additional capital on reasonable terms, and if so, we will be forced to significantly curtail or cease our operations or obtain funds by entering into financing agreements on unattractive terms.

Invus, L.P., our largest stockholder, may decline to grant its consent which is required for us to conduct additional equity offerings at prices less than \$4.50 per share. In addition, we can provide no assurance that Invus will exercise its rights to require us to initiate up to two pro rata rights offerings in which it would be obligated to purchase its pro rata portion of the offering.

In June 2007, we entered into a securities purchase agreement with Invus, L.P., under which Invus made an initial investment of \$205.4 million to purchase 50,824,986 shares of our common stock in August 2007 and 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. We have not completed any such qualified offering. Invus may exercise its right to require us to conduct the first rights offering by giving us notice within a period of one year beginning on November 28, 2009 (which we refer to as the first rights offering trigger date). Invus may exercise its right to require us to conduct a second rights offering by giving us notice within a period of one year beginning on the date that is 90 days 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 one year beginning on the first anniversary of the first rights offering trigger date. If Invus elects to exercise its right to require us to initiate a rights offering, Invus would be required to purchase its pro rata portion of the offering.

Under the securities purchase agreement, until the later of the completion of the second rights offering or the expiration of the period following the second rights offering trigger date during which Invus may require us to initiate the second rights offering, we have agreed not to issue any of our common stock for a per share price of less than \$4.50 without the prior written consent of Invus, except pursuant to an employee or director stock option, incentive compensation or similar plan or to persons involved in the pharmaceutical industry in connection with simultaneous strategic transactions involving such persons in the ordinary course. In addition, if we notify Invus of a proposed public offering for an offering above \$4.50 per share during the period in which Invus may initiate a rights offering, Invus will have a period of 10 business days in which to exercise its right to require us to conduct a rights offering, in which case we would be required to forego the proposed public offering and proceed with the rights offering. If we are not able to issue common stock at prices equal to or greater than \$4.50 per share in the future, due to market conditions or otherwise, this obligation will limit our ability to raise capital by issuing additional equity securities without the consent of Invus. In the event Invus declines to grant such consent and, in addition, elects not to exercise its right to require us to initiate the first rights offering, or elects to limit the size of the first rights offering, our ability during this period to satisfy our future capital requirements by issuing equity securities will be limited if we are unable to do so by issuing common stock at prices equal to or greater than \$4.50 per share.

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 incurred net losses since our inception, including net losses of \$82.8 million for the year ended December 31, 2009, \$76.9 million for the year ended December 31, 2008 and \$58.8 million for the year ended December 31, 2007. As of December 31, 2009, we had an accumulated deficit of \$570.2 million. We are unsure when we will become profitable, if ever. The size of our net losses will depend, in part, on the rate of decline or growth in our revenues and on the level of our expenses.

We derive substantially all of our revenues from drug discovery and development collaborations and other collaborations and technology licenses, and will continue to do so for the foreseeable future. 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 future revenues from such agreements, if any, depend on the achievement of milestones and payment of royalties we earn from any future products developed under the collaborations. As a result, we depend, in part, on securing new collaboration and license 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, as we have to date with respect to our four clinical drug candidates, 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. Given the early-stage nature of our operations, we do not currently derive any revenues from sales of pharmaceutical products.

A large portion of our expenses is fixed, including expenses related to facilities, equipment and personnel. In addition, we expect to spend significant amounts to fund our research and development activities, including the conduct of clinical trials and the advancement of additional potential therapeutics into clinical development. As a result, we expect that our operating expenses will continue to increase significantly as our drug programs progress into and through human clinical trials and, consequently, we will need to generate significant additional revenues to achieve profitability. Even if we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis.

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.

Our option to purchase all of the equity of Symphony Icon, thereby allowing us to reacquire these drug candidates, is exercisable by us at any time, in our sole discretion, until June 15, 2011 at an exercise price of (a) \$81 million, if the purchase option is exercised before June 15, 2010 and (b) \$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. Any such issuance of common stock may also be subject to Invus providing its consent to such issuance as required by our securities purchase agreement with Invus.

If we elect to exercise the purchase option, we will be required to make a substantial cash payment or to make a lesser but still substantial cash payment and issue a substantial number of shares of our common stock, which may in turn require us to enter into a financing arrangement or license arrangement with one or more third parties. The amount of any such cash payment would reduce our capital resources. Payment in shares of our common stock could result in dilution to our stockholders at that time. Other financing or licensing alternatives may be expensive or impossible to obtain. If we do not exercise the purchase option prior to its expiration, our rights to purchase all of the equity in Symphony Icon and to reacquire LX1031 and LX1032 will terminate. We may not have the financial resources to exercise the option, which may result in our loss of these rights. Additionally, we may not receive clinical data from future clinical trials of LX1031 before the expiration of our option on June 15, 2011 or the clinical data available to us may otherwise be insufficient for us to make a determination of whether we should exercise the option prior to June 15, 2010 or June 15, 2011.

At December 31, 2009, we held \$56.2 million (par value), with an estimated fair value of \$46.3 million, of auction rate securities for which auctions have failed and, as a result, we may not be able to access at least a portion of these funds without a loss of principal.

At December 31, 2009, we held \$56.2 million (par value), with an estimated fair value of \$46.3 million, of investments with an auction interest rate reset feature, known as auction rate securities. Until February 2008, the market for our auction rate securities was highly liquid. However, 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.

In November 2008, we accepted an offer from UBS AG, the investment bank that sold us our auction rate securities, providing us with certain rights related to our auction rate securities. The rights permit us to require UBS to purchase our auction rate securities from us 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 the securities. In connection with our acceptance of UBS’s offer, in January 2009, we entered into a credit line agreement with UBS Bank USA that provides, as of December 31, 2009, up to an aggregate amount of \$37.5 million in the form of an uncommitted, demand, revolving line of credit. The credit line is secured only by the 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 December 31, 2009, we had \$37.4 million outstanding under this credit line.

Although we have accessed substantially the maximum amount permitted under the credit line and expect to exercise the rights and sell our auction rate securities to UBS on June 30, 2010, the earliest date allowable under the rights, we will have no means to access approximately \$18.7 million (par value), as of December 31, 2009, invested in auction rate securities before such date without a loss of principal. Further, UBS and its affiliates may not be able to maintain the financial resources necessary to perform its obligations under the rights or credit line. UBS and the Swiss government are currently engaged in discussions with the United States government regarding the disclosure, pursuant to an August 2009 settlement between UBS and the United States government, of the identities of certain UBS customers subject to an ongoing investigation of tax fraud, the outcome of which could also impact UBS’ ability to perform its obligations under the rights or credit line. As a result, we cannot provide any assurance that we will be able to access the funds invested in auction rate securities without a loss of principal, unless a future auction on these investments is successful or the issuer redeems the securities.

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.

Our operating results and, in particular, our ability to generate additional revenues are dependent on many factors, including:

- our ability to establish new collaborations and technology licenses, and the timing of such arrangements;
- the expiration or other termination of collaborations and technology licenses, which may not be renewed or replaced;
- 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 our collaborators to commercialize pharmaceutical products that would result in milestone payments and royalties; and
- general and industry-specific economic conditions, which may affect our and our collaborators' research and development expenditures.

Because of these and other factors, including the risks and uncertainties described in this section, our operating results have fluctuated in the past and are likely to do so in the future. Due to the likelihood of fluctuations in our revenues and expenses, 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.

Our business strategy of using our discovery of the functions of genes using knockout mice to select promising drug targets and developing and commercializing drug candidates based on our target discoveries, in significant part through collaborations, is unproven. Our success will depend upon our ability to successfully generate, select and develop drug candidates for targets we consider to have pharmaceutical value, whether on our own or through collaborations, and to select an appropriate commercialization strategy for each potential therapeutic we choose to pursue.

We have not proven our ability to develop or commercialize drug candidates based on our drug target discoveries. The generation and selection of potential drug candidates for a target is a difficult, expensive and time-consuming process that is subject to substantial technical and scientific challenges and uncertainties, without any assurance of ever identifying a drug candidate warranting clinical testing. The process involves the optimization of a wide variety of variables, including among many other things potency against the target, selectivity for the intended target relative to other proteins, absorption, metabolism, distribution and excretion characteristics, activity in animal models of disease and the results of other preclinical research, and feasibility and cost of manufacture, each of which may affect one or more of the others in ways that conflict with the desired profile.

Furthermore, we do not know that any pharmaceutical products based on our drug target discoveries can be successfully developed or commercialized. Our strategy is focused principally on the discovery and development of drug candidates for targets that have not been clinically validated in humans by drugs or drug candidates generated by others. As a result, the drug candidates we develop are subject to uncertainties as to the effects of modulating the human drug target as well as to those relating to the characteristics and activity of the particular compound. For example, we are presently seeking to develop an improved formulation of LX1031 in preparation for use in future clinical trials and cannot provide assurance that we will be able to develop a commercially viable formulation.

In addition, we may experience unforeseen technical complications in the processes we use to identify potential drug targets or discover and develop potential drug candidates. These complications could materially delay or limit the use of our resources, substantially increase the anticipated cost of conducting our drug target or drug candidate discovery efforts or prevent us from implementing our processes at appropriate quality and throughput levels.

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.

In order to obtain regulatory approvals for the commercial sale of any products that we may develop, we will be required to complete extensive clinical trials in humans to demonstrate the safety and efficacy of our drug candidates. We or our collaborators may not be able to obtain authority from the FDA, or other equivalent foreign regulatory agencies to initiate or complete any clinical trials. In addition, we have limited internal resources for making regulatory filings and interacting with regulatory authorities.

Clinical trials are inherently risky and the results from preclinical testing of a drug candidate that is under development may not be predictive of results that will be obtained in human clinical trials. In addition, the results of early human clinical trials may not be predictive of results that will be obtained in larger-scale, advanced stage clinical trials. A number of companies in the pharmaceutical industry have suffered significant setbacks in advanced clinical trials, even after achieving positive results in earlier trials. Negative or inconclusive results from a preclinical study or a clinical trial could cause us, one of our collaborators or the FDA to terminate a preclinical study or clinical trial or require that we repeat it. Furthermore, we, one of our collaborators or a regulatory agency with jurisdiction over the trials may suspend clinical trials at any time if the subjects or patients participating in such trials are being exposed to unacceptable health risks or for other reasons.

Any preclinical or clinical test may fail to produce results satisfactory to the FDA or foreign regulatory authorities. Preclinical and clinical data can be interpreted in different ways, which could delay, limit or prevent regulatory approval. The FDA or institutional review boards at the medical institutions and healthcare facilities where we sponsor clinical trials may suspend any trial indefinitely if they find deficiencies in the conduct of these trials. Clinical trials must be conducted in accordance with the FDA's current Good Clinical Practices. The FDA and these institutional review boards have authority to oversee our clinical trials, and the FDA may require large numbers of subjects or patients. In addition, we must manufacture, or contract for the manufacture of, the drug candidates that we use in our clinical trials under the FDA's current Good Manufacturing Practices.

The rate of completion of clinical trials is dependent, in part, upon the rate of enrollment of patients. Patient accrual is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the study, the nature of the study, the existence of competitive clinical trials and the availability of alternative treatments. Delays in planned patient enrollment may result in increased costs and prolonged clinical development, which in turn could allow our competitors to bring products to market before we do and impair our ability to commercialize our products or potential products.

We or our collaborators may not be able to successfully complete any clinical trial of a potential product within any specified time period. In some cases, we or our collaborators may not be able to complete the trial at all. Moreover, clinical trials may not show our potential products to be both safe and effective. Thus, the FDA and other regulatory authorities may not approve any products that we develop for any indication or may limit the approved indications or impose other conditions.

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.

Our drug candidates, as well as the activities associated with their research, development and commercialization, are subject to extensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in other countries. Failure to obtain regulatory approval for a drug candidate would prevent us from commercializing that drug candidate. We have not received regulatory approval to market any of our drug candidates in any jurisdiction and have only limited experience in preparing and filing the applications necessary to gain regulatory approvals. The process of obtaining regulatory approvals is expensive, and often takes many years, if approval is obtained at all, and can vary substantially based upon the type, complexity and novelty of the drug candidates involved. Before a new drug application can be filed with the FDA, the drug candidate must undergo extensive clinical trials, which can take many years and may require substantial expenditures. Any clinical trial may fail to produce results satisfactory to the FDA. For example, the FDA could determine that the design of a clinical trial is inadequate to produce reliable results. The regulatory process also requires preclinical testing, and data obtained from preclinical and clinical activities are susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. In addition, delays or rejections may be encountered based upon changes in regulatory policy for product approval during the period of product development and regulatory agency review. Changes in regulatory approval policy, regulations or statutes or the process for regulatory review during the development or approval periods of our drug candidates may cause delays in the approval or rejection of an application. Even if the FDA or a comparable authority in another country approves a drug candidate, the approval may impose significant restrictions on the indicated uses, conditions for use, labeling, advertising, promotion, marketing and/or production of such product and may impose ongoing requirements for post-approval studies, including additional research and development and clinical trials. These agencies also may impose various civil or criminal sanctions for failure to comply with regulatory requirements, including withdrawal of product approval.

If our potential products receive regulatory approval, we or our collaborators will remain subject to extensive and rigorous ongoing regulation.

If we or our collaborators obtain initial regulatory approvals from the FDA or foreign regulatory authorities for any products that we may develop, we or our collaborators will be subject to extensive and rigorous ongoing domestic and foreign government regulation of, among other things, the research, development, testing, manufacture, labeling, promotion, advertising, distribution and marketing of our products and drug candidates. The failure to comply with these requirements or the identification of safety problems during commercial marketing could lead to the need for product marketing restrictions, product withdrawal or recall or other voluntary or regulatory action, which could delay further marketing until the product is brought into compliance. The failure to comply with these requirements may also subject us or our collaborators to stringent penalties.

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.

Even if approved by the relevant regulatory authority, our ability to commercialize any products that we may develop will be highly dependent upon the extent to which these products gain market acceptance among physicians, patients, health care payors, such as Medicare and Medicaid, private health insurers, including managed care organizations and group purchasing organizations, and the medical community. If these products do not achieve an adequate level of acceptance, we may not generate adequate product revenues, if at all, and we may not become profitable. The degree of market acceptance of our drug candidates, if approved for commercial sale, will depend upon a number of factors, including:

- the effectiveness, or perceived effectiveness, of our products in comparison to competing products;
- the existence of any significant side effects, as well as their severity in comparison to any competing products;
- potential advantages over alternative treatments;
- the ability to offer our products for sale at competitive prices;
- relative convenience and ease of administration;
- the strength of marketing and distribution support; and
- sufficient third-party coverage or reimbursement.

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.

We have no experience as a company in the sales, marketing and distribution of pharmaceutical products and do not currently have a sales and marketing organization. Developing a sales and marketing force would be expensive and time-consuming, could delay any product launch, and we may never be able to develop this capacity. To the extent that we enter into arrangements with third parties to provide sales, marketing and distribution services, our product revenues are likely to be lower than if we market and sell any products that we develop ourselves. If we are unable to establish adequate sales, marketing and distribution capabilities, independently or with others, we may not be able 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 ability to commercialize any products that we may develop will be highly dependent on the extent to which coverage and reimbursement for our products will be available from third-party payors, including governmental payors, such as Medicare and Medicaid, and private health insurers, including managed care organizations and group purchasing organizations. Many patients will not be capable of paying themselves for some or all of the products that we may develop and will rely on third-party payors to pay for, or subsidize, their medical needs. If third-party payors do not provide coverage or reimbursement for any products that we may develop, our revenues and prospects for profitability will suffer. In addition, even if third-party payors provide some coverage or reimbursement for our products, the availability of such coverage or reimbursement for prescription drugs under private health insurance and managed care plans often varies based on the type of contract or plan purchased.

A primary trend in the United States health care industry is toward reform and cost containment. Current and future prescription drug benefit programs, including any programs that may become effective as a result of such trend, may have the effect of reducing the prices that we are able to charge for products we develop and sell through plans under the programs. These prescription drug programs may also cause third-party payors other than the federal government, including the states under the Medicaid program, to discontinue coverage for products we develop or to lower the price that they will pay.

Proponents of drug reimportation may attempt to pass legislation, which would allow direct reimportation under certain circumstances. If legislation or regulations were passed allowing the reimportation of drugs, it could decrease the price we receive for any products that we may develop, thereby negatively affecting our revenues and prospects for profitability.

In addition, in some foreign countries, particularly the countries in the European Union, the pricing of prescription pharmaceuticals is subject to governmental control. In these countries, price negotiations with governmental authorities can take six to 12 months or longer after the receipt of regulatory marketing approval for a product. To obtain reimbursement and/or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost effectiveness of our drug candidates or products to other available therapies. The conduct of such a clinical trial could be expensive and result in delays in the commercialization of our drug candidates. Third-party payors are challenging the prices charged for medical products and services, and many third-party payors limit reimbursement for newly approved health care products. In particular, third-party payors may limit the indications for which they will reimburse patients who use any products that we may develop. Cost-control initiatives could decrease the price we might establish for products that we may develop, which would result in lower product revenues to us.

Our competitors may develop products that make our products obsolete.

The biotechnology industry is highly fragmented and is characterized by rapid technological change. We face, and will continue to face, intense competition from biotechnology and pharmaceutical companies, as well as academic research institutions, clinical reference laboratories and government agencies that are pursuing research and development activities similar to ours. In addition, significant delays in the development of our drug candidates could allow our competitors to bring products to market before us, which would impair our ability to commercialize our drug candidates. Any products that we develop will compete in highly competitive markets. Further, our competitors may be more effective at using their technologies to develop commercial products. Many of the organizations competing with us have greater capital resources, larger research and development staff and facilities, more experience in obtaining regulatory approvals and more extensive product manufacturing and marketing capabilities. As a result, our competitors may be able to more easily develop products that would render our products, and those of our collaborators, obsolete and noncompetitive. For example, drug candidates are currently being developed by other pharmaceutical companies for the treatment of type 2 diabetes that act through SGLT2, one of the targets of LX4211, which are in more advanced stages of development than LX4211. In addition, there may be drug candidates of which we are not aware at an earlier stage of development that may compete with our drug candidates.

We may not be able to manufacture our drug candidates in commercial quantities, which would prevent us from commercializing our drug candidates.

To date, our drug candidates have been manufactured in small quantities for preclinical and clinical trials. If any of these drug candidates are approved by the FDA or other regulatory agencies for commercial sale, we will need to manufacture them in larger quantities. We may not be able to successfully increase the manufacturing capacity, whether in collaboration with third-party manufacturers or on our own, for any of our drug candidates in a timely or economic manner, or at all. Significant scale-up of manufacturing may require additional validation studies, which the FDA must review and approve. If we are unable to successfully increase the manufacturing capacity for a drug candidate, the regulatory approval or commercial launch of that drug candidate may be delayed or there may be a shortage in supply. Our drug candidates require precise, high-quality manufacturing. The failure to achieve and maintain these high manufacturing standards, including the incidence of manufacturing errors, could result in patient injury or death, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could seriously hurt our business.

Risks Related to Our Relationships with Third Parties

Disagreements with Symphony Icon regarding the development of our drug candidates LX1031 or LX1032 could negatively affect or delay their development.

While we are the party primarily responsible for development of our drug candidates LX1031 and LX1032 in accordance with a specified development plan and related development budget, our development activities are supervised by Symphony Icon's development committee, which is comprised of an equal number of representatives from us and Symphony Icon. Any disagreements between us and Symphony Icon regarding a development decision may cause delays in the development and commercialization of those drug candidates or lead to development decisions that do not reflect our interests. Any such delays or development decisions not in our interest could negatively affect the value of LX1031 or LX1032.

We are dependent in many ways upon our collaborations with major pharmaceutical companies. The revenues we receive under our existing collaboration agreements have been decreasing in recent periods and are likely to continue to decrease in the future. If we are unable to achieve milestones under our 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.

We have derived a substantial majority of our revenues to date from collaborative drug discovery and development alliances with a limited number of major pharmaceutical companies. Revenues from our drug discovery and development alliances depend upon continuation of the collaborations, the achievement of milestones and payment of royalties we earn from any future products developed under the collaborations. If our relationship terminates with any of our collaborators, our reputation in the business and scientific community may suffer and revenues will be negatively impacted to the extent such losses are not offset by additional collaboration agreements. If we are unable to achieve milestones or our collaborators are unable to successfully develop products from which royalties are payable, we will not earn the revenues contemplated by those drug discovery and development collaborations. In addition, some of our alliances are exclusive and preclude us from entering into additional collaborative arrangements with other parties in the field of exclusivity.

We have limited or no control over the resources that any collaborator may devote to the development and commercialization of products under our alliances. Any of our present or future collaborators may not perform their obligations as expected. These collaborators may breach or terminate their agreements with us or otherwise fail to conduct discovery, development or commercialization activities successfully or in a timely manner. Further, our collaborators may elect not to develop pharmaceutical products arising out of our collaborative arrangements or may not devote sufficient resources to the development, approval, manufacture, marketing or sale of these products. If any of these events occurs, we may not be able to develop or commercialize potential pharmaceutical products.

Conflicts with our collaborators could jeopardize the success of our collaborative agreements and harm our product development efforts.

We may pursue opportunities in specific disease and therapeutic modality fields that could result in conflicts with our collaborators, if any of our collaborators takes the position that our internal activities overlap with those activities that are exclusive to our collaboration. Moreover, disagreements could arise with our collaborators over rights to our intellectual property or our rights to share in any of the future revenues of compounds or therapeutic approaches developed by our collaborators. Any conflict with or among our collaborators could result in the termination of our collaborative agreements, delay collaborative research or development activities, impair our ability to renew or obtain future collaborative agreements or lead to costly and time consuming litigation. Conflicts with our collaborators could also have a negative impact on our relationship with existing collaborators, materially impairing our business and revenues. Some of our collaborators are also potential competitors or may become competitors in the future. Our collaborators could develop competing products, preclude us from entering into collaborations with their competitors or terminate their agreements with us prematurely. Any of these events could harm our product development efforts.

We rely on third parties to carry out drug development activities.

We rely on clinical research organizations and other third party contractors to carry out many of our drug development activities, including the performance of preclinical laboratory and animal tests under the FDA's current Good Laboratory Practices regulations and the conduct of clinical trials of our drug candidates in accordance with protocols we establish. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, our drug development activities may be delayed, suspended or terminated. Such a failure by these third parties could significantly impair our ability to develop and commercialize the affected drug candidates.

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 currently do not have the manufacturing capabilities or experience necessary to produce materials for preclinical studies, clinical trials or commercial sales and intend in the future to continue to rely on collaborators and third-party contractors to produce such materials. We will rely on selected manufacturers to deliver materials on a timely basis and to comply with applicable regulatory requirements, including the current Good Manufacturing Practices of the FDA, which relate to manufacturing and quality control activities. These manufacturers may not be able to produce material on a timely basis or manufacture material at the quality level or in the quantity required to meet our development timelines and applicable regulatory requirements. In addition, there are a limited number of manufacturers that operate under the FDA's current Good Manufacturing Practices and that are capable of producing such materials, and we may experience difficulty finding manufacturers with adequate capacity for our needs. If we are unable to contract for the production of sufficient quantity and quality of materials on acceptable terms, our product development and commercialization efforts may be delayed. Moreover, noncompliance with the FDA's current Good Manufacturing Practices can result in, among other things, fines, injunctions, civil and criminal penalties, product recalls or seizures, suspension of production, failure to obtain marketing approval and withdrawal, suspension or revocation of marketing approvals.

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.

Our success will depend in part upon our ability to obtain patents and maintain adequate protection of the intellectual property related to our technologies and products. The patent positions of biotechnology companies, including our patent position, are generally uncertain and involve complex legal and factual questions. We will be able to protect our intellectual property rights from unauthorized use by third parties only to the extent that our technologies are covered by valid and enforceable patents or are effectively maintained as trade secrets. We will continue to apply for patents covering our technologies and products as and when we deem appropriate. Pending patent applications do not provide protection against competitors because they are not enforceable until they issue as patents. Further, the disclosures contained in our current and future patent applications may not be sufficient to meet statutory requirements for patentability. Once issued, patents still may not provide commercially meaningful protection. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products. Furthermore, others may independently develop similar or alternative technologies or design around our patents. If anyone infringes upon our or our collaborators' patent rights, enforcing these rights may be difficult, costly and time-consuming and, as a result, it may not be cost-effective or otherwise expedient to pursue litigation to enforce those patent rights. In addition, our patents may be challenged or invalidated or may fail to provide us with any competitive advantages, if, for example, others were the first to invent or to file patent applications for these inventions.

Because patent applications can take many years to issue, there may be currently pending applications, unknown to us, which may later result in issued patents that cover the production, manufacture, commercialization or use of our technologies, drug targets or drug candidates. If any such patents are issued to other entities, we will be unable to obtain patent protection for the same or similar discoveries that we make. Moreover, we may be blocked from using or developing some of our existing or proposed technologies and products, or may be required to obtain a license that may not be available on reasonable terms, if at all. Further, others may discover uses for our technologies or products other than those covered in our issued or pending patents, and these other uses may be separately patentable. Even if we have a patent claim on a particular technology or product, the holder of a patent covering the use of that technology or product could exclude us from selling a product that is based on the same use of that product.

The laws of some foreign countries do not protect intellectual property rights to the same extent as the laws of the United States, and many companies have encountered significant problems in protecting and defending such rights in foreign jurisdictions. Many countries, including certain countries in Europe, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties (for example, if the patent owner has failed to “work” the invention in that country or the third party has patented improvements). In addition, many countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may have limited remedies, which could materially diminish the value of the patent. Compulsory licensing of life-saving drugs is also becoming increasingly popular in developing countries either through direct legislation or international initiatives. Such compulsory licenses could be extended to include some of our drug candidates, which could limit our potential revenue opportunities. Moreover, the legal systems of certain countries, particularly certain developing countries, do not favor the aggressive enforcement of patent and other intellectual property protection, which makes it difficult to stop infringement.

We rely on trade secret protection for our confidential and proprietary information. We have taken security measures to protect our proprietary information and trade secrets, but these measures may not provide adequate protection. While we seek to protect our proprietary information by entering into confidentiality agreements with employees, collaborators and consultants, we cannot assure you that our proprietary information will not be disclosed, or that we can meaningfully protect our trade secrets. In addition, our competitors may independently develop substantially equivalent proprietary information or may otherwise gain access to our trade secrets.

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. We may not prevail in any such litigation or other dispute or be able to obtain required licenses.

Our discovery and development efforts as well as our potential products and those of our collaborators may give rise to claims that they infringe the patents of others. We are aware that other companies and institutions are developing products acting through the same drug targets through which some of our drug candidates currently in clinical development act, have conducted research on many of the same targets that we have identified and have filed patent applications potentially covering many of the genes and encoded drug targets that are the focus of our drug discovery programs. In some cases, patents have issued from these applications. In addition, many companies and institutions have well-established patent portfolios directed to common techniques, methods and means of developing, producing and manufacturing pharmaceutical products. Other companies or institutions could bring legal actions against us or our collaborators for damages or to stop us or our collaborators from engaging in certain discovery or development activities or from manufacturing and marketing any resulting therapeutic products. If any of these actions are successful, in addition to our potential liability for damages, these entities would likely require us or our collaborators to obtain a license in order to continue engaging in the infringing activities or to manufacture or market the resulting therapeutic products or may force us to terminate such activities or manufacturing and marketing efforts.

We may need to pursue litigation against others to enforce our patents and intellectual property rights and may be the subject of litigation brought by third parties to enforce their patent and intellectual property rights. In addition, we may become involved in litigation based on intellectual property indemnification undertakings that we have given to certain of our collaborators. Patent litigation is expensive and requires substantial amounts of management attention. The eventual outcome of any such litigation is uncertain and involves substantial risks.

We believe that there will continue to be significant litigation in our industry regarding patent and other intellectual property rights. We have expended and many of our competitors have expended and are continuing to expend significant amounts of time, money and management resources on intellectual property litigation. If we become involved in future intellectual property litigation, it could consume a substantial portion of our resources and could negatively affect our results of operations.

We use intellectual property that we license from third parties. If we do not comply with these licenses, we could lose our rights under them.

We rely, in part, on licenses to use certain technologies that are important to our business, and we do not own the patents that underlie these licenses. Most of these licenses, however, have terms that extend for the life of the licensed patents. Our rights to use these technologies and practice the inventions claimed in the licensed patents are subject to our abiding by the terms of those licenses and the licensors not terminating them. We believe we are currently in material compliance with all requirements of these licenses. In many cases, we do not control the filing, prosecution or maintenance of the patent rights to which we hold licenses and rely upon our licensors to prosecute infringement of those rights. The scope of our rights under our licenses may be subject to dispute by our licensors or third parties.

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. As a result, our international competitors could be granted foreign patent protection with respect to our discoveries.

We have decided not to pursue patent protection with respect to some of our inventions outside the United States, both because we do not believe it is cost-effective and because of confidentiality concerns. Accordingly, our international competitors could develop, and receive foreign patent protection for, genes or gene sequences, uses of those genes or gene sequences, gene products and drug targets, assays for identifying potential therapeutic products, potential therapeutic products and methods of treatment for which we are seeking United States patent protection.

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.

Many of our employees and independent contractors were previously employed at universities, other biotechnology or pharmaceutical companies, including our competitors or potential competitors. We may be subject to claims that these employees, independent contractors or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and divert management's attention. If we fail in defending such claims, in addition to paying money claims, we may lose valuable intellectual property rights or personnel. A loss of key research personnel and/or their work product could hamper or prevent our ability to commercialize certain drug candidates, which could severely harm our business.

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.

We are highly dependent upon the principal members of our management and scientific staff, the loss of whose services might adversely impact the achievement of our objectives and the continuation of existing collaborations. Recruiting and retaining qualified clinical and scientific personnel will be critical to support activities related to advancing our clinical and preclinical development programs, and supporting our collaborative arrangements and our internal proprietary research and development efforts. Competition is intense for experienced clinical personnel, in particular, and we may be unable to retain or recruit clinical personnel with the expertise or experience necessary to allow us to pursue collaborations, develop our products or expand our operations to the extent otherwise possible. Further, all of our employees are employed "at will" and, therefore, may leave our employment at any time.

Our collaborations with outside scientists may be subject to restriction and change.

We work with scientific and clinical advisors and collaborators at academic and other institutions that assist us in our research and development efforts. These advisors and collaborators are not our employees and may have other commitments that limit their availability to us. Although these advisors and collaborators generally agree not to perform competing work, if a conflict of interest between their work for us and their work for another entity arises, we may lose their services. In such a circumstance, our development efforts with respect to the matters on which they were working maybe significantly delayed or otherwise adversely affected. In addition, although our advisors and collaborators sign agreements not to disclose our confidential information, it is possible that valuable proprietary knowledge may become publicly known through them.

Security breaches may disrupt our operations and harm our operating results.

Our network security and data recovery measures may not be adequate to protect against computer viruses, break-ins, and similar disruptions from unauthorized tampering with our computer systems. The misappropriation, theft, sabotage or any other type of security breach with respect to any of our proprietary and confidential information that is electronically stored, including research or clinical data, could have a material adverse impact on our business, operating results and financial condition. Additionally, any break-in or trespass of our facilities that results in the misappropriation, theft, sabotage or any other type of security breach with respect to our proprietary and confidential information, including research or clinical data, or that results in damage to our research and development equipment and assets could have a material adverse impact on our business, operating results and financial condition.

Because most of our operations are located at a single facility, the occurrence of a disaster could significantly disrupt our business.

Most of our operations are conducted at our facility in The Woodlands, Texas. While we have developed redundant and emergency backup systems to protect our resources and the facilities in which they are stored, they may be insufficient in the event of a severe fire, flood, hurricane, tornado, mechanical failure or similar disaster. If such a disaster significantly damages or destroys the facility in which our resources are maintained, our business could be disrupted until we could regenerate the affected resources. Our business interruption insurance may not be sufficient to compensate us in the event of a major interruption due to such a disaster.

Risks Related to Environmental and Product Liability

We use hazardous chemicals and radioactive and biological materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.

Our research and development processes involve the controlled use of hazardous materials, including chemicals and radioactive and biological materials. Our operations produce hazardous waste products. We cannot eliminate the risk of accidental contamination or discharge and any resultant injury from these materials. Federal, state and local laws and regulations govern the use, manufacture, storage, handling and disposal of hazardous materials. We may face liability for any injury or contamination that results from our use or the use by third parties of these materials, and such liability may exceed our insurance coverage and our total assets. Compliance with environmental laws and regulations may be expensive, and current or future environmental regulations may impair our research, development and production efforts.

In addition, our collaborators may use hazardous materials in connection with our collaborative efforts. In the event of a lawsuit or investigation, we could be held responsible for any injury caused to persons or property by exposure to, or release of, these hazardous materials used by these parties. Further, we may be required to indemnify our collaborators against all damages and other liabilities arising out of our development activities or products produced in connection with these collaborations.

We may be sued for product liability.

We or our collaborators may be held liable if any product that we or our collaborators develop, or any product that is made with the use or incorporation of any of our technologies, causes injury or is found otherwise unsuitable during product testing, manufacturing, marketing or sale. Although we currently have and intend to maintain product liability insurance, this insurance may become prohibitively expensive or may not fully cover our potential liabilities. Our inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims could prevent or inhibit the commercialization of products developed by us or our collaborators. If we are sued for any injury caused by our or our collaborators' products, our liability could exceed our total assets.

Risks Related to Our Common Stock

Our stock price may be extremely volatile.

The trading price of our common stock has been highly volatile, and we believe the trading price of our common stock will remain highly volatile and may fluctuate substantially due to factors such as the following:

- adverse results or delays in clinical trials;
- announcement of FDA approval or non-approval, or delays in the FDA review process, of our or our collaborators' product candidates or those of our competitors or actions taken by regulatory agencies with respect to our, our collaborators' or our competitors' clinical trials;
- the announcement of new products by us or our competitors;

- quarterly variations in our or our competitors' results of operations;
- conflicts or litigation with our collaborators;
- litigation, including intellectual property infringement and product liability lawsuits, involving us;
- failure to achieve operating results projected by securities analysts;
- changes in earnings estimates or recommendations by securities analysts;
- financing transactions;
- developments in the biotechnology or pharmaceutical industry;
- sales of large blocks of our common stock or sales of our common stock by our executive officers, directors and significant stockholders;
- departures of key personnel or board members;
- developments concerning current or future collaborations;
- FDA or international regulatory actions;
- third-party reimbursement policies;
- acquisitions of other companies or technologies;
- disposition of any of our subsidiaries, drug programs or other technologies; and
- other factors, including factors unrelated to our operating performance or the operating performance of our competitors.

These factors, as well as general economic, political and market conditions, may materially adversely affect the market price of our common stock.

In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been instituted. A securities class action suit against us could result in substantial costs and divert management's attention and resources, which could have a material and adverse effect on our business.

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.

Under the stockholders' agreement we entered into in connection with Invus' \$205.4 million initial investment in our common stock, Invus currently has the right to designate the greater of three members or 30% (or the percentage of all the outstanding shares of our common stock owned by Invus and its affiliates, if less than 30%) of all members of our board of directors, rounded up to the nearest whole number of directors, pursuant to which Invus has designated Raymond Debbane, president and chief executive officer of The Invus Group, LLC, an affiliate of Invus, and Philippe J. Amouyal and Christopher J. Sobecki, each of whom are managing directors of The Invus Group, LLC. In the event that the number of shares of our common stock owned by Invus and its affiliates ever exceeds 50% of the total number of shares of our common stock then outstanding (not counting for such purpose any shares acquired by Invus from third parties in excess of 40% (or, if higher, its then pro rata amount) of the total number of outstanding shares of common stock, as permitted by the standstill provisions of the stockholders' agreement), from and after that time, Invus will have the right to designate a number of directors equal to the percentage of all the outstanding shares of our common stock owned by Invus and its affiliates (not counting for such purpose any shares acquired by Invus from third parties in excess of 40% (or, if higher, its then pro rata amount) of the total number of outstanding shares of common stock, as permitted by the standstill provisions of the stockholders' agreement), rounded up to the nearest whole number of directors. The directors appointed by Invus have proportionate representation on the compensation and corporate governance committees of our board of directors.

Invus' rights with respect to the designation of members of our board of directors and its compensation and corporate governance committees will terminate if the percentage of all the outstanding shares of our common stock owned by Invus and its affiliates falls below 10%. Invus will also have the right to terminate these provisions at any time following the date on which the percentage of all the outstanding shares of our common stock owned by Invus and its affiliates exceeds 50% (not counting for such purpose any shares acquired by Invus and its affiliates from third parties in excess of 40% (or, if higher, its then pro rata amount) of the total number of outstanding shares of our common stock, as permitted by the standstill provisions of the stockholders' agreement).

Invus has preemptive rights under the stockholders' agreement to participate in future equity issuances by us (including any qualified offering), subject to certain exceptions, so as to maintain its then-current percentage ownership of our capital stock. Subject to certain limitations, Invus will be required to exercise its preemptive rights in advance with respect to certain marketed offerings, in which case it will be obligated to buy its pro rata share of the number of shares being offered in such marketed offering, including any over-allotment (or such lesser amount specified in its exercise of such rights), so long as the sale of the shares were priced within a range within 10% above or below the market price on the date we notified Invus of the offering and we met certain other conditions.

The provisions of the stockholders' agreement relating to preemptive rights will terminate on the earlier to occur of August 28, 2017 and the date on which the percentage of all the outstanding shares of our common stock owned by Invus and its affiliates falls below ten percent.

Invus is subject to standstill provisions restricting its ability to purchase or otherwise acquire additional shares of common stock from third parties to an amount that would result in its ownership of our common stock not exceeding 49% of the total number of shares outstanding. These standstill provisions will not apply to the acquisitions of securities by way of stock splits, stock dividends, reclassifications, recapitalizations, or other distributions by us, acquisitions contemplated by the securities purchase agreement and the stockholders' agreement, including in the rights offerings and upon Invus' exercise of preemptive rights under the stockholders' agreement.

Except for acquisitions pursuant to the provisions described above, and subject to certain exceptions, Invus has agreed that it will not, and will cause its affiliates not to, without the approval of our unaffiliated board, directly or indirectly:

- solicit proxies to vote any of our voting securities or any voting securities of our subsidiaries;
- submit to our board of directors a written proposal for any merger, recapitalization, reorganization, business combination or other extraordinary transaction involving an acquisition of us or any of our subsidiaries or any of our or our subsidiaries' securities or assets by Invus and its affiliates;
- enter into discussions, negotiations, arrangements or understandings with any third party with respect to any of the foregoing; or
- request us or any of our representatives, directly or indirectly, to amend or waive any of these standstill provisions.

The standstill provisions of the stockholders' agreement will terminate on the earliest to occur of (a) August 28, 2017, (b) the date on which the percentage of all the outstanding shares of our common stock owned by Invus and its affiliates falls below 10%, (c) the date on which the percentage of all of the outstanding shares of our common stock owned by Invus and its affiliates exceeds 50% (not counting for such purpose any shares acquired by Invus from third parties in excess of 40% (or, if higher, its then pro rata amount) of the total number of outstanding shares of common stock, as permitted by the standstill provisions of the stockholders' agreement), (d) the date on which any third party makes a public proposal to acquire (by purchase, exchange, merger or otherwise) assets or business constituting 50% or more of our revenues, net income or assets or 50% of any class of our equity securities our board of directors recommends or approves, or proposes to recommend or approve, any such transaction or (e) the date on which any third party acquires beneficial ownership (by purchase, exchange, merger or otherwise) of assets or business constituting 20% or more of our revenues, net income or assets or 20% of any class of our equity securities or our board of directors recommends or approves, or proposes to recommend or approve, any such transaction.

Subject to certain exceptions, Invus has agreed that neither it nor its affiliates will sell any shares of common stock to third parties that are not affiliated with Invus if, to Invus' knowledge, such transfer would result in any such third party (or any person or group including such third party) owning more than 14.9% of the total number of outstanding shares of our common stock.

The provisions of the stockholders' agreement relating to sales to third parties will terminate on the earliest to occur of (a) August 28, 2017, (b) the date on which the percentage of all the outstanding shares of our common stock owned by Invus and its affiliates falls below 10%, and (c) the date on which the percentage of all the outstanding shares of our common stock owned by Invus and its affiliates exceeds 50% (not counting for such purpose any shares acquired by Invus and its affiliates from third parties in excess of 40% (or, if higher, its then pro rata amount) of the total number of outstanding shares of our common stock, as permitted by the standstill provisions of the stockholders' agreement).

In any election of persons to serve on our board of directors, Invus will be obligated to vote all of the shares of common stock held by it and its affiliates in favor of the directors nominated by our board of directors, as long as we have complied with our obligation with respect to the designation of members of our board of directors described above and the individuals designated by Invus for election to our board of directors have been nominated, and, if applicable, are serving on our board of directors. With respect to all other matters submitted to a vote of the holders of our common stock, Invus will be obligated to vote any shares that it acquired from third parties in excess of 40% (or, if higher, its then pro rata amount) of the total number of outstanding shares of common stock, as permitted by the standstill provisions of the stockholders' agreement, in the same proportion as all the votes cast by other holders of our common stock, unless Invus and we (acting with the approval of the unaffiliated board) agree otherwise. Invus may vote all other shares of our common stock held by it in its sole discretion.

The provisions of the stockholders' agreement relating to voting will terminate on the earliest to occur of (a) August 28, 2017, (b) the date on which the percentage of all the outstanding shares of our common stock held by Invus and its affiliates falls below 10%, (c) the date on which the percentage of all outstanding shares of our common stock owned by Invus and its affiliates exceeds 50% (not counting for such purpose any shares acquired by Invus from third parties in excess of 40% (or, if higher, its then pro rata amount) of the total number of outstanding shares of our common stock, as permitted by the provisions of the stockholders' agreement), and (d) the termination of the standstill provisions in accordance with the stockholders' agreement.

Invus is entitled to certain minority protections, including consent rights over (a) the creation or issuance of any new class or series of shares of our capital stock (or securities convertible into or exercisable for shares of our capital stock) having rights, preferences or privileges senior to or on parity with our common stock, (b) any amendment to our certificate of incorporation or bylaws, or amendment to the certificate of incorporation or bylaws of any of our subsidiaries, in a manner adversely affecting Invus' rights under the securities purchase agreement and the related agreements, (c) the repurchase, retirement, redemption or other acquisition of our or our subsidiaries' capital stock (or securities convertible into or exercisable for shares of our or our subsidiaries' capital stock), (d) any increase in the size of our board of directors to more than 12 members and (e) the adoption or proposed adoption of any stockholders' rights plan, "poison pill" or other similar plan or agreement, unless Invus is exempt from the provisions of such plan or agreement.

The provisions of the stockholders' agreement relating to minority protections will terminate on the earlier to occur of August 28, 2017 and the date on which Invus and its affiliates hold less than 15% of the total number of outstanding shares of our common stock.

We may engage in future acquisitions, which may be expensive and time consuming and from which we may not realize anticipated benefits.

We may acquire additional businesses, technologies and products if we determine that these businesses, technologies and products complement our existing technology or otherwise serve our strategic goals. If we do undertake any transactions of this sort, the process of integrating an acquired business, technology or product may result in operating difficulties and expenditures and may not be achieved in a timely and non-disruptive manner, if at all, and may absorb significant management attention that would otherwise be available for ongoing development of our business. If we fail to integrate acquired businesses, technologies or products effectively or if key employees of an acquired business leave, the anticipated benefits of the acquisition would be jeopardized. Moreover, we may never realize the anticipated benefits of any acquisition, such as increased revenues and earnings or enhanced business synergies. Future acquisitions could result in potentially dilutive issuances of our equity securities, the incurrence of debt and contingent liabilities and amortization expenses related to intangible assets, which could materially impair our results of operations and financial condition.

Future sales of our common stock may depress our stock price.

If our stockholders sell substantial amounts of our common stock (including shares issued upon the exercise of options) in the public market, the market price of our common stock could fall. These sales also might make it more difficult for us to sell equity or equity-related securities in the future at a time and price that we deem appropriate. For example, following an acquisition, a significant number of shares of our common stock held by new stockholders may become freely tradable or holders of registration rights could cause us to register their shares for resale. Sales of these shares of common stock held by existing stockholders could cause the market price of our common stock to decline.

If we are unable to meet Nasdaq continued listing requirements, Nasdaq may take action to delist our common stock.

Our common stock trades on The Nasdaq Global Market, which has qualitative and quantitative listing criteria, including operating results, net assets, corporate governance, minimum trading price and minimums for public float, which is the amount of stock not held by our affiliates. If we are unable to meet Nasdaq continued listing requirements, Nasdaq may take action to delist our common stock. A delisting of our common stock could negatively impact us and our shareholders by reducing the liquidity and market price of our common stock and potentially reducing the number of investors willing to hold or acquire our common stock.

Item 1B. *Unresolved Staff Comments*

None.

Item 2. *Properties*

We currently own approximately 300,000 square feet of space for our corporate offices and laboratories in buildings located in The Woodlands, Texas, a suburb of Houston, Texas, and lease approximately 76,000 square feet of space for offices and laboratories near Princeton, New Jersey.

In April 2004, we purchased our facilities in The Woodlands, Texas from the lessor under our previous synthetic lease agreement. In connection with such purchase, we obtained a \$34.0 million mortgage which has a ten-year term with a 20-year amortization and bears interest at a fixed rate of 8.23%. The mortgage had a principal balance outstanding of \$29.5 million as of December 31, 2009.

In May 2002, our subsidiary Lexicon Pharmaceuticals (New Jersey), Inc. entered into a lease for our facility 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.

We believe that our facilities are well-maintained, in good operating condition and acceptable for our current operations.

Item 3. *Legal Proceedings*

We are from time to time party to claims and legal proceedings that arise in the normal course of our business and that we believe will not have, individually or in the aggregate, a material adverse effect on our results of operations, financial condition or liquidity.

Item 4. *[Reserved]*

PART II

Item 5. Market for Registrant’s Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is quoted on The Nasdaq Global Market under the symbol “LXRX.” The following table sets forth, for the periods indicated, the high and low sales prices for our common stock as reported on The Nasdaq Global Market.

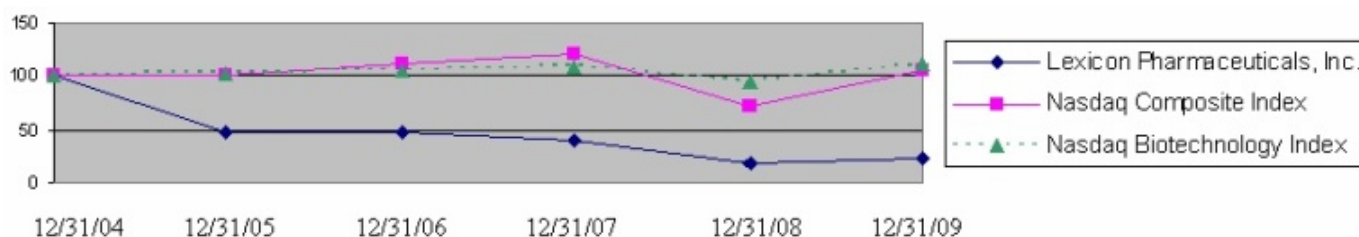
	High	Low
2008		
First Quarter	\$ 3.07	\$ 1.27
Second Quarter	\$ 2.44	\$ 1.57
Third Quarter	\$ 2.60	\$ 1.51
Fourth Quarter	\$ 1.90	\$ 0.74
2009		
First Quarter	\$ 1.75	\$ 0.81
Second Quarter	\$ 1.63	\$ 0.94
Third Quarter	\$ 3.78	\$ 1.11
Fourth Quarter	\$ 2.13	\$ 1.30

As of February 28, 2010, there were approximately 228 holders of record of our common stock.

We have never paid cash dividends on our common stock. We anticipate that we will retain all of our future earnings, if any, for use in the expansion and operation of our business and do not anticipate paying cash dividends in the foreseeable future.

Performance Graph

The following performance graph compares the performance of our common stock to the Nasdaq Composite Index and the Nasdaq Biotechnology Index for the period beginning December 31, 2004 and ending December 31, 2009. The graph assumes that the value of the investment in our common stock and each index was \$100 at December 31, 2004, and that all dividends were reinvested.



	December 31,					
	2004	2005	2006	2007	2008	2009
Lexicon Pharmaceuticals, Inc.	100	47	47	39	18	22
Nasdaq Composite Index	100	101	111	122	72	104
Nasdaq Biotechnology Index	100	103	104	109	95	110

The foregoing stock price performance comparisons shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference by any general statement incorporating by reference this annual report on Form 10-K into any filing under the Securities Act of 1933 or under the Securities Exchange Act of 1934, except to the extent that we specifically incorporate such comparisons by reference.

Purchases of Equity Securities

The following table provides information about our purchases of shares of our common stock during the six months ended December 31, 2009:

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of a Publicly Announced Program	Maximum Number of Shares that May Yet be Purchased Under the Program ⁽¹⁾
July 1 – 31, 2009	—	\$ —	—	\$ —
August 1 – 31, 2009	67,891 ⁽²⁾	\$ 1.30 ⁽³⁾	—	\$ —
September 1 – 30, 2009	—	\$ —	—	\$ —
October 1 – 31, 2009	—	\$ —	—	\$ —
November 1 – 30, 2009	—	\$ —	—	\$ —
December 1 – 31, 2009	—	\$ —	—	\$ —

(1) In connection with the vesting of restricted stock bonus awards granted under our Equity Incentive Plan, which was adopted in February 2009 as an amendment and restatement of our 2000 Equity Incentive Plan and expires in February 2019, certain recipients of such restricted stock bonus awards elected to satisfy their withholding tax obligations with respect to such vesting event by having us retain a portion of the vested shares. In the future, we may grant additional restricted equity securities under our Equity Incentive Plan for which the recipient's tax withholding obligations may be satisfied by our retention of a portion of such securities. Further, the number of such restricted equity securities which may vest will be dependent on the continued employment of such recipients or other performance-based conditions. As a result, we cannot predict with any certainty either the total amount of restricted equity securities or the approximate dollar value of such securities that we may purchase in future years as those securities vest.

(2) Represents shares retained by us at the election of certain recipients of restricted stock bonus awards granted under our Equity Incentive Plan in satisfaction of their withholding tax obligations with respect to the vesting of those awards.

(3) Represents the market price of our common stock on the date of vesting, calculated in accordance with the process for determination of fair market value under our Equity Incentive Plan.

Selected Financial Data

The statement of operations data for the years ended December 31, 2009, 2008 and 2007 and the balance sheet data as of December 31, 2009 and 2008 have been derived from our audited financial statements included elsewhere in this annual report on Form 10-K. The statements of operations data for the years ended December 31, 2006 and 2005, and the balance sheet data as of December 31, 2007, 2006 and 2005 have been derived from our audited financial statements not included in this annual report on Form 10-K. Our historical results are not necessarily indicative of results to be expected for any future period. The data presented below has been derived from financial statements that have been prepared in accordance with accounting principles generally accepted in the United States and should be read with our financial statements, including the notes, and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this annual report on Form 10-K.

	Year Ended December 31,				
	2009	2008	2007	2006	2005
Statements of Operations Data:					
	(in thousands, except per share data)				
Revenues	\$ 10,700	\$ 32,321	\$ 50,118	\$ 72,798	\$ 75,680
Operating expenses:					
Research and development, including stock-based compensation of \$3,022 in 2009, \$3,941 in 2008, \$5,150 in 2007, \$4,394 in 2006 and (\$21) in 2005	81,238	107,232	103,237	105,494	92,539
General and administrative, including stock-based compensation of \$2,252 in 2009, \$2,559 in 2008, \$2,776 in 2007, \$2,636 in 2006 and \$0 in 2005	19,418	21,624	21,835	22,535	19,260
Total operating expenses	100,656	128,856	125,072	128,029	111,799
Loss from operations	(89,956)	(96,535)	(74,954)	(55,231)	(36,119)
Interest and other income (expense), net	(3,463)	(349)	3,721	801	(77)
Consolidated net loss before taxes	(93,419)	(96,884)	(71,233)	(54,430)	(36,196)
Income tax benefit (provision)	102	—	—	119	(119)
Consolidated net loss	(93,317)	(96,884)	(71,233)	(54,311)	(36,315)
Less: net loss attributable to noncontrolling interest in Symphony Icon, Inc.	10,537	20,024	12,439	—	—
Net loss attributable to Lexicon Pharmaceuticals, Inc.	\$ (82,780)	\$ (76,860)	\$ (58,794)	\$ (54,311)	\$ (36,315)
Net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	\$ (0.57)	\$ (0.56)	\$ (0.59)	\$ (0.81)	\$ (0.57)
Shares used in computing net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	145,465	136,797	99,798	66,876	63,962
	As of December 31,				
	2009	2008	2007	2006	2005
Balance Sheet Data:					
	(in thousands)				
Cash, cash equivalents and short-term investments, including restricted cash and investments of \$430	\$ 157,096	\$ 86,502	\$ 222,109	\$ 79,999	\$ 99,695
Short-term investments held by Symphony Icon, Inc.	5,417	16,610	36,666	—	—
Long-term investments	—	55,686	—	—	—
Working capital	118,730	87,991	229,303	39,586	48,584
Total assets	257,761	261,508	369,296	190,266	218,714
Long-term debt, net of current portion	28,482	29,529	30,493	31,372	32,189
Accumulated deficit	(570,175)	(487,395)	(410,535)	(351,741)	(297,430)
Lexicon Pharmaceuticals, Inc. stockholders' equity	163,787	185,580	256,300	85,501	85,802

The following discussion and analysis should be read with "Selected Financial Data" and our financial statements and notes included elsewhere in this annual report on Form 10-K.

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 technologies 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 drug candidates from such programs internally and to collaborate with third parties with respect to the discovery, development and commercialization of small molecule and biotherapeutic 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 received 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.

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 that would result in milestone payments and 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, as we have with our four clinical drug candidates, 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 December 31, 2009, we had an accumulated deficit of \$570.2 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, and other expenses related to our drug discovery and development programs. 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 continued 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

Revenue Recognition

We recognize revenues when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable, and collectibility is reasonably assured. Payments received in advance under these arrangements are recorded as deferred revenue until earned.

Upfront fees under our drug discovery and development alliances are recognized as revenue on a straight-line basis over the estimated period of service, generally the contractual research term, as this period is our best estimate of the period over which the services will be rendered, to the extent they are non-refundable. We have determined that the level of effort we perform to meet our obligations is fairly constant throughout the estimated periods of service. As a result, we have determined that it is appropriate to recognize revenue from such agreements on a straight-line basis, as we believe this reflects how the research is provided during the initial period of the agreement. When it becomes probable that a collaborator will extend the research period, we adjust the revenue recognition method as necessary based on the level of effort required under the agreement for the extension period.

Research funding under these alliances is recognized as services are performed to the extent they are non-refundable, either on a straight-line basis over the estimated service period, generally the contractual research term; or as contract research costs are incurred. Milestone-based fees are recognized upon completion of specified milestones according to contract terms. Payments received under target validation collaborations and government grants and contracts are recognized as revenue as we perform our obligations related to such research to the extent such fees are non-refundable. Non-refundable technology license fees are recognized as revenue upon the grant of the license, when performance is complete and there is no continuing involvement.

Revenues recognized from multiple element contracts are allocated to each element of the arrangement based on the relative fair value of the elements. An element of a contract can be accounted for separately if the delivered elements have standalone value to the collaborator and the fair value of any undelivered elements is determinable through objective and reliable evidence. If an element is considered to have standalone value but the fair value of any of the undelivered items cannot be determined, all elements of the arrangement are recognized as revenue over the period of performance for such undelivered items or services.

A change in our revenue recognition policy or changes in the terms of contracts under which we recognize revenues could have an impact on the amount and timing of our recognition of revenues.

Research and Development Expenses

Research and development expenses consist of costs incurred for research and development activities solely sponsored by us as well as collaborative research and development activities. These costs include direct and research-related overhead expenses and are expensed as incurred. Technology license fees for technologies that are utilized in research and development and have no alternative future use are expensed when incurred.

We have announced positive top-line results from Phase 2 clinical trials of each of our two most advanced drug candidates: LX1031, an orally-delivered small molecule compound that we are developing as a potential treatment for irritable bowel syndrome and other gastrointestinal disorders and LX4211, an orally-delivered small molecule compound that we are developing as a potential treatment for type 2 diabetes. We are presently conducting Phase 2 clinical trials of two other drug candidates: LX2931, an orally-delivered small molecule compound that we are developing as a potential treatment for rheumatoid arthritis and other autoimmune diseases and LX1032, an orally-delivered small molecule compound that we are developing as a potential treatment for the symptoms associated with carcinoid syndrome. We have advanced one other drug candidate into preclinical development: LX7101, a topically-delivered small molecule compound that we are developing as a potential treatment for glaucoma. We have small molecule compounds from a number of additional drug discovery programs in various stages of preclinical research and believe that our systematic, target biology-driven approach to drug discovery will enable us to continue to expand our clinical pipeline. The drug development process takes many years to complete. The cost and length of time varies due to many factors including the type, complexity and intended use of the drug candidate. We estimate that drug development activities are typically completed over the following periods:

Phase	Estimated Completion Period
Preclinical development	1-2 years
Phase 1 clinical trials	1-2 years
Phase 2 clinical trials	1-2 years
Phase 3 clinical trials	2-4 years

We expect research and development costs to increase in the future as our existing clinical drug programs advance to later stage clinical trials and new drug programs enter preclinical and clinical development. Due to the variability in the length of time necessary for drug development, the uncertainties related to the cost of these activities and ultimate ability to obtain governmental approval for commercialization, accurate and meaningful estimates of the ultimate costs to bring our potential drug candidates to market are not available.

We record significant accrued liabilities related to unbilled expenses for products or services that we have received from service providers, specifically related to ongoing preclinical studies and clinical trials. These costs primarily relate to clinical study management, monitoring, laboratory and analysis costs, drug supplies, toxicology studies and investigator grants. We have multiple drugs in concurrent preclinical studies and clinical trials at clinical sites throughout the world. In order to ensure that we have adequately provided for ongoing preclinical and clinical development costs during the period in which we incur such costs, we maintain accruals to cover these expenses. We update our estimates for these accruals on a monthly basis. Although we use consistent milestones or subject or patient enrollment to drive expense recognition, the assessment of these costs is a subjective process that requires judgment. Upon settlement, these costs may differ materially from the amounts accrued in our consolidated financial statements.

We record our research and development costs by type or category, rather than by project. Significant categories of costs include personnel, facilities and equipment costs, laboratory supplies and third-party and other services. In addition, a significant portion of our research and development expenses is not tracked by project as it benefits multiple projects. Consequently, fully-loaded research and development cost summaries by project are not available.

Consolidation of Variable Interest Entity

We consolidate the financial condition and results of operations of Symphony Icon. While we have determined Symphony Icon is a variable interest entity for which we are the primary beneficiary, Symphony Icon is wholly-owned by the noncontrolling interest holders. Therefore, we reduce the amount of our reported net loss in our consolidated statements of operations by the loss attributed to the noncontrolling interest and we also reduce the noncontrolling interest holders' ownership interest in the consolidated balance sheets by Symphony Icon's losses.

As discussed in Note 3, Recent Accounting Pronouncements, of the Notes to Consolidated Financial Statements, we have determined that upon adoption of SFAS 167, Amendments to FASB Interpretation No. 46(R), on January 1, 2010, we are not the primary beneficiary of Symphony Icon, and therefore, we will no longer include the financial condition and results of operations of Symphony Icon in our consolidated financial statements.

Stock-based Compensation Expense

We recognize compensation expense in our statements of operations for share-based payments, including stock options issued to employees, based on their fair values on the date of the grant, with the compensation expense recognized over the period in which an employee is required to provide service in exchange for the stock award. Stock-based compensation expense is recognized on a straight-line basis. We had stock-based compensation expense of \$5.3 million for the year ended December 31, 2009, or \$0.04 per share. Stock-based compensation expense has no impact on cash flows from operating activities or financing activities. As of December 31, 2009, stock-based compensation cost for all outstanding unvested options was \$6.8 million, which is expected to be recognized over a weighted-average vesting period of 1.2 years.

The fair value of stock options is estimated at the date of grant using the Black-Scholes option-pricing model. For purposes of determining the fair value of stock options, we segregate our options into two homogeneous groups, based on exercise and post-vesting employment termination behaviors, resulting in a change in the assumptions used for expected option lives and forfeitures. Expected volatility is based on the historical volatility in our stock price. The following weighted-average assumptions were used for options granted in the years ended December 31, 2009, 2008 and 2007, respectively:

	<u>Expected Volatility</u>	<u>Risk-free Interest Rate</u>	<u>Expected Term</u>	<u>Estimated Forfeitures</u>	<u>Dividend Rate</u>
December 31, 2009:					
Employees	78%	1.9%	5	24%	0%
Officers and non-employee directors	77%	2.7%	8	7%	0%
December 31, 2008:					
Employees	66%	2.9%	6	22%	0%
Officers and non-employee directors	66%	3.8%	9	6%	0%
December 31, 2007:					
Employees	66%	4.5%	6	21%	0%
Officers and non-employee directors	67%	4.6%	9	4%	0%

Goodwill Impairment

Goodwill is not amortized, but is tested at least annually for impairment at the reporting unit level. We have determined that the reporting unit is the single operating segment disclosed in our current financial statements. Impairment is the condition that exists when the carrying amount of goodwill exceeds its implied fair value. The first step in the impairment process is to determine the fair value of the reporting unit and then compare it to the carrying value, including goodwill. We determined that the market capitalization approach is the most appropriate method of measuring fair value of the reporting unit. Under this approach, fair value is calculated as the average closing price of our common stock for the 30 days preceding the date that the annual 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. If the fair value exceeds the carrying value, no further action is required and no impairment loss is recognized. Additional impairment assessments may be performed on an interim basis if we encounter events or changes in circumstances that would indicate that, more likely than not, the carrying value of goodwill has been impaired. There was no impairment of goodwill in 2009.

Valuation of Investments that Do Not Have Active Markets

At December 31, 2009, we held \$56.2 million (par value) of investments with an auction interest rate reset feature, known as auction rate securities. The securities have historically traded at par and are redeemable at par plus accrued interest at the option of the issuer. Until February 2008, the carrying value of our auction rate securities approximated fair value. With the liquidity issues experienced in the global credit and capital markets, our auction rate securities have experienced multiple failed auctions and the estimated market value of these securities is less than cost.

We estimated the fair value of these auction rate securities using a discounted cash flow analysis that considered the following key inputs: (a) the underlying structure of each security; (b) the present value of the future principal and interest payments discounted at rates considered to reflect current market conditions and the relevant risk associated with each security; and (c) consideration of the time horizon that the market value of each security could return to its cost. We also considered secondary market trading date in estimating the fair value of these auction rate securities. We estimate that the fair value of these securities at December 31, 2009 was \$46.3 million.

In November 2008, we accepted an offer from UBS AG, the investment bank that sold us our auction rate securities, providing us with certain rights related to our auction rate securities. These rights permit us to require UBS to purchase our \$56.2 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 the securities. We expect to exercise these rights and sell our auction rate securities back to UBS on June 30, 2010, the earliest date allowable under the rights. We estimate that the fair value of these rights at December 31, 2009 was \$9.7 million.

The enforceability of the rights results in a separate asset that is measured at its fair value. We elected to measure the rights under a fair value option, which permits entities to choose, at certain election dates, to measure eligible items at fair value. 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 from available-for-sale securities. As a result, we will 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. 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 UBS of its obligations under the agreement.

The fair value of the auction rate securities and the associated rights could further change significantly in the future and we may be required to record additional other-than-temporary impairment charges related to the auction rate securities and gains related to the rights if there are further reductions in fair value of the auction rate securities in future periods.

Recent Accounting Pronouncements

See Note 3, Recent Accounting Pronouncements, of the Notes to Consolidated Financial Statements, for a discussion of the impact of new accounting standards on our consolidated financial statements.

Results of Operations – Comparison of Years Ended December 31, 2009, 2008 and 2007

Revenues

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

	Year Ended December 31,		
	2009	2008	2007
Total revenues	\$ 10.7	\$ 32.3	\$ 50.1
Dollar decrease	\$ (21.6)	\$ (17.8)	
Percentage decrease	(67%)	(36%)	

Years Ended December 31, 2009 and 2008

- *Collaborative research* – Revenue from collaborative research decreased 66% to \$9.3 million, primarily due to reduced revenues under our alliances with Bristol-Myers Squibb and N.V. Organon due to the completion in 2009 of the target discovery portion of these alliances, and completion in 2008 of the target discovery portion of our alliance with Genentech, partially offset by increases in revenue from our collaboration with Taconic.
- *Subscription and license fees* – Revenue from subscriptions and license fees decreased 73% to \$1.4 million, primarily due to a decrease in technology license fees.

Years Ended December 31, 2008 and 2007

- *Collaborative research* – Revenue from collaborative research decreased 43% to \$27.2 million, primarily due to the completion in 2007 of the knockout mouse embryonic stem cell library project funded by our award from the Texas Enterprise Fund, reduced revenues under our alliance with N.V. Organon due to our progress towards completion of the target discovery portion of the alliance, and the completion in 2007 of the target discovery portion of our alliance with Takeda Pharmaceutical Limited.
- *Subscription and license fees* – Revenue from subscriptions and license fees increased 152% to \$5.1 million, primarily due to an increase in technology license fees.

In 2009, Bristol-Myers Squibb, Organon and Taconic represented 31%, 23% and 21% of revenues, respectively. In 2008, Bristol-Myers Squibb, Organon and Genentech represented 32%, 29% and 13% of revenues, respectively. In 2007, Organon, Bristol-Myers Squibb and the Texas Enterprise Fund represented 27%, 23% and 22% of revenues, respectively.

Research and Development Expenses

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

	Year Ended December 31,		
	2009	2008	2007
Total research and development expense	\$ 81.2	\$ 107.2	\$ 103.2
Dollar increase (decrease)	\$ (26.0)	\$ 4.0	
Percentage increase (decrease)	(24%)	4%	

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

Years Ended December 31, 2009 and 2008

- *Personnel* – Personnel costs decreased 21% in 2009 to \$32.7 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.
- *Third-party and other services* – Third-party and other services decreased 33% in 2009 to \$20.2 million, primarily due to a decrease in external preclinical research and development costs. Third-party and other services include third-party research services, technology licenses and subscriptions to third-party databases.
- *Facilities and equipment* – Facilities and equipment costs decreased 17% in 2009 to \$15.3 million, primarily due to decreases in depreciation expense and utilities expense.
- *Laboratory supplies* – Laboratory supplies expense decreased 28% in 2009 to \$6.2 million, primarily due to reductions in our genetics research activities.
- *Stock-based compensation* – Stock-based compensation expense decreased 23% in 2009 to \$3.0 million, primarily as a result of the reduction in our personnel.
- *Other* – Other costs decreased 22% in 2009 to \$3.8 million, primarily due to a decrease in computer software expense.

Years Ended December 31, 2008 and 2007

- *Personnel* – Personnel costs decreased 7% to \$41.4 million, primarily due to a reduction in our personnel in May 2008.
- *Third-party and other services* – Third-party and other services increased 72% to \$29.9 million, primarily due to an increase in external preclinical and clinical research and development costs.
- *Facilities and equipment* – Facilities and equipment costs decreased 8% to \$18.5 million, primarily due to a decrease in depreciation expense.
- *Laboratory supplies* – Laboratory supplies expense decreased 25% to \$8.6 million, primarily due to the reduction in personnel in May 2008.
- *Stock-based compensation* – Stock-based compensation expense decreased 23% to \$3.9 million, primarily due to the reduction in our personnel in May 2008.
- *Other* – Other costs increased by 2% to \$4.9 million.

General and Administrative Expenses

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

	Year Ended December 31,		
	2009	2008	2007
Total general and administrative expense	\$ 19.4	\$ 21.6	\$ 21.8
Dollar decrease	\$ (2.2)	\$ (0.2)	
Percentage decrease	(10%)	(1%)	

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

Years Ended December 31, 2009 and 2008

- *Personnel* – Personnel costs decreased 13% in 2009 to \$9.0 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.
- *Professional fees* – Professional fees decreased 7% in 2009 to \$4.0 million, primarily due to decreased consulting fees.
- *Facilities and equipment* – Facilities and equipment costs were \$2.5 million, consistent with the prior year.
- *Stock-based compensation* – Stock-based compensation expense decreased 12% in 2009 to \$2.3 million, primarily as a result of the reduction in our personnel.
- *Other* – Other costs decreased 16% in 2009 to \$1.6 million.

Years Ended December 31, 2008 and 2007

- *Personnel* – Personnel costs decreased 3% to \$10.4 million, primarily due to lower bonus and benefit costs, offset in part by severance costs associated with reductions in personnel.
- *Professional fees* – Professional fees increased 20% to \$4.3 million, primarily due to increased market research and other consulting costs.
- *Facilities and equipment* – Facilities and equipment costs were \$2.5 million, consistent with the prior year.
- *Stock-based compensation* – Stock-based compensation expense decreased 8% to \$2.6 million.
- *Other* – Other costs decreased 16% to \$1.9 million.

Gain (Loss) on Investments, Net, Interest Income, Interest Expense and Other (Expense) Income, Net

Gain (Loss) on Investments, Net. Gain on investments was \$3.5 million for the year ended December 31, 2009, representing the increase in fair value of our student loan auction rate securities. This gain was partially offset by a loss on investments of \$2.3 million for the year ended December 31, 2009, representing the decline in fair value of the rights obtained from UBS. Loss on investments was \$13.4 million for the year ended December 31, 2008, representing the decline in fair value of our student loan auction rate securities. This loss was partially offset by a gain on investments of \$12.1 million for the year ended December 31, 2008, representing the fair value of the rights.

Interest Income. Interest income decreased 85% in 2009 to \$0.9 million from \$5.8 million in 2008 primarily due to lower average cash and investment balances as well as lower yields on our investments. Interest income decreased 21% in 2008 from \$7.3 million in 2007, primarily due to lower average cash and investment balances as well as lower yields on our investments.

Interest Expense. Interest expense increased 10% in 2009 to \$3.0 million from \$2.7 million in 2008 and decreased 3% in 2008 from \$2.8 million in 2007.

Other (Expense) Income, Net. Other expense, net increased 21% in 2009 to \$2.6 million from 2008 primarily due to an impairment of surplus equipment as a result of our reduction of personnel in January 2009. Other expense, net increased 165% in 2008 to \$2.1 million from 2007 primarily due to the increase in amortization of the asset related to the option to purchase the equity of Symphony Icon. We have recorded the value of the purchase option as an asset, and we are amortizing this asset over the four-year option period (see Note 10, Arrangements with Symphony Icon, Inc., of the Notes to Consolidated Financial Statements, for more information).

Income Tax Benefit

The income tax benefit for the year ended December 31, 2009 was \$102,000.

Noncontrolling Interest in Symphony Icon, Inc.

The loss attributed to the noncontrolling interest holders of Symphony Icon decreased 47% to \$10.5 million from \$20.0 million in 2008 and increased 61% in 2008 from \$12.4 million in 2007, due to the timing of expenditures related to clinical development of the drug candidates licensed to Symphony Icon.

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 \$82.8 million in 2009 from \$76.9 million in 2008 and \$58.8 million in 2007. Net loss attributable to Lexicon Pharmaceuticals, Inc. per common share increased to \$0.57 in 2009 from \$0.56 in 2008 and decreased from \$0.59 in 2007.

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 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 December 31, 2009, we had received net proceeds of \$605.4 million from issuances of common and preferred stock. In addition, from our inception through December 31, 2009, we received \$448.7 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 \$434.7 million had been recognized as revenues through December 31, 2009.

As of December 31, 2009, we had \$157.1 million in cash, cash equivalents and investments, including \$56.0 million in auction rate securities and related rights as discussed below under "Disclosure about Market Risk," and \$5.4 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 \$89.0 million in operations in 2009. This consisted primarily of the consolidated net loss for the period of \$93.3 million, a \$4.7 million decrease in deferred revenue, a net decrease in other operating liabilities net of assets of \$3.8 million, and a net gain on investments and auction rate security rights of \$1.2 million, partially offset by non-cash charges of \$6.2 million related to depreciation expense, \$5.3 million related to stock-based compensation expense and \$2.1 million related to the amortization of the Symphony Icon purchase option. Investing activities provided cash of \$11.9 million in 2009, primarily due to maturities of investments of \$76.3 million, partially offset by purchases of investments of \$64.2 million. Financing activities provided cash of \$91.8 million due to proceeds from issuance of common stock of \$55.4 million, proceeds from debt borrowings of \$38.6 million, partially offset by repayment of debt borrowings of \$2.1 million.

UBS Credit Line. In January 2009, we entered into a credit line agreement with UBS Bank USA that provides, as of December 31, 2009, up to an aggregate amount of \$37.5 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 \$56.2 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 December 31, 2009 we had \$37.4 million outstanding under the credit line.

Invus Securities Purchase Agreement. In June 2007, we entered into a securities purchase agreement with Invus, L.P., under which Invus made an initial investment of \$205.4 million to purchase 50,824,986 shares of our common stock in August 2007 and 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. We have not completed any such qualified offering. Invus may exercise its right to require us to conduct the first rights offering by giving us notice within a period of one year beginning on November 28, 2009 (which we refer to as the first rights offering trigger date). Invus may exercise its right to require us to conduct a second rights offering by giving us notice within a period of one year beginning on the date that is 90 days 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 one year beginning on the first anniversary of the first rights offering trigger date. If Invus elects to exercise its right to require us to initiate a rights offering, Invus would be required to purchase its pro rata portion of the offering.

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.

Symphony Drug Development Financing Agreement. In June 2007, we entered into a series of related agreements providing for the financing of the clinical development of certain drug programs, 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) \$81 million, if the purchase option is exercised before June 15, 2010 and (b) \$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. Through December 31, 2009, Symphony Icon's board of directors has requested us to pay Symphony Icon \$4.3 million under the agreement, all of which has been paid, and we expect that additional funding will be needed in the future.

Facilities. 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. signed a ten-year lease for its facility in Hopewell, New Jersey extending the term 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.

Including the lease and debt obligations described above, we had incurred the following contractual obligations as of December 31, 2009:

Contractual Obligations	Payments due by period (in millions)				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Debt	\$ 67.0	\$ 38.5	\$ 2.4	\$ 26.1	\$ —
Interest payment obligations	9.8	2.4	4.6	2.8	—
Operating leases	9.0	2.5	5.1	1.4	—
Total	\$ 85.8	\$ 43.4	\$ 12.1	\$ 30.3	\$ —

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 and cash and revenues we expect to derive from drug discovery and development collaborations, other collaborations and technology licenses and other sources 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 December 31, 2009, we held \$56.2 million (par value), with an estimated fair value of \$46.3 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. However, 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. We have modified our current investment strategy to reallocate our investments more into U.S. treasury securities and U.S. treasury-backed money market investments.

At December 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 \$46.3 million as of December 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 December 31, 2009. The underlying sources of these assumptions are volatile and the assumptions are subject to change as those sources and market conditions change. If the current market conditions deteriorate further, or a recovery in market values does not occur, we may be required to record additional unrealized or realized losses in future quarters.

In November 2008, we accepted an offer from UBS AG, the investment bank that sold us our auction rate securities, providing us with certain rights related to our auction rate securities. The rights permit us to require UBS to purchase our \$56.2 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 is measured at its fair value. We elected to measure the rights under a fair value option, which permits entities to choose, at certain election dates, to measure eligible items at fair value. As a result of accepting the rights, we have elected to classify the rights and reclassify our investments in auction rate securities as trading securities from available-for-sale securities. As a result, we will 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. 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 December 31, 2009, we had approximately \$106.5 million in cash and cash equivalents and short-term investments, including \$5.4 million in investments held by Symphony Icon. We believe that the working capital available to us excluding the funds held in auction rate securities 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 7A. Quantitative and Qualitative Disclosures About Market Risk

See “Disclosure about Market Risk” under “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” for quantitative and qualitative disclosures about market risk.

Item 8. Financial Statements and Supplementary Data

The financial statements required by this Item are incorporated under Item 15 in Part IV of this report.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. 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 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.

Management Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act).

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2009. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control-Integrated Framework*.

Based on such assessment using those criteria, management believes that, as of December 31, 2009, our internal control over financial reporting is effective.

Our independent auditors have also audited our internal control over financial reporting as of December 31, 2009 as stated in the audit report which appears on page F-2 and is incorporated under Item 15 in Part IV of this report.

Item 9B. Other Information

None.

PART III

Item 10. *Directors, Executive Officers and Corporate Governance*

The information required by this Item is hereby incorporated by reference from (a) the information appearing under the captions “Election of Directors,” “Stock Ownership of Certain Beneficial Owners and Management,” “Corporate Governance” and “Executive and Director Compensation” in our definitive proxy statement which involves the election of directors and is to be filed with the Securities and Exchange Commission pursuant to the Securities Exchange Act of 1934 within 120 days of the end of our fiscal year on December 31, 2009 and (b) the information appearing under Item 1 in Part I of this report.

Item 11. *Executive Compensation*

The information required by this Item is hereby incorporated by reference from the information appearing under the captions “Corporate Governance” and “Executive and Director Compensation” in our definitive proxy statement which involves the election of directors and is to be filed with the Commission pursuant to the Securities Exchange Act of 1934 within 120 days of the end of our fiscal year on December 31, 2009. Notwithstanding the foregoing, in accordance with the instructions to Item 407(e)(5) of Regulation S-K, the information contained in our proxy statement under the sub-heading “Compensation Committee Report” shall not be deemed to be filed as part of or incorporated by reference into this annual report on Form 10-K.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

The information required by this Item is hereby incorporated by reference from the information appearing under the captions “Stock Ownership of Certain Beneficial Owners and Management” and “Equity Compensation Plan Information” in our definitive proxy statement which involves the election of directors and is to be filed with the Commission pursuant to the Securities Exchange Act of 1934 within 120 days of the end of our fiscal year on December 31, 2009.

Item 13. *Certain Relationships and Related Transactions, and Director Independence*

The information required by this Item is hereby incorporated by reference from the information appearing under the captions “Corporate Governance” and “Transactions with Related Persons” in our definitive proxy statement which involves the election of directors and is to be filed with the Commission pursuant to the Securities Exchange Act of 1934 within 120 days of the end of our fiscal year on December 31, 2009.

Item 14. *Principal Accounting Fees and Services*

The information required by this Item as to the fees we pay our principal accountant is hereby incorporated by reference from the information appearing under the caption “Ratification and Approval of Independent Auditors” in our definitive proxy statement which involves the election of directors and is to be filed with the Commission pursuant to the Securities Exchange Act of 1934 within 120 days of the end of our fiscal year on December 31, 2009.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) Documents filed as a part of this report:

1. Consolidated Financial Statements

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Report of Independent Registered Public Accounting Firm	F-1
Report of Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets	F-3
Consolidated Statements of Operations	F-4
Consolidated Statements of Stockholders' Equity	F-5
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2. Financial Statement Schedules

All other financial statement schedules are omitted because they are not applicable or not required, or because the required information is included in the financial statements or notes thereto.

3. Exhibits

Exhibit No.	Description
3.1	— Restated Certificate of Incorporation (filed as Exhibit 3.1 to the Company's Registration Statement on Form S-1 (Registration No. 333-96469) and incorporated by reference herein).
3.2	— First Certificate of Amendment to Restated Certificate of Incorporation (filed as Exhibit 3.2 to the Company's Annual Report on Form 10-K for the period ended December 31, 2007 and incorporated by reference herein).
3.3	— Second Certificate of Amendment to Restated Certificate of Incorporation (filed as Exhibit 3.3 to the Company's Annual Report on Form 10-K for the period ended December 31, 2007 and incorporated by reference herein).
3.4	— Third Certificate of Amendment to Restated Certificate of Incorporation (filed as Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2009 and incorporated by reference herein).
3.5	— Amended and Restated Bylaws (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K dated October 24, 2007 and incorporated by reference herein).
4.1	— Securities Purchase Agreement, dated June 17, 2007, with Invus, L.P. (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated June 17, 2007 and incorporated by reference herein).
4.2	— Amendment, dated October 7, 2009, to Securities Purchase Agreement, dated June 17, 2007, with Invus, L.P. (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 7, 2009 and incorporated by reference herein).
4.3	— Registration Rights Agreement, dated June 17, 2007, with Invus, L.P. (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K dated June 17, 2007 and incorporated by reference herein).
4.4	— Stockholders' Agreement, dated June 17, 2007, with Invus, L.P. (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K dated June 17, 2007 and incorporated by reference herein).
10.1	— Restated Employment Agreement with Arthur T. Sands, M.D., Ph.D. (filed as Exhibit 10.1 to the Company's Annual Report on Form 10-K for the period ended December 31, 2005 and incorporated by reference herein).

Exhibit No.	Description
10.2	— Employment Agreement with Alan Main, Ph.D. (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2001 and incorporated by reference herein).
10.3	— Employment Agreement with Jeffrey L. Wade, J.D. (filed as Exhibit 10.3 to the Company's Registration Statement on Form S-1 (Registration No. 333-96469) and incorporated by reference herein).
10.4	— Employment Agreement with Brian P. Zambrowicz, Ph.D. (filed as Exhibit 10.4 to the Company's Registration Statement on Form S-1 (Registration No. 333-96469) and incorporated by reference herein).
10.5	— Offer Letter, dated May 4, 2009, with Ajay Bansal (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated May 4, 2009 and incorporated by reference herein).
10.6	— Consulting Agreement with Alan S. Nies, M.D. dated February 19, 2003, as amended (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2004 and incorporated by reference herein).
10.7	— Consulting Agreement with Robert J. Lefkowitz, M.D. dated March 31, 2003 (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2003 and incorporated by reference herein).
10.8	— Form of Indemnification Agreement with Officers and Directors (filed as Exhibit 10.7 to the Company's Registration Statement on Form S-1 (Registration No. 333-96469) and incorporated by reference herein).
10.9	— Summary of Non-Employee Director Compensation (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K dated April 23, 2009 and incorporated by reference herein).
10.10	— Summary of 2010 Named Executive Officer Cash Compensation (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated February 15, 2010 and incorporated by reference herein).
10.11	— Equity Incentive Plan (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated April 23, 2009 and incorporated by reference herein).
10.12	— Non-Employee Directors' Stock Option Plan (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated April 23, 2009 and incorporated by reference herein).
10.13	— Coelacanth Corporation 1999 Stock Option Plan (filed as Exhibit 99.1 to the Company's Registration Statement on Form S-8 (Registration No. 333-66380) and incorporated by reference herein).
10.14	— Form of Stock Option Agreement with Chairman of Board of Directors under the Equity Incentive Plan (filed as Exhibit 10.17 to the Company's Annual Report on Form 10-K for the period ended December 31, 2005 and incorporated by reference herein).
*10.15	— Form of Stock Option Agreement with Directors under the Non-Employee Directors' Stock Option Plan.
*10.16	— Form of Stock Option Agreement with Officers under the Equity Incentive Plan.
10.17	— Form of Restricted Stock Bonus Agreement with Officers under the Equity Incentive Plan (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated February 12, 2009 and incorporated by reference herein).
10.18	— Form of Restricted Stock Unit Agreement with Officers under the Equity Incentive Plan (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated February 15, 2010 and incorporated by reference herein).
†10.19	— Collaboration and License Agreement, dated December 17, 2003, with Bristol-Myers Squibb Company (filed as Exhibit 10.15 to the amendment to the Company's Annual Report on Form 10-K/A for the period ended December 31, 2003, as filed on July 16, 2004, and incorporated by reference herein).

Exhibit No.	Description
†10.20	— First Amendment, dated May 30, 2006, to Collaboration and License Agreement, dated December 17, 2003, with Bristol-Myers Squibb Company (filed as Exhibit 10.2 to the Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2006, and incorporated by reference herein).
†10.21	— Collaboration Agreement, dated July 27, 2004, with Takeda Pharmaceutical Company Limited (filed as Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q for the period ended September 30, 2004 and incorporated by reference herein).
†10.22	— Collaboration and License Agreement, dated May 16, 2005, with N.V. Organon and (only with respect to Section 9.4 thereof) Intervet Inc. (filed as Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2005 and incorporated by reference herein).
†10.23	— Second Amended and Restated Collaboration and License Agreement, dated November 30, 2005, with Genentech, Inc. (filed as Exhibit 10.22 to the Company’s Annual Report on Form 10-K for the period ended December 31, 2005 and incorporated by reference herein).
10.24	— Amendment, dated June 8, 2009, to Second Amended and Restated Collaboration and License Agreement, dated November 30, 2005, with Genentech, Inc. (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K/A dated June 8, 2009 and incorporated by reference herein).
10.25	— Economic Development Agreement dated July 15, 2005, with the State of Texas and the Texas A&M University System (filed as Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q for the period ended September 30, 2005 and incorporated by reference herein).
10.26	— Amendment, dated April 30, 2008, to Economic Development Agreement, dated July 15, 2005, with the State of Texas and the Texas A&M University System (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K dated April 30, 2008 and incorporated by reference herein).
†10.27	— Novated and Restated Technology License Agreement, dated June 15, 2007, with Symphony Icon Holdings LLC and Symphony Icon, Inc. (filed as Exhibit 10.1 to the Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2007 and incorporated by reference herein).
†10.28	— Amended and Restated Research and Development Agreement, dated June 15, 2007, with Symphony Icon Holdings LLC and Symphony Icon, Inc. (filed as Exhibit 10.2 to the Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2007 and incorporated by reference herein).
†10.29	— Purchase Option Agreement, dated June 15, 2007, with Symphony Icon Holdings LLC and Symphony Icon, Inc. (filed as Exhibit 10.3 to the Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2007 and incorporated by reference herein).
†10.30	— Research Cost Sharing, Payment and Extension Agreement, dated June 15, 2007, with Symphony Icon Holdings LLC and Symphony Icon, Inc. (filed as Exhibit 10.4 to the Company’s Quarterly Report on Form 10-Q for the period ended June 30, 2007 and incorporated by reference herein).
10.31	— Credit Line Agreement, dated January 27, 2009, with UBS Bank USA (filed as Exhibit 10.1 to the Company’s Current Report on Form 8-K dated January 27, 2009 and incorporated by reference herein).
10.32	— Loan and Security Agreement, dated April 21, 2004, between Lex-Gen Woodlands, L.P. and iStar Financial Inc. (filed as Exhibit 10.18 to the Company’s Annual Report on Form 10-K for the period ended December 31, 2004 and incorporated by reference herein).

Exhibit No.	Description
10.33	— Lease Agreement, dated May 23, 2002, between Lexicon Pharmaceuticals (New Jersey), Inc. and Townsend Property Trust Limited Partnership (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended June 30, 2002 and incorporated by reference herein).
21.1	— Subsidiaries (filed as Exhibit 21.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2004 and incorporated by reference herein).
*23.1	— Consent of Independent Registered Public Accounting Firm
*24.1	— Power of Attorney (contained in signature page)
*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

* Filed herewith.

† Confidential treatment has been requested for a portion of this exhibit. The confidential portions of this exhibit have been omitted and filed separately with the Securities and Exchange Commission.

Signatures

Pursuant to the requirements of Section 13 or 15(d) 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: March 5, 2010

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

Date: March 5, 2010

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

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Jeffrey L. Wade and James F. Tessmer, or either of them, each with the power of substitution, his or her attorney-in-fact, to sign any amendments to this Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, here ratifying and confirming all that each of said attorneys-in-fact, or his or her substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ ARTHUR T. SANDS</u> Arthur T. Sands, M.D., Ph.D.	President and Chief Executive Officer (Principal Executive Officer)	March 5, 2010
<u>/s/ JAMES F. TESSMER</u> James F. Tessmer	Vice President, Finance and Accounting (Principal Financial and Accounting Officer)	March 5, 2010
<u>/s/ SAMUEL L. BARKER</u> Samuel L. Barker, Ph.D.	Chairman of the Board of Directors	March 5, 2010
<u>/s/ PHILIPPE J. AMOUYAL</u> Philippe J. Amouyal	Director	March 5, 2010
<u>/s/ RAYMOND DEBBANE</u> Raymond Debbane	Director	March 5, 2010
<u>/s/ ROBERT J. LEFKOWITZ</u> Robert J. Lefkowitz, M.D.	Director	March 5, 2010
<u>/s/ ALAN S. NIES</u> Alan S. Nies, M.D.	Director	March 5, 2010
<u>/s/ FRANK P. PALANTONI</u> Frank P. Palantoni	Director	March 5, 2010
<u>/s/ CHRISTOPHER J. SOBECKI</u> Christopher J. Sobecki	Director	March 5, 2010
<u>/s/ JUDITH L. SWAIN</u> Judith L. Swain, M.D.	Director	March 5, 2010

**Report of Independent
Registered Public Accounting Firm**

The Board of Directors and Stockholders
of Lexicon Pharmaceuticals, Inc.:

We have audited the accompanying consolidated balance sheets of Lexicon Pharmaceuticals, Inc. and subsidiaries as of December 31, 2009 and 2008, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2009. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Lexicon Pharmaceuticals, Inc. and subsidiaries as of December 31, 2009 and 2008, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2009, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Lexicon Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2009, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 5, 2010 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Houston, Texas
March 5, 2010

**Report of Independent
Registered Public Accounting Firm**

The Board of Directors and Stockholders
of Lexicon Pharmaceuticals, Inc.:

We have audited Lexicon Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2009, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Lexicon Pharmaceuticals, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed 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. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Lexicon Pharmaceuticals, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Lexicon Pharmaceuticals, Inc. and subsidiaries as of December 31, 2009 and 2008, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2009 and our report dated March 5, 2010 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Houston, Texas
March 5, 2010

Lexicon Pharmaceuticals, Inc.

Consolidated Balance Sheets
(In thousands, except par value)

	As of December 31,	
	2009	2008
Assets		
Current assets:		
Cash and cash equivalents	\$ 100,554	\$ 85,873
Short-term investments, including restricted investments of \$430	56,542	629
Short-term investments held by Symphony Icon, Inc.	5,417	16,610
Accounts receivable, net of allowances of \$35	815	568
Prepaid expenses and other current assets	6,356	5,487
Total current assets	169,684	109,167
Long-term investments	—	55,686
Property and equipment, net of accumulated depreciation and amortization of \$75,795 and \$71,102, respectively	58,754	65,087
Goodwill	25,798	25,798
Other assets	3,525	5,770
Total assets	<u>\$ 257,761</u>	<u>\$ 261,508</u>
Liabilities and Equity		
Current liabilities:		
Accounts payable	\$ 5,919	\$ 7,926
Accrued liabilities	5,611	6,615
Current portion of deferred revenue	942	5,672
Current portion of long-term debt	38,482	963
Total current liabilities	50,954	21,176
Deferred revenue, net of current portion	14,212	14,212
Long-term debt	28,482	29,529
Other long-term liabilities	616	764
Total liabilities	94,264	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; 900,000 and 300,000 shares authorized, respectively; 175,785 and 136,797 shares issued, respectively	176	137
Additional paid-in capital	733,874	672,838
Accumulated deficit	(570,175)	(487,395)
Treasury stock, at cost, 80 and no shares, respectively	(88)	—
Total Lexicon Pharmaceuticals, Inc. stockholders' equity	163,787	185,580
Noncontrolling interest in Symphony Icon, Inc.	(290)	10,247
Total equity	163,497	195,827
Total liabilities and equity	<u>\$ 257,761</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)

	Year Ended December 31,		
	2009	2008	2007
Revenues:			
Collaborative research	\$ 9,334	\$ 27,177	\$ 48,080
Subscription and license fees	1,366	5,144	2,038
Total revenues	10,700	32,321	50,118
Operating expenses:			
Research and development, including stock-based compensation of \$3,022, \$3,941 and \$5,150, respectively	81,238	107,232	103,237
General and administrative, including stock-based compensation of \$2,252, \$2,559 and \$2,776, respectively	19,418	21,624	21,835
Total operating expenses	100,656	128,856	125,072
Loss from operations	(89,956)	(96,535)	(74,954)
Gain (loss) on investments, net	1,173	(1,314)	—
Interest income	880	5,762	7,286
Interest expense	(2,966)	(2,691)	(2,771)
Other expense, net	(2,550)	(2,106)	(794)
Consolidated net loss before taxes	(93,419)	(96,884)	(71,233)
Income tax benefit	102	—	—
Consolidated net loss	(93,317)	(96,884)	(71,233)
Less: net loss attributable to Symphony Icon, Inc.	10,537	20,024	12,439
Net loss attributable to Lexicon Pharmaceuticals, Inc.	<u>\$ (82,780)</u>	<u>\$ (76,860)</u>	<u>\$ (58,794)</u>
Net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	<u>\$ (0.57)</u>	<u>\$ (0.56)</u>	<u>\$ (0.59)</u>
Shares used in computing net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	145,465	136,797	99,798

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	Treasury Stock	Total	Noncontrolling Interest	Total Equity
	Shares	Par Value							
Balance at December 31, 2006	77,804	\$ 78	\$ 437,180	\$ (351,741)	\$ (16)	\$ —	\$ 85,501	\$ —	\$ 85,501
Stock-based compensation	—	—	7,926	—	—	—	7,926	—	7,926
Issuance of common stock to Invus, L.P., net of fees	50,825	51	197,911	—	—	—	197,962	—	197,962
Issuance of common stock to Symphony Holdings, LLC, net of fees	7,651	8	22,793	—	—	—	22,801	—	22,801
Purchase of noncontrolling interest by preferred shareholders of Symphony Icon, Inc.	—	—	—	—	—	—	—	42,710	42,710
Issuance of common stock	516	—	892	—	—	—	892	—	892
Net loss	—	—	—	(58,794)	—	—	(58,794)	(12,439)	(71,233)
Unrealized gain on investments	—	—	—	—	12	—	12	—	12
Comprehensive loss	—	—	—	—	—	—	(58,782)	—	(71,221)
Balance at December 31, 2007	136,796	137	666,702	(410,535)	(4)	—	256,300	30,271	286,571
Stock-based compensation	—	—	6,135	—	—	—	6,135	—	6,135
Exercise of common stock options	1	—	1	—	—	—	1	—	1
Net loss	—	—	—	(76,860)	—	—	(76,860)	(20,024)	(96,884)
Unrealized gain on investments	—	—	—	—	4	—	4	—	4
Comprehensive loss	—	—	—	—	—	—	(76,856)	—	(96,880)
Balance at December 31, 2008	136,797	137	672,838	(487,395)	—	—	185,580	10,247	195,827
Stock-based compensation	—	—	5,639	—	—	—	5,639	—	5,639
Grant of restricted stock	534	—	—	—	—	—	—	—	—
Issuance of common stock, net of fees	38,333	39	55,133	—	—	—	55,172	—	55,172
Exercise of common stock options	121	—	264	—	—	—	264	—	264
Repurchase of common stock	—	—	—	—	—	(88)	(88)	—	(88)
Net loss	—	—	—	(82,780)	—	—	(82,780)	(10,537)	(93,317)
Balance at December 31, 2009	175,785	\$ 176	\$ 733,874	\$ (570,175)	\$ —	\$ (88)	\$ 163,787	\$ (290)	\$ 163,497

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

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

	Year Ended December 31,		
	2009	2008	2007
Cash flows from operating activities:			
Consolidated net loss	\$ (93,317)	\$ (96,884)	\$ (71,233)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	6,159	7,929	9,262
Impairment of fixed assets	436	—	—
Amortization of Symphony Icon purchase option	2,141	2,141	1,160
Stock-based compensation	5,274	6,500	7,926
(Gain) loss on auction rate securities (“ARS”)	(3,508)	13,374	—
(Gain) loss on ARS Rights	2,335	(12,060)	—
Changes in operating assets and liabilities:			
(Increase) decrease in receivables	(247)	1,195	(577)
(Increase) decrease in prepaid expenses and other current assets	(869)	(1,375)	255
Decrease in other assets	104	108	109
Increase (decrease) in accounts payable and other liabilities	(2,794)	(2,256)	2,619
Decrease in deferred revenue	(4,730)	(14,272)	(23,844)
Net cash used in operating activities	<u>(89,016)</u>	<u>(95,600)</u>	<u>(74,323)</u>
Cash flows from investing activities:			
Purchases of property and equipment	(369)	(2,187)	(1,900)
Proceeds from disposal of property and equipment	107	—	1
Purchases of investments held by Symphony Icon, Inc.	(4,250)	—	(44,991)
Maturities of investments held by Symphony Icon, Inc.	15,443	20,056	8,325
Purchase of short-term investments	(59,955)	(39,847)	(260,739)
Maturities of short-term investments	60,901	181,393	111,353
Net cash provided by (used in) investing activities	<u>11,877</u>	<u>159,415</u>	<u>(187,951)</u>
Cash flows from financing activities:			
Proceeds from issuance of common stock to Invus, L.P., net of fees	—	—	197,962
Proceeds from issuance of common stock to Symphony Holdings, LLC, net of fees	—	—	14,237
Proceeds from issuance of common stock, net of fees	55,436	1	892
Repurchase of common stock	(88)	—	—
Proceeds from debt borrowings	38,592	—	—
Repayment of debt borrowings	(2,120)	(881)	(815)
Proceeds from purchase of noncontrolling interest by preferred shareholders of Symphony Icon, Inc.	—	—	42,710
Net cash provided by (used in) financing activities	<u>91,820</u>	<u>(880)</u>	<u>254,986</u>
Net increase (decrease) in cash and cash equivalents	14,681	62,935	(7,288)
Cash and cash equivalents at beginning of year	85,873	22,938	30,226
Cash and cash equivalents at end of year	<u>\$ 100,554</u>	<u>\$ 85,873</u>	<u>\$ 22,938</u>
Supplemental disclosure of cash flow information:			
Cash paid for interest	\$ 2,519	\$ 2,599	\$ 2,665
Cash received related to income taxes	\$ 102	\$ —	\$ —
Supplemental disclosure of noncash investing and financing activities:			
Common stock issued for purchase option in conjunction with Symphony Icon financing	\$ —	\$ —	\$ 8,564
Unrealized gain on investments	\$ —	\$ 4	\$ 12

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

Lexicon Pharmaceuticals, Inc.**Notes to Consolidated Financial Statements****December 31, 2009****1. Organization and Operations**

Lexicon Pharmaceuticals, Inc. (“Lexicon” or the “Company”) is a Delaware corporation incorporated on July 7, 1995. Lexicon was organized to discover the functions and pharmaceutical utility of genes and use those gene function discoveries in the discovery and development of pharmaceutical products for the treatment of human disease.

Lexicon has financed its operations from inception primarily through sales of common and preferred stock, payments received under collaboration and alliance agreements, database subscription agreements, government grants and contracts and technology licenses, and financing obtained under debt and lease arrangements. The Company’s future success is dependent upon many factors, including, but not limited to, its ability to discover and develop pharmaceutical products for the treatment of human disease, establish additional collaboration and license agreements, achieve milestones under such agreements, obtain and enforce patents and other proprietary rights in its discoveries, comply with federal and state regulations, and maintain sufficient capital to fund its activities. As a result of the aforementioned factors and the related uncertainties, there can be no assurance of the Company’s future success.

2. Summary of Significant Accounting Policies

Basis of Presentation: 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”), of which the Company is the primary beneficiary. The Company has therefore consolidated the financial condition and results of operations of Symphony Icon. Intercompany transactions and balances are eliminated in consolidation.

Certain amounts in the prior year’s financial statements have been reclassified to conform to the current year presentation. These include the reclassification of \$1.3 million and \$1.1 million of patent-related legal costs from research and development expense to general and administrative expense on the consolidated statements of operations for the years ended December 31, 2008 and 2007, respectively.

Use of Estimates: The preparation of financial statements in conformity with U. S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the period. Actual results could differ from those estimates.

Cash, Cash Equivalents and Short-Term Investments: Lexicon considers all highly-liquid investments with original maturities of three months or less to be cash equivalents. As of December 31, 2009, short-term investments consist of certificates of deposit, auction rate securities and auction rate security rights (“ARS Rights”) obtained from UBS AG, the investment bank that sold Lexicon the auction rate securities it currently holds (see Note 4). As of December 31, 2008, short-term investments consisted of certificates of deposit. The certificates of deposits are classified as available-for-sale securities and are carried at fair value, based on quoted market prices of the securities. The Company views its available-for-sale securities as available for use in current operations regardless of the stated maturity date of the security. Unrealized gains and losses on such securities are reported as a separate component of stockholders’ equity. Net realized gains and losses, interest and dividends are included in interest income. Lexicon has elected to classify its auction rate securities and ARS Rights as trading securities, which requires recording these securities at fair value. The cost of securities sold is based on the specific identification method.

Restricted Cash and Investments: Lexicon is required to maintain restricted cash or investments to collateralize standby letters of credit for the lease on its office and laboratory facilities in Hopewell, New Jersey (see Note 11). As of December 31, 2009 and 2008, restricted cash and investments were \$0.4 million.

Long-Term Investments: Lexicon classifies its investments as either current or long-term based upon the investments' contractual maturities and Lexicon's intent and ability to convert such instruments to cash within one year. As of December 31, 2008, long-term investments consisted of auction rate securities and ARS Rights. Lexicon has elected to classify its long-term investments as trading securities, which requires recording these securities at fair value.

Accounts Receivable: Lexicon records trade accounts receivable in the normal course of business related to the sale of products or services. The allowance for doubtful accounts takes into consideration such factors as historical write-offs, the economic climate and other factors that could affect collectibility. Write-offs are evaluated on a case by case basis.

Concentration of Credit Risk: Lexicon's cash equivalents, investments and accounts receivable represent potential concentrations of credit risk. The Company attempts to minimize potential concentrations of risk in cash equivalents and investments by placing investments in high-quality financial instruments. The Company's accounts receivable are unsecured and are concentrated in pharmaceutical and biotechnology companies located in the United States, Europe and Japan. The Company has not experienced any significant credit losses to date. In 2009, customers in the United States and Europe represented 75% and 25% of revenue, respectively. In 2008, customers in the United States and Europe represented 68% and 32% of revenue, respectively. In 2007, customers in the United States, Europe and Japan represented 66%, 29% and 5% of revenue, respectively. At December 31, 2009, management believes that the Company has no significant concentrations of credit risk.

Segment Information and Significant Customers: Lexicon operates in one business segment, which primarily focuses on the discovery of the functions and pharmaceutical utility of genes and the use of those gene function discoveries in the discovery and development of pharmaceutical products for the treatment of human disease. Substantially all of the Company's revenues have been derived from drug discovery alliances, target validation collaborations for the development and, in some cases, analysis of the physiological effects of genes altered in knockout mice, technology licenses, subscriptions to its databases, government grants and contracts and compound library sales. In 2009, Bristol-Myers Squibb Company, N.V. Organon and Taconic Farms, Inc. represented 31%, 23% and 21% of revenues, respectively. In 2008, Bristol-Myers Squibb, Organon and Genentech, Inc. represented 32%, 29% and 13% of revenues, respectively. In 2007, Organon, Bristol-Myers Squibb and the Texas Enterprise Fund represented 27%, 23% and 22% of revenues, respectively.

Property and Equipment: Property and equipment are carried at cost and depreciated using the straight-line method over the estimated useful life of the assets which ranges from three to 40 years. Maintenance, repairs and minor replacements are charged to expense as incurred. Leasehold improvements are amortized over the shorter of the estimated useful life or the remaining lease term. Significant renewals and betterments are capitalized.

Impairment of Long-Lived Assets: Long-lived assets and certain identifiable intangible assets to be held and used are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable. Determination of recoverability is based on an estimate of undiscounted future cash flows resulting from the use of the asset and its eventual disposition. In the event that such cash flows are not expected to be sufficient to recover the carrying amount of the assets, the assets are written down to their estimated fair values.

Goodwill Impairment: Goodwill is not amortized, but is tested at least annually for impairment at the reporting unit level. The Company has determined that the reporting unit is the single operating segment disclosed in its current financial statements. Impairment is the condition that exists when the carrying amount of goodwill exceeds its implied fair value. The first step in the impairment process is to determine the fair value of the reporting unit and then compare it to the carrying value, including goodwill. If the fair value exceeds the carrying value, no further action is required and no impairment loss is recognized. Additional impairment assessments may be performed on an interim basis if the Company encounters events or changes in circumstances that would indicate that, more likely than not, the carrying value of goodwill has been impaired. There was no impairment of goodwill in 2009, 2008 or 2007.

Revenue Recognition: Revenues are recognized when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectibility is reasonably assured. Payments received in advance under these arrangements are recorded as deferred revenue until earned. Revenues are earned from drug discovery and development collaborations, target validation collaborations, database subscriptions, technology licenses, and government grants and contracts. 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 for the purpose of accounting for these arrangements.

Upfront fees under drug discovery and development collaborations are recognized as revenue on a straight-line basis over the estimated period of service, generally the contractual research term, as this period is Lexicon's best estimate of the period over which the services will be rendered, to the extent they are non-refundable. Lexicon has determined that the level of effort it performs to meet its obligations is fairly constant throughout the estimated periods of service. As a result, Lexicon has determined that it is appropriate to recognize revenue from such agreements on a straight-line basis, as management believes this reflects how the research is provided during the initial period of the agreement. When it becomes probable that a collaborator will extend the research period, Lexicon adjusts the revenue recognition method as necessary based on the level of effort required under the agreement for the extension period.

Research funding under these alliances is recognized as services are performed to the extent they are non-refundable, either on a straight-line basis over the estimated service period, generally the contractual research term, or as contract research costs are incurred. Milestone-based fees are recognized upon completion of specified milestones according to contract terms. Payments received under target validation collaborations and government grants and contracts are recognized as revenue as Lexicon performs its obligations related to such research to the extent such fees are non-refundable. Non-refundable technology license fees are recognized as revenue upon the grant of the license when performance is complete and there is no continuing involvement.

The Company analyzes its multiple element arrangements to determine whether the elements can be separated and accounted for individually as separate units of accounting. An element of a contract can be accounted for separately if the delivered elements have standalone value to the collaborator and the fair value of any undelivered elements is determinable through objective and reliable evidence. If an element is considered to have standalone value but the fair value of any of the undelivered items cannot be determined, all elements of the arrangement are recognized as revenue over the period of performance for such undelivered items or services.

Research and Development Expenses: Research and development expenses consist of costs incurred for company-sponsored as well as collaborative research and development activities. These costs include direct and research-related overhead expenses and are expensed as incurred. Technology license fees for technologies that are utilized in research and development and have no alternative future use are expensed when incurred.

Stock-Based Compensation: The Company recognizes compensation expense in its statement of operations for share-based payments, including stock options issued to employees, based on their fair values on the date of the grant, with the compensation expense recognized over the period in which an employee is required to provide service in exchange for the stock award. Stock-based compensation expense is recognized on a straight-line basis. As of December 31, 2009, stock-based compensation cost for all outstanding unvested options was \$6.8 million, which is expected to be recognized over a weighted-average period of 1.2 years.

The fair value of stock options is estimated at the date of grant using the Black-Scholes method. The Black-Scholes option-pricing model requires the input of subjective assumptions. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options. For purposes of determining the fair value of stock options, the Company segregates its options into two homogeneous groups, based on exercise and post-vesting employment termination behaviors, resulting in a change in the assumptions used for expected option lives and forfeitures. Expected volatility is based on the historical volatility in the Company's stock price. The following weighted-average assumptions were used for options granted in the years ended December 31, 2009, 2008 and 2007, respectively:

	<u>Expected Volatility</u>	<u>Risk-free Interest Rate</u>	<u>Expected Term</u>	<u>Estimated Forfeitures</u>	<u>Dividend Rate</u>
December 31, 2009:					
Employees	78%	1.9%	5	24%	0%
Officers and non-employee directors	77%	2.7%	8	7%	0%
December 31, 2008:					
Employees	66%	2.9%	6	22%	0%
Officers and non-employee directors	66%	3.8%	9	6%	0%
December 31, 2007:					
Employees	66%	4.5%	6	21%	0%
Officers and non-employee directors	67%	4.6%	9	4%	0%

Net Loss per Common Share: Net loss per common share is computed using the weighted average number of shares of common stock outstanding. Shares associated with stock options and warrants are not included because they are antidilutive.

Comprehensive Loss: Comprehensive loss is comprised of net loss and unrealized gains and losses on available-for-sale securities. Comprehensive loss is reflected in the consolidated statements of stockholders' equity. Comprehensive loss equals net loss for the year ended December 31, 2009. There were no unrealized gains for the year ended December 31, 2009. There were unrealized gains of \$4,000 and \$12,000 in the years ended December 31, 2008 and 2007, respectively.

3. Recent Accounting Pronouncements

In September 2006, the Financial Accounting Standards Board ("FASB") issued a new accounting pronouncement regarding fair value measurements (formerly Statement of Financial Standards ("SFAS") No. 157, "Fair Value Measurements"). The pronouncement, found under FASB Accounting Standards Codification ("ASC") Topic 820, defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles, and expands disclosures about fair value measurements. This pronouncement 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 pronouncement does not require any new fair value measurements. More specifically, this pronouncement 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. This pronouncement was effective January 1, 2008 for financial assets and liabilities and January 1, 2009 for non-financial assets and liabilities. The adoption of this pronouncement did not have an effect on the Company's financial position or results of operations.

In December 2007, the FASB issued a new accounting pronouncement regarding business combinations (formerly SFAS No. 141(Revised), "Business Combinations"), which 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 pronouncement, found under FASB ASC Topic 805, 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. This pronouncement 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 pronouncement. This pronouncement 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 this pronouncement did not have an effect on the Company's financial position or results of operations.

In December 2007, the FASB issued a new pronouncement regarding noncontrolling interests (formerly SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements") to improve the relevance, comparability, and transparency of the financial information that a reporting entity provides in its consolidated financial statements. This pronouncement, found under FASB ASC Topic 810, 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 pronouncement 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 pronouncement 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 pronouncement 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 this pronouncement 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 a new pronouncement regarding collaborative arrangements (formerly Emerging Issues Task Force 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 this pronouncement, found under FASB ASC Topic 808, did not have an effect on the Company’s financial position or results of operations, other than requiring additional disclosures.

In May 2009, the FASB issued a new accounting pronouncement regarding subsequent events (formerly SFAS No. 165, “Subsequent Events”), which provides guidance to establish general standards of accounting for, and disclosures of, events that occur after the balance sheet date but before financial statements are issued or are available to be issued. This pronouncement, found under FASB ASC Topic 855, is effective for interim or fiscal periods ending after June 15, 2009. The Company’s adoption of this pronouncement did not have an effect on its financial position or results of operations.

In June 2009, the FASB issued a new accounting pronouncement regarding variable interest entities (formerly SFAS No. 167, “Amendments to FASB Interpretation No. 46(R)”), which changes how a company determines when an entity that is insufficiently capitalized or is not controlled through voting (or similar rights) should be consolidated. The determination of whether a company is required to consolidate an entity is based on, among other things, an entity’s purpose and design and a company’s ability to direct the activities that most significantly impacts the entity’s economic performance. The impact of the adoption of this pronouncement may be applied retrospectively with a cumulative-effect adjustment to retained earnings as of the beginning of the first year restated, or through a cumulative-effect adjustment on the date of adoption. This pronouncement, found under FASB ASC Topic 810, is effective for fiscal years, and interim periods within those fiscal years, beginning on or after November 15, 2009. The Company has determined that upon adoption of this pronouncement on January 1, 2010, Lexicon will no longer be the primary beneficiary of Symphony Icon, and therefore will no longer include the financial condition and results of operations of Symphony Icon in its consolidated financial statements. As of December 31, 2009, Symphony Icon had \$6.2 million in current assets, \$5.4 million of which was short-term investments, and \$4.2 million in current liabilities. On January 1, 2010, Lexicon will record a cumulative-effect adjustment to retained earnings (accumulated deficit) as a result of adopting this pronouncement, which will increase the accumulated deficit balance by \$1.5 million.

In October 2009, the FASB issued Accounting Standards Update (“ASU”) No. 2009-13, “Multiple-Deliverable Revenue Arrangements”, which amends FASB ASC Topic 605. ASU No. 2009-13 addresses how to determine whether an arrangement involving multiple deliverables contain more than one unit of accounting and how to allocate consideration to each unit of accounting in the arrangement. This pronouncement replaces all references to fair value as the measurement criteria with the term selling price and establishes a hierarchy for determining the selling price of a deliverable. The pronouncement also eliminates the use of the residual value method for determining the allocation of arrangement consideration, and requires additional disclosures. This pronouncement should be applied prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010, with early adoption permitted. This pronouncement’s impact on accounting for revenue arrangements is dependent upon arrangements entered into on or after that time.

4. Cash and Cash Equivalents and Investments

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

	As of December 31, 2009			Estimated Fair Value
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	
(in thousands)				
Cash and cash equivalents	\$ 100,554	\$ —	\$ —	\$ 100,554
Securities maturing within one year:				
Certificates of deposit	508	—	—	508
ARS rights	—	9,725	—	9,725
Securities maturing after ten years:				
Auction rate securities	56,175	—	(9,866)	46,309
Total short-term investments	<u>\$ 56,683</u>	<u>\$ 9,725</u>	<u>\$ (9,866)</u>	<u>\$ 56,542</u>
Short-term investments held by Symphony Icon, Inc.:				
Cash and cash equivalents	5,417	—	—	5,417
Total short-term investments held by Symphony Icon, Inc.	<u>\$ 5,417</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 5,417</u>
Total cash and cash equivalents and investments	<u>\$ 162,654</u>	<u>\$ 9,725</u>	<u>\$ (9,866)</u>	<u>\$ 162,513</u>
	As of December 31, 2008			Estimated Fair Value
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	
(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 year ended December 31, 2009. There were realized gains of \$123,000 for the year ended December 31, 2008. There were no realized gains or losses for the year ended December 31, 2007.

At December 31, 2009, Lexicon held \$56.2 million (par value), with an estimated fair value of \$46.3 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. However, 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 modified its current investment strategy to reallocate its investments more into U.S. treasury securities and U.S. treasury-backed money market investments.

At December 31, 2009 and 2008, 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 \$46.3 million and \$43.6 million as of December 31, 2009 and 2008, respectively, 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 December 31, 2009 and 2008. The underlying sources of these assumptions are volatile and the assumptions are subject to change as those sources and market conditions change. If the current market conditions deteriorate further, or a recovery in market values does not occur, Lexicon may be required to record additional unrealized or realized losses in future quarters.

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 \$56.2 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 UBS Bank USA, an affiliate of UBS, at no net cost up to 75% of the market value of the securities, as determined by UBS Bank USA, which loans would become payable upon the investment bank's purchase or sale of the securities (see Note 9).

The enforceability of the ARS Rights results in a separate asset that is measured at its fair value. Lexicon elected to measure the ARS Rights under a fair value option, which permits entities to choose, at certain election dates, to measure eligible items at fair value. As a result of accepting the ARS Rights, Lexicon has elected to classify the ARS Rights and reclassify its investments in auction rate securities as trading securities from available-for-sale 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. 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.

5. 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 sheet are categorized by the level of objectivity associated with the inputs used to measure their fair value. The following levels are 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. Based on market conditions and the unavailability of Level 1 inputs, during the year ended December 31, 2008, the Company adopted a valuation methodology that involves discounted cash flow analysis and secondary market data for its auction rate securities. Accordingly, the investments in auction rate securities changed from Level 1 to Level 3 within the fair value levels described above. In addition, the Company obtained ARS Rights from UBS, and the ARS Rights have been recorded at fair value as determined using a discounted cash flow valuation methodology. The following tables provide the fair value measurements of applicable Company financial assets according to the fair value levels defined above as of December 31, 2009 and 2008.

Financial Assets at Fair Value As of December 31, 2009				
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Cash and cash equivalents	\$ 100,554	\$ —	\$ —	\$ 100,554
Short-term investments	508	—	56,034	56,542
Short-term investments held by Symphony Icon, Inc.	5,417	—	—	5,417
Total cash and cash equivalents and investments	\$ 106,479	\$ —	\$ 56,034	\$ 162,513

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 years ended December 31, 2008 and 2009.

	Short-term Investments	Long-term Investments	Total
	(in thousands)		
Balance at December 31, 2007	\$ —	\$ —	\$ —
Unrealized losses included in earnings as loss on investments	—	(13,374)	(13,374)
Unrealized gains included in earnings as gain on investments	—	12,060	12,060
Net sales and settlements	—	(21,050)	(21,050)
Transfers into Level 3	—	78,050	78,050
Balance at December 31, 2008	—	55,686	55,686
Unrealized gains included in earnings as gain on investments	350	823	1,173
Net sales and settlements	(725)	(100)	(825)
Reclassification from long-term to short-term investments	56,409	(56,409)	—
Balance at December 31, 2009	\$ 56,034	\$ —	\$ 56,034

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.

6. Property and Equipment

Property and equipment at December 31, 2009 and 2008 are as follows:

	Estimated Useful Lives In Years	As of December 31,	
		2009	2008
		(in thousands)	
Computers and software	3-5	\$ 10,986	\$ 12,328
Furniture and fixtures	5-7	7,634	7,648
Laboratory equipment	3-7	39,047	39,385
Leasehold improvements	7-10	9,786	9,756
Buildings	15-40	63,532	63,508
Land	—	3,564	3,564
Total property and equipment		134,549	136,189
Less: Accumulated depreciation and amortization		(75,795)	(71,102)
Net property and equipment		\$ 58,754	\$ 65,087

7. Income Taxes

Lexicon recognizes deferred tax liabilities and assets for the expected future tax consequences of events that have been recognized differently in the financial statements and tax returns. Under this method, deferred tax liabilities and assets are determined based on the difference between the financial statement carrying amounts and tax bases of liabilities and assets using enacted tax rates and laws in effect in the years in which the differences are expected to reverse. Deferred tax assets are evaluated for realization based on a more-likely-than-not criteria in determining if a valuation allowance should be provided.

The components of Lexicon's deferred tax assets (liabilities) at December 31, 2009 and 2008 are as follows:

	As of December 31,	
	2009	2008
	(in thousands)	
Deferred tax assets:		
Net operating loss carryforwards	\$ 161,020	\$ 159,917
Research and development tax credits	29,440	25,000
Capitalized research and development	29,870	—
Stock-based compensation	9,778	8,815
Deferred revenue	5,296	6,368
Other	1,699	902
Total deferred tax assets	<u>237,103</u>	<u>201,002</u>
Deferred tax liabilities:		
Other	(413)	(397)
Total deferred tax liabilities	(413)	(397)
Less: valuation allowance	(236,690)	(200,605)
Net deferred tax assets	<u>\$ —</u>	<u>\$ —</u>

At December 31, 2009, Lexicon had both federal and state NOL carryforwards of approximately \$443.3 million and \$110.8 million, respectively. The federal and state NOL carryforwards begin to expire in 2011. The Company has R&D tax credit carryforwards of approximately \$29.4 million expiring beginning in 2011. Utilization of the NOL and R&D credit carryforwards may be subject to a significant annual limitation due to ownership changes that have occurred previously or could occur in the future provided by Section 382 of the Internal Revenue Code. Based on the federal tax law limits and the Company's cumulative loss position, Lexicon concluded it was appropriate to establish a full valuation allowance for its net deferred tax assets until an appropriate level of profitability is sustained. During the year ended December 31, 2009, the valuation allowance increased \$36.1 million, primarily due to the Company's current year net loss. Lexicon recorded an income tax benefit of \$102,000 in the year ended December 31, 2009. As of December 31, 2008 and 2007, the Company did not have any unrecognized tax benefits.

The Company is primarily subject to U.S. federal and New Jersey and Texas state income taxes. The tax years 1995 to current remain open to examination by U.S. federal authorities and 2004 to current remain open to examination by state authorities. The Company's policy is to recognize interest and penalties related to income tax matters in income tax expense. As of December 31, 2009 and 2008, the Company had no accruals for interest or penalties related to income tax matters.

8. 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 period 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. There was no change in the carrying amount of goodwill for the year ended December 31, 2009. Goodwill 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. The Company performed an impairment test of goodwill on its annual impairment assessment date. This test did not result in an impairment of goodwill.

9. Debt Obligations

Mortgage Loan: In April 2004, Lexicon purchased its existing laboratory and office buildings and animal facilities in The Woodlands, Texas with proceeds from a \$34.0 million third-party mortgage financing and \$20.8 million in cash. The mortgage loan has a ten-year term with a 20-year amortization and bears interest at a fixed rate of 8.23%. The buildings and land that serve as collateral for the mortgage loan are included in property and equipment at \$63.5 million and \$3.6 million, respectively, before accumulated depreciation.

The fair value of Lexicon's mortgage loan approximates its carrying value. The fair value of Lexicon's mortgage loan is estimated using discounted cash flow analysis, based on the Company's estimated current incremental borrowing rate.

UBS Credit Line: In January 2009, Lexicon entered into a credit line agreement with UBS Bank USA that provides, as of December 31, 2009, up to an aggregate amount of \$37.5 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, providing Lexicon with rights to require UBS to purchase its \$56.2 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. The interest rate paid on the line of credit is less than Lexicon's current incremental borrowing rate. As of December 31, 2009, Lexicon had \$37.4 million outstanding under this credit line.

The following table includes the aggregate future principal payments of the Company's long-term debt as of December 31, 2009:

	For the Year Ending December 31 (in thousands)
2010	\$ 38,482
2011	1,138
2012	1,230
2013	1,343
2014	24,771
	66,964
Less current portion	(38,482)
Total long-term debt	<u>\$ 28,482</u>

10. 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 its 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 has 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 (a) \$81 million, if the Purchase Option is exercised before June 15, 2010 and (b) \$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 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 \$3.1 million and \$5.3 million is recorded in other assets in the accompanying consolidated balance sheets as of December 31, 2009 and 2008, respectively, and the amortization expense of \$2.1 million is recorded in other expense, net in the accompanying consolidated statements of operations for each of the years ended December 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 will report 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. Through December 2009, Symphony Icon's board of directors has requested the Company to pay Symphony Icon \$4.3 million under this agreement, all of which has been paid through December 31, 2009, and management expects that additional funding will be needed in the future.

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 progressed, this line item was reduced by Symphony Icon's losses, which were \$10.5 million, \$20.0 million and \$12.4 million in the years ended December 31, 2009, 2008 and 2007, respectively. The reductions to the noncontrolling interest in Symphony Icon have been reflected in Lexicon's consolidated statements of operations using a similar caption and has reduced the amount of Lexicon's reported net loss. Through December 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.

As discussed in Note 3, Recent Accounting Pronouncements, Lexicon has determined that upon adoption of SFAS 167 on January 1, 2010, Lexicon will no longer be the primary beneficiary of Symphony Icon, and therefore will no longer include the financial condition and results of operations of Symphony Icon in its consolidated financial statements.

11. Commitments and Contingencies

Operating Lease Obligations: A Lexicon subsidiary leases laboratory and office space in Hopewell, New Jersey under an agreement that 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 obligation of its subsidiary under this lease. 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 December 31, 2009 and 2008. Additionally, Lexicon leases certain equipment under operating leases.

Rent expense for all operating leases was approximately \$2.4 million, \$2.5 million and \$2.5 million for the years ended December 31, 2009, 2008 and 2007, respectively. The following table includes non-cancelable, escalating future lease payments for the facility in New Jersey:

	<u>For the Year Ending</u> <u>December 31</u> <u>(in thousands)</u>
2010	\$ 2,502
2011	2,539
2012	2,593
2013	1,296
Total	<u>\$ 8,930</u>

Employment Agreements: Lexicon has entered into employment agreements with certain of its corporate officers. Under the agreements, each officer receives a base salary, subject to adjustment, with an annual discretionary bonus based upon specific objectives to be determined by the compensation committee. The employment agreements are at-will and contain non-competition agreements. The agreements also provide for a termination clause, which requires either a six or 12-month payment based on the officer's salary and payment of a specified portion of the officer's bonus target for such year, in the event of termination.

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

12. Agreements with Invus, L.P.

On June 17, 2007, Lexicon entered into a series of agreements with Invus, L.P. ("Invus") under which Invus made an investment in the Company's common stock and has certain other rights described below.

Lexicon entered into a Securities Purchase Agreement (the "Securities Purchase Agreement") with Invus under which the Company issued and sold to Invus 50,824,986 shares in an initial investment (the "Initial Investment") and permitted Invus to require, subject to specific conditions, that the Company conduct certain rights offerings (the "Rights Offerings"). In connection with the Securities Purchase Agreement, Lexicon also entered into a Warrant Agreement with Invus under which the Company issued to Invus warrants (the "Warrants") to purchase 16,498,353 shares of its common stock at an exercise price of \$3.0915 per share. The Warrant Agreement provided that, to the extent not previously exercised, the Warrants would terminate concurrently with the closing of the Initial Investment.

Initial Investment: In the Initial Investment, which closed on August 28, 2007, Invus purchased 50,824,986 shares of Lexicon's common stock for a total of approximately \$205.4 million, resulting in net proceeds of \$198.0 million after deducting fees and expenses of approximately \$7.5 million. Simultaneously with the closing of the Initial Investment, all Warrants issued under the Warrant Agreement terminated unexercised according to their terms. This purchase resulted in Invus' ownership of 40% of the post-transaction outstanding shares of Lexicon's common stock.

Rights Offerings: For a period of one year following November 28, 2009 (the "First Rights Offering Trigger Date"), Invus will have the right to require Lexicon to make a pro rata offering of non-transferable rights to acquire common stock to all of its stockholders (the "First Rights Offering") in an aggregate amount to be designated by Invus not to exceed \$172.3 million, minus the aggregate net proceeds received in all Qualified Offerings (as defined below), if any, completed prior to the First Rights Offering Trigger Date. The price per share of the First Rights Offering would be designated by Invus in a range between \$4.50 and a then-current average market price of the Company's common stock. All stockholders would have oversubscription rights with respect to the First Rights Offering, and Invus would be required to purchase its pro rata portion of the First Rights Offering.

For a period of one year following the date (the “Second Rights Offering Trigger Date”) which is 90 days after (a) Invus’ exercise of its right to require us to conduct the First Rights Offering or (b) if Invus does not exercise its right to require Lexicon to conduct the First Rights Offering, the First Rights Offering Trigger Date, Invus would have the right to require the Company to make a pro rata offering of non-transferable rights to acquire common stock to all of its stockholders (the “Second Rights Offering” and, together with the First Rights Offering, the “Rights Offerings”) in an aggregate amount to be designated by Invus not to exceed an amount equal to \$344.5 million, minus the amount of the First Rights Offering, minus the aggregate net proceeds received in all Qualified Offerings, if any, completed prior to the Second Rights Offering Trigger Date. The price per share of the Second Rights Offering would be designated by Invus in a range between \$4.50 and a then-current average market price of the Company’s common stock. All stockholders would have oversubscription rights with respect to the Second Rights Offering, and Invus would be required to purchase its pro rata portion of the Second Rights Offering. Lexicon has determined that the First Rights Offering and the Second Rights Offering should be treated as equity instruments, and accordingly has not recorded a liability for the future settlement of any rights offerings.

A “Qualified Offering” consists of a bona fide financing transaction comprised of Lexicon’s issuance of shares of its common stock at a price greater than \$4.50 per share, which transaction is not entered into in connection with the Company’s entry into any other transaction (including, a collaboration or license for the discovery, development or commercialization of pharmaceutical products) involving the purchaser of such common stock. Lexicon has not completed any such Qualified Offering. Until the later of the completion of the Second Rights Offering or the expiration of the 90-day period following the Second Rights Offering Trigger Date, Lexicon will not, without Invus’ prior consent, issue any shares of its common stock at a price below \$4.50 per share, subject to certain exceptions.

In connection with the Securities Purchase Agreement, Lexicon entered into a Stockholders’ Agreement with Invus under which Invus (a) has specified rights with respect to designation of directors and to participate in future equity issuances by the Company, (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 the Company’s common stock, is entitled to certain minority protections.

13. Other Capital Stock Agreements

Common Stock: In October 2009, Lexicon completed the public offering and sale of 38,333,332 shares of its common stock at a price of \$1.50 per share, resulting in net proceeds of \$55.2 million, after deducting underwriting discounts and commissions of \$1.9 million and offering expenses of \$0.4 million. Invus purchased 15,455,145 of these shares. All of the net proceeds of this offering are reflected as issuance of common stock in the accompanying financial statements.

14. Stock Options and Warrants

Stock Option Plans

Equity Incentive Plan: In September 1995, Lexicon adopted the 1995 Stock Option Plan, which was subsequently amended and restated in February 2000 as the 2000 Equity Incentive Plan, and later amended and restated in April 2009 as the Equity Incentive Plan (the “Equity Incentive Plan”).

The Equity Incentive Plan provides for the grant of incentive stock options to employees and nonstatutory stock options to employees, directors and consultants of the Company. The plan also permits the grant of stock bonus awards, restricted stock awards, phantom stock awards and stock appreciation rights. Incentive and nonstatutory stock options have an exercise price of 100% or more of the fair market value of our common stock on the date of grant. The purchase price of restricted stock awards may not be less than 85% of fair market value. However, the plan administrator may award stock bonus awards in consideration of past services or phantom stock awards without a purchase payment. Shares may be subject to a repurchase option in the discretion of the plan administrator. Most options granted under the Equity Incentive Plan become vested and exercisable over a period of four years; however some have been granted with different vesting schedules. Options granted under the Equity Incentive Plan have a term of ten years from the date of grant.

The total number of shares of common stock that may be issued pursuant to stock awards under the Equity Incentive Plan shall not exceed in the aggregate 35,000,000 shares. No more than 3,500,000 shares may be issued pursuant to awards other than stock options and stock appreciation rights. As of December 31, 2009, an aggregate of 35,000,000 shares of common stock had been reserved for issuance, options to purchase 16,739,448 shares were outstanding, 4,310,864 shares had been issued upon the exercise of stock options and 552,073 shares had been issued pursuant to stock bonus awards or restricted stock awards granted under the Equity Incentive Plan.

Non-Employee Directors' Stock Option Plan: In February 2000, Lexicon adopted the 2000 Non-Employee Directors' Stock Option Plan, which was subsequently amended and restated in April 2009 as the Non-Employee Directors' Stock Option Plan, (the "Directors' Plan") to provide for the automatic grant of nonstatutory stock options to non-employee directors of the Company. Under the Directors' Plan, non-employee directors receive an initial option to purchase 30,000 shares of common stock. In addition, on the day following each of the Company's annual meetings of stockholders, each non-employee director who has been a director for at least six months is automatically granted an option to purchase 10,000 shares of common stock, and the non-employee chairman of the board of directors is automatically granted an option to purchase 20,000 shares of common stock. Initial option grants become vested and exercisable over a period of five years and annual option grants become vested over a period of 12 months from the date of grant. Options granted under the Directors' Plan have an exercise price equal to the fair market value of the Company's common stock on the date of grant and a term of ten years from the date of grant.

The total number of shares of common stock that may be issued pursuant to stock awards under the Directors' Plan shall not exceed in the aggregate 1,200,000 shares. As of December 31, 2009, an aggregate of 1,200,000 shares of common stock had been reserved for issuance, options to purchase 604,000 shares were outstanding, and none had been exercised under the Directors' Plan.

Coelacanth Corporation 1999 Stock Option Plan: Lexicon assumed the Coelacanth Corporation 1999 Stock Option Plan (the "Coelacanth Plan") and the outstanding stock options under the plan in connection with its July 2001 acquisition of Coelacanth Corporation. The Company will not grant any further options under the plan. As outstanding options under the plan expire or terminate, the number of shares authorized for issuance under the plan will be correspondingly reduced.

The purpose of the plan was to provide an opportunity for employees, directors and consultants of Coelacanth to acquire a proprietary interest, or otherwise increase their proprietary interest, in Coelacanth as an incentive to continue their employment or service. Both incentive and nonstatutory options are outstanding under the plan. Most outstanding options vest over time and expire ten years from the date of grant. The exercise price of options awarded under the plan was determined by the plan administrator at the time of grant. In general, incentive stock options have an exercise price of 100% or more of the fair market value of Coelacanth common stock on the date of grant and nonstatutory stock options have an exercise price as low as 85% of fair market value on the date of grant.

As of December 31, 2009, an aggregate of 30,142 shares of common stock had been reserved for issuance, options to purchase 2,225 shares of common stock were outstanding and 27,917 shares of common stock had been issued upon the exercise of stock options issued under the Coelacanth Plan.

Stock Option Activity: The following is a summary of option activity under Lexicon's stock option plans:

(in thousands, except exercise price data)	2009		2008		2007	
	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at beginning of year	16,898	\$ 5.13	16,351	\$ 5.65	15,815	\$ 5.99
Granted	4,864	1.44	4,077	2.08	2,952	3.85
Exercised	(121)	2.18	(1)	1.89	(516)	1.80
Expired	(3,372)	5.66	(2,663)	4.32	(1,137)	8.11
Forfeited	(923)	2.46	(866)	3.03	(763)	4.68
Outstanding at end of year	<u>17,346</u>	4.16	<u>16,898</u>	5.13	<u>16,351</u>	5.65
Exercisable at end of year	<u>10,462</u>	\$ 5.69	<u>11,410</u>	\$ 6.28	<u>11,946</u>	\$ 6.21

The weighted average estimated grant date fair value of options granted during the years ended December 31, 2009, 2008 and 2007 were \$1.04, \$1.43 and \$2.71, respectively. The total intrinsic value of options exercised during the years ended December 31, 2009, 2008 and 2007 were \$600, \$300 and \$982,000, respectively. The weighted average remaining contractual term of options outstanding and exercisable was 6.1 and 4.4 years, respectively, as of December 31, 2009. At December 31, 2009, the aggregate intrinsic value of the outstanding options and the exercisable options was \$1,344,000 and \$51,000, respectively.

The following is a summary of the nonvested options as of December 31, 2009, and changes during the year then ended, under Lexicon's stock option plans:

	<u>Options</u> (in thousands)	<u>Weighted Average Grant Date Fair Value</u>
Nonvested at beginning of year	5,488	\$ 1.91
Granted	4,864	1.04
Vested	(2,546)	1.99
Canceled	(923)	1.71
Nonvested at end of year	<u>6,883</u>	<u>\$ 1.30</u>

Restricted Stock Activity:

During the year ended December 31, 2009, Lexicon granted its officers restricted stock bonus awards under the Equity Incentive Plan in lieu of cash bonus awards. The shares subject to the awards vested 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 year ended December 31, 2009:

	<u>Shares</u> (in thousands)	<u>Weighted Average Grant Date Fair Value</u>
Outstanding at December 31, 2008	—	\$ —
Granted	534	1.45
Vested	(267)	1.45
Forfeited	(12)	1.45
Nonvested at December 31, 2009	<u>255</u>	<u>\$ 1.45</u>

Warrants

In connection with the acquisition of Coelacanth in July 2001, Lexicon assumed Coelacanth's outstanding warrants to purchase 25,169 shares of common stock. The warrants expired on March 31, 2009. The fair value of the warrants was included in the total purchase price for the acquisition.

Aggregate Shares Reserved for Issuance

As of December 31, 2009, an aggregate of 17,345,673 shares of common stock were reserved for issuance upon exercise of outstanding stock options and 14,005,665 additional shares were available for future grants under Lexicon's stock option plans. The Company has a policy of using either authorized and unissued shares or treasury shares, including shares acquired by purchase in the open market or in private transactions, to satisfy equity award exercises.

15. Benefit Plans

Lexicon has established an Annual Profit Sharing Incentive Plan (the "Profit Sharing Plan"). The purpose of the Profit Sharing Plan is to provide for the payment of incentive compensation out of the profits of the Company to certain of its employees. Participants in the Profit Sharing Plan are entitled to an annual cash bonus equal to their proportionate share (based on salary) of 15 percent of the Company's annual pretax income, if any.

Lexicon maintains a defined-contribution savings plan under Section 401(k) of the Internal Revenue Code. The plan covers substantially all full-time employees. Participating employees may defer a portion of their pretax earnings, up to the Internal Revenue Service annual contribution limit. Beginning in 2000, the Company was required to match employee contributions according to a specified formula. The matching contributions totaled \$614,000, \$828,000 and \$862,000 in the years ended December 31, 2009, 2008 and 2007, respectively. Company contributions are vested based on the employee's years of service, with full vesting after four years of service.

16. Collaboration and License Agreements

Lexicon has derived substantially all of its revenues from drug discovery and development alliances, 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.

Drug Discovery and Development Alliances

Bristol-Myers Squibb. Lexicon established an alliance with Bristol-Myers Squibb Company in December 2003 to discover, develop and commercialize small molecule drugs in the neuroscience field. Lexicon initiated the alliance with a number of drug discovery programs at various stages of development and has used its gene knockout technology to identify additional drug targets with promise in the neuroscience field. For those targets that were selected for the alliance, Lexicon and Bristol-Myers Squibb are working together, on an exclusive basis, to identify, characterize and carry out the preclinical development of small molecule drugs, and share equally both in the costs and in the work attributable to those efforts. As drugs resulting from the collaboration enter clinical trials, Bristol-Myers Squibb will have the first option to assume full responsibility for clinical development and commercialization.

Lexicon received an upfront payment of \$36.0 million and research funding of \$30.0 million in the initial three years of the agreement, or the target function discovery term. This funding was in consideration for access to Lexicon's technology and infrastructure and for Lexicon's production and specified phenotypic analysis of knockout mice in support of the target function discovery portion of the alliance. Bristol-Myers Squibb extended the target discovery term of the alliance in May 2006 for an additional two years in exchange for \$20.0 million in additional research funding over the two year extension, which commenced in January 2007. This additional funding was in consideration for additional research and phenotypic analysis of knockout mice which supplemented the phenotypic analysis conducted in the initial target function discovery term. Lexicon will also receive clinical and regulatory milestone payments ranging, depending on the timing and extent of its efforts in the alliance, up to \$76 million for each drug developed by Bristol-Myers Squibb under the alliance. Lexicon will earn royalties on sales of drugs commercialized by Bristol-Myers Squibb. The party with responsibility for the clinical development and commercialization of drugs resulting from the alliance will bear the costs of those efforts. The target discovery portion of the alliance expired in October 2009. The original upfront payment of \$36.0 million and research funding of \$30.0 million was recognized over the initial estimated period of service of three years. The additional research funding of \$20.0 million was recognized over the estimated performance period of two and one-half additional years subject to the extension, beginning in January 2007. Lexicon recorded a change in estimate that increased net loss and net loss per share by \$1.7 million and \$0.01 per share, respectively, in the year ended December 31, 2008 due to an increase in estimated performance period of this extension.

The upfront payment of \$36.0 million was not related to a deliverable with standalone value at inception, and Lexicon accounted for the entire agreement with Bristol-Myers Squibb as a single unit of accounting. Milestone payments received are in consideration for additional performance. Therefore, Lexicon recognizes revenue from such milestone payments upon achievement of the milestones.

Revenue recognized under this agreement was \$1.7 million, \$9.3 million and \$10.0 million for the years ended December 31, 2009, 2008 and 2007, respectively.

Genentech. Lexicon established an alliance with Genentech, Inc. in December 2002 to discover novel therapeutic proteins and antibody targets. Lexicon used its target validation technologies to discover the functions of secreted proteins and potential antibody targets identified through Genentech's internal drug discovery research. Lexicon received an upfront payment of \$9.0 million and funding under a \$4.0 million loan in 2002. In addition, Lexicon received \$24.0 million in performance payments for its work in the collaboration as it was completed. The upfront payment of \$9.0 million was recognized over the initial estimated period of service of three years, which was subsequently extended to three and one-half years.

In November 2005, Lexicon and Genentech expanded the alliance to include additional research, as well as the development and commercialization of new biotherapeutic drugs. Lexicon received a total of \$25.0 million in upfront and milestone payments and research funding for the three-year advanced research portion of the expanded alliance. In the expanded alliance, Lexicon conducted advanced research on a broad subset of targets validated in the original collaboration using Lexicon's proprietary gene knockout technology. The upfront payment under the new agreement was recognized over the estimated period of service of three years.

Lexicon has exclusive rights to develop and commercialize biotherapeutic drugs for two of the targets included in the alliance, while Genentech has exclusive rights to develop and commercialize biotherapeutic drugs for the other targets. Lexicon retains certain other rights to discoveries made in the alliance, including non-exclusive rights, along with Genentech, for the development and commercialization of small molecule drugs addressing the targets included in the alliance. Lexicon will receive clinical and regulatory milestone payments ranging, depending on the extent of Lexicon's efforts in the alliance, up to \$25 million for each drug target for which Genentech develops a biotherapeutic drug under the alliance. Lexicon will also earn royalties on sales of biotherapeutic drugs commercialized by Genentech under the alliance. Genentech is entitled to receive milestone payments and royalties on sales of biotherapeutic drugs which Lexicon develops or commercializes under the alliance. The research collaboration term under the agreement expired in November 2008.

The upfront payment was not related to a deliverable with standalone value at inception and Lexicon accounted for the entire agreement with Genentech as a single unit of accounting. Milestone payments received are in consideration for additional performance. Therefore, Lexicon recognizes revenue from such milestone payments upon achievement of the milestones.

Revenue recognized under this agreement was \$4.0 million and \$4.3 million for the years ended December 31, 2008 and 2007, respectively.

Schering-Plough/Organon. Lexicon established a drug discovery alliance with N.V. Organon in May 2005 to discover, develop and commercialize novel biotherapeutic drugs. In the alliance, Lexicon created and analyzed knockout mice for 300 genes selected by the parties that encode secreted proteins or potential antibody targets, including two of Lexicon's preexisting drug discovery programs. Lexicon and Organon agreed to equally share costs of and responsibility for research, preclinical and clinical activities, jointly determine the manner in which collaboration products would be commercialized, and equally benefit from product revenue. Organon, formerly a subsidiary of Akzo Nobel N.V., was acquired by Schering-Plough Corporation in November 2007, which subsequently merged with Merck & Co., Inc. in November 2009. In February 2010, Lexicon entered into a revised collaboration and license agreement with Organon and Schering Corporation, acting through its Schering-Plough Research Institute division, amending the terms of the alliance to provide that Schering-Plough will assume the full cost of research activities conducted by either party in the alliance, and will assume the full cost of and responsibility for preclinical, clinical and commercialization activities with respect to biotherapeutic drugs resulting from the alliance. Lexicon is entitled to receive clinical and regulatory milestone payments of up to \$39 million for each drug target for which Schering-Plough develops a biotherapeutic drug under the alliance. Lexicon will also earn royalties on sales of biotherapeutic drugs commercialized by Schering-Plough under the alliance.

Lexicon received an upfront payment of \$22.5 million from Organon in exchange for access to Lexicon's drug target discovery capabilities and the exclusive right to co-develop biotherapeutic drugs for the 300 genes selected for the alliance. Organon has also provided Lexicon with annual research funding totaling \$30.0 million for its 50% share of the alliance's costs during this same period. The target discovery portion of the alliance expired in December 2009.

The upfront payment of \$22.5 million was not related to a deliverable with standalone value at inception, and Lexicon accounted for the entire agreement with Organon as a single unit of accounting. Revenue from the upfront payment is recognized on a straight-line basis over the four-year period that Lexicon expects to perform its obligations under the target function discovery portion of the alliance. Revenue from the research funding fees is recognized as Lexicon performs its obligations under the target function discovery portion of the alliance, reflecting the gross amount billed to Organon on the basis of shared costs during the period. Milestone payments received are in consideration for additional performance. Therefore, Lexicon recognizes revenue from such milestone payments upon achievement of the milestones.

Revenue recognized under this agreement was \$2.3 million, \$9.2 million and \$13.5 million for the years ended December 31, 2009, 2008 and 2007, respectively.

Takeda. Lexicon established an alliance with Takeda Pharmaceutical Company Limited in July 2004 to discover new drugs for the treatment of high blood pressure. In the collaboration, Lexicon used its gene knockout technologies to identify drug targets that control blood pressure. Takeda is responsible for the screening, medicinal chemistry, preclinical and clinical development and commercialization of drugs directed against targets selected for the alliance, and bears all related costs. Lexicon received an upfront payment of \$12.0 million from Takeda for the initial, three-year term of the agreement. This payment was in consideration for access to Lexicon's technology and infrastructure during the target discovery portion of the alliance. In addition, Lexicon received \$6.5 million in research milestone payments for targets selected for therapeutic development. Lexicon is entitled to receive clinical development and product launch milestone payments of up to \$29 million for each product commercialized from the collaboration. Lexicon will also earn royalties on sales of drugs commercialized by Takeda. The target discovery portion of the alliance, which ended in 2007, had a term of three years.

The upfront payment of \$12.0 million was not related to a deliverable with standalone value at inception, and Lexicon accounted for the entire agreement with Takeda as a single unit of accounting. Revenue was recognized from the upfront payment on a straight-line basis over the three-year period Lexicon expected to perform its obligations under the agreement. Milestone payments received are in consideration for additional performance. Therefore, Lexicon recognizes revenue from such milestone payments upon achievement of the milestones.

Revenue recognized under this agreement was \$2.3 million for the year ended December 31, 2007.

Other Collaborations and Licenses

Texas Institute for Genomic Medicine. In July 2005, Lexicon received a \$35.0 million award from the Texas Enterprise Fund for the creation of a knockout mouse embryonic stem cell library containing 350,000 cell lines for the Texas Institute for Genomic Medicine ("TIGM") using Lexicon's proprietary gene trapping technology, which Lexicon completed in 2007. Lexicon also equipped TIGM with the bioinformatics software required for the management and analysis of data relating to the library. The Texas Enterprise Fund also awarded \$15.0 million to the Texas A&M University System for the creation of facilities and infrastructure to house the library. Revenue recognized under this agreement was \$0.1 million and \$10.6 million for the years ended December 31, 2008 and 2007, respectively. Lexicon recorded a change in estimate that increased revenue and therefore decreased net loss and net loss per share by \$3.7 million and \$0.04 per share, respectively, in the year ended December 31, 2007 due to a reduction in the estimated performance period of this agreement.

Under the terms of the award, Lexicon is responsible for the creation of a specified number of jobs beginning in 2012, reaching an aggregate of 1,616 new jobs in Texas by December 31, 2016. Lexicon will obtain credits based on funding received by TIGM and certain related parties from sources other than the State of Texas that it may offset against its potential liability for any job creation shortfalls. Lexicon will also obtain credits against future jobs commitment liabilities for any surplus jobs it creates. Subject to these credits, if Lexicon fails to create the specified number of jobs, the state may require Lexicon to repay \$2,415 for each job Lexicon falls short. Lexicon's maximum aggregate exposure for such payments, if Lexicon fails to create any new jobs, is approximately \$14.2 million, without giving effect to any credits to which Lexicon may be entitled. Lexicon has recorded this obligation as deferred revenue in the accompanying consolidated balance sheets. The Texas A&M University System, together with TIGM, has independent job creation obligations and is obligated for an additional period to maintain an aggregate of 5,000 jobs, inclusive of those Lexicon creates.

Taconic Farms. Lexicon established a collaboration with Taconic Farms, Inc. in November 2005 for the marketing, distribution and licensing of certain lines of knockout mice and entered into an expanded collaboration with Taconic in July 2009. Under the terms of the collaboration, Lexicon is presently making available through Taconic more than 3,600 distinct lines of knockout mice, and in some cases, phenotypic data relating to such lines of knockout mice, for use by pharmaceutical and biotechnology companies, academic and non-profit institutions and other researchers. Lexicon receives license fees and royalties from payments received by Taconic from customers obtaining access to knockout mice and any related phenotypic data. The Company received payments totaling \$2.8 million through December 31, 2009. Revenue recognized under these agreements was \$2.2 million, \$747,000 and \$558,000 for the years ended December 31, 2009, 2008 and 2007, respectively.

Bristol-Myers Squibb. Lexicon entered into drug target validation agreements with Bristol-Myers Squibb Company in December 2004, January 2006, October 2006, November 2007 and February 2009, under which Lexicon is developing mice and phenotypic data for certain genes requested by Bristol-Myers Squibb under those agreements. The collaboration term under each of these agreements will expire after the final phenotypic data set has been delivered by Lexicon under that agreement. The Company received payments totaling \$10.6 million under these agreements through December 31, 2009. Revenue recognized under these agreements was \$1.1 million, \$1.1 million and \$1.7 million for the years ended December 31, 2009, 2008 and 2007, respectively.

Genentech. Lexicon entered into a drug target validation agreement with Genentech, Inc. in February 2007. Under this agreement, Lexicon developed mice with mutations requested by Genentech. The collaboration term under the agreement has expired as the final delivery of the selected mice has been performed by Lexicon. The Company received payments totaling \$1.1 million under the agreement through December 31, 2009. Revenue recognized under this agreement was \$26,000, \$0.1 million and \$0.9 million for the years ended December 31, 2009, 2008 and 2007, respectively.

17. Selected Quarterly Financial Data

The table below sets forth certain unaudited statements of operations data, and net loss per common share data, for each quarter of 2009 and 2008:

(in thousands, except per share data)

	Quarter Ended			
	March 31	June 30	September 30	December 31
	(Unaudited)			
2009				
Revenues	\$ 4,168	\$ 2,989	\$ 2,131	\$ 1,412
Loss from operations	\$ (23,570)	\$ (22,782)	\$ (21,757)	\$ (21,847)
Net loss attributable to Lexicon Pharmaceuticals, Inc.	\$ (21,560)	\$ (20,073)	\$ (19,142)	\$ (22,005)
Net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	\$ (0.16)	\$ (0.15)	\$ (0.14)	\$ (0.13)
Shares used in computing net loss per common share	137,075	137,331	137,313	169,872
2008				
Revenues	\$ 8,893	\$ 9,566	\$ 7,512	\$ 6,350
Loss from operations	\$ (24,438)	\$ (26,386)	\$ (24,822)	\$ (20,889)
Net loss attributable to Lexicon Pharmaceuticals, Inc.	\$ (17,950)	\$ (20,034)	\$ (23,459)	\$ (15,417)
Net loss attributable to Lexicon Pharmaceuticals, Inc. per common share, basic and diluted	\$ (0.13)	\$ (0.15)	\$ (0.17)	\$ (0.11)
Shares used in computing net loss per common share	136,795	136,796	136,796	136,797

STOCK OPTION AGREEMENT

(Non-Employee Director Stock Option)

THIS STOCK OPTION AGREEMENT (this "Agreement"), effective as of _____ (the "Grant Date"), is by and between LEXICON PHARMACEUTICALS, INC., a Delaware corporation (the "Company"), and _____ ("Optionee").

To carry out the purposes of the Lexicon Pharmaceuticals, Inc. Non-Employee Directors' Stock Option Plan (the "Plan"), by providing Optionee the opportunity to purchase shares of Common Stock, par value \$0.001 per share, of the Company ("Stock"), and in consideration of the mutual agreements and other matters set forth herein and in the Plan, the Company and Optionee hereby agree as follows:

1. **Grant of Option.** The Company hereby grants to Optionee the right and option (the "Option") to purchase all or any part of an aggregate of **[10,000 or 20,000 (for annual grant)] [30,000 (for initial grant)]** shares of Stock, on the terms and conditions set forth in this Agreement and in the Plan. The Option shall be treated as a non-statutory stock option and not as an "incentive stock option" within the meaning of section 422(b) of the Internal Revenue Code of 1986, as amended (the "Code").

2. **Exercise Price.** The price at which Optionee may purchase Stock upon exercise of the Option (the "Exercise Price") shall be \$_____ per share, which has been determined to be the Fair Market Value (as defined in the Plan) of the Stock on the Grant Date. The Exercise Price is subject to adjustment under certain circumstances as provided in the Plan.

3. **Term.** The Option shall expire on the 10th anniversary of the Grant Date, subject to earlier termination under the circumstances specified in Section 8 of this Agreement.

4. **Exercisability and Vesting.** Subject to the terms and conditions set forth in this Agreement and the Plan, the Option may be exercised, in whole or in part, at any time and from time to time during the term of the Option, to purchase the number of shares of Stock that have vested and become exercisable in accordance with this Agreement. The Option shall vest and become exercisable with respect to **[1/12 of the total number of shares of Stock subject to the Option each month after grant for 12 months after the Grant Date (Use with annual grants)] [1/60 of the total number of shares of Stock subject to the Option each month after grant for five years after the Grant Date (Use with initial grants)]**; provided that, such vesting schedule may be accelerated upon a change in control of the Company pursuant to the provisions of the Plan and; provided further, that, upon the termination of Optionee's Continuous Service (as defined in the Plan), the Option shall cease to vest and shall terminate with respect to all shares of Stock that have not vested and become exercisable prior to such time.

5. **Procedures for Exercise.** Subject to the terms and conditions set forth in this Agreement and the Plan, the Option may be exercised by delivery to the Company at its principal executive office of (i) written notice addressed to the Secretary of the Company specifying the number of shares of Stock as to which the Option is being exercised and (ii) payment in full of the Exercise Price for such shares. The Exercise Price shall be paid in cash or in such other manner as may be authorized by the administrator of the Plan in accordance with the terms of the Plan. If the offering, sale and delivery of the shares of Stock issuable upon exercise of the Option have not been registered under the Securities Act of 1933 (the "Securities Act"), the Company may require Optionee, as a condition to Optionee's exercise of the Option, to enter into a stock purchase agreement containing such representations and warranties as the Company may deem necessary to permit the issuance of the Stock purchased upon exercise of the Option in compliance with the Securities Act and applicable state securities laws.

6. No Rights of Ownership in Stock Before Issuance. No person shall be entitled to the rights and privileges of stock ownership with respect to any shares of Stock issuable upon exercise of the Option until such shares have been issued in accordance with the terms of this Agreement and the Plan.

7. Non-Transferability. The Option may not be transferred by Optionee otherwise than (i) by will or the laws of descent and distribution, by instrument to an inter vivos or testamentary trust or by gift to a member of Optionee's immediate family, in each case in accordance with the terms of the Plan, or (ii) pursuant to a qualified domestic relations order (as defined in Title I of the Employee Retirement Income Security Act of 1974, as amended, or the rules thereunder).

8. Termination of Option. If Optionee's Continuous Service is terminated for any reason other than the Disability (as defined in the Plan) or death of Optionee, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of such termination, for a period of six months after the date of such termination (subject to extension as provided in the Plan, but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which six-month period this Agreement and Optionee's right to exercise the Option shall terminate. If Optionee's Continuous Service is terminated because of Disability of Optionee, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of such termination, for a period of 12 months after the date of such termination (but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which 12-month period this Agreement and Optionee's right to exercise the Option shall terminate. If (i) Optionee's Continuous Service is terminated because of death of Optionee or (ii) Optionee dies within the three-month period after the termination of Optionee's Continuous Service for a reason other than death, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of death, for a period of 18 months after the date of such termination (but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which 18-month period this Agreement and the right to exercise the Option shall terminate. Notwithstanding the foregoing, if the Optionee is removed from the Company's Board of Directors for cause in accordance with the Company's Bylaws, this Agreement and Optionee's right to exercise any portion of the Option, whether or not vested, shall terminate at the commencement of business on the date of such removal.

9. Withholding of Tax. To the extent that the Company is required under applicable federal or state income tax laws to withhold any amount on account of any present or future tax imposed as a result of the exercise of the Option, Optionee shall pay the Company, at the time of such exercise, funds in an amount sufficient to permit the Company to satisfy such withholding obligations in full. If Optionee fails to pay such amount, the Company shall be authorized (i) to withhold from any cash remuneration then or thereafter payable to Optionee any tax required to be withheld or (ii) to refuse to issue or transfer any shares otherwise required to be issued pursuant to the terms of this Agreement.

10. Status of Stock. (a) Unless the offering, sale and delivery of the shares of Stock issuable upon exercise of the Option have been registered under the Securities Act, Optionee agrees that any shares of Stock purchased upon exercise of the Option shall be acquired for investment without a view to distribution, within the meaning of the Securities Act, and shall not be sold, transferred, assigned, pledged or hypothecated in the absence of an effective registration statement under the Securities Act and applicable state securities laws or an applicable exemption from the registration requirements of the Act and any applicable state securities laws. Optionee further agrees that the shares of Stock which Optionee may acquire by exercising the Option will not be sold or disposed of in any manner which would constitute a violation of any other applicable federal or state securities laws. In addition, Optionee agrees (i) that the certificates representing the shares of Stock issued under this Agreement may bear such legend or legends as the administrator of the Plan deems appropriate in order to assure compliance with applicable securities laws, and (ii) that the Company may give instruction to its transfer agent, if any, to stop transfer of the shares of Stock issued under this Agreement on the stock transfer records of the Company, if such proposed transfer would, in the opinion of counsel to the Company, constitute a violation of any applicable securities law or any such agreements.

(b) Optionee further agrees that the Option granted herein shall be subject to the requirement that if at any time the administrator of the Plan shall determine, in its discretion, that the listing, registration or qualification of the shares of Stock subject to such Option upon any securities exchange or market or under any state or federal law, or the consent or approval of any governmental regulatory body, is necessary or desirable as a condition of, or in connection with, the purchase or issuance of shares of Stock hereunder, such Option may not be exercised in whole or in part unless such listing, registration, qualification, consent or approval shall have been effected or obtained free of any conditions not reasonably acceptable to the administrator of the Plan.

11. Stock Option Plan. The Plan, a copy of which is available for inspection by Optionee or other persons entitled to exercise this Option at the Company's principal executive office during business hours, is incorporated by reference in this Agreement. The Option is subject to, and the Company and Optionee agree to be bound by, all of the terms and conditions of the Plan. In the event of a conflict between this Agreement and the Plan, the terms of the Plan shall control. Subject to the terms of the Plan, the administrator of the Plan shall have authority to construe the terms of this Agreement, and the determinations of the administrator of the Plan shall be final and binding on Optionee and the Company.

12. Binding Agreement. This Agreement shall be binding upon and inure to the benefit of any successors to the Company and all persons lawfully claiming under Optionee.

13. Governing Law. This Agreement and all actions taken hereunder shall be governed by and construed in accordance with the laws of the State of Delaware.

IN WITNESS WHEREOF, the Company has caused this Agreement to be duly executed and Optionee has executed this Agreement as of the day and year first above written.

LEXICON PHARMACEUTICALS, INC.

By:

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

OPTIONEE

[Name]

STOCK OPTION AGREEMENT

(Officer Incentive Stock Option)

THIS STOCK OPTION AGREEMENT (this “Agreement”), effective as of «GrantDate» (the “Grant Date”), is by and between LEXICON PHARMACEUTICALS, INC., a Delaware corporation (the “Company”), and «Name» (“Optionee”).

To carry out the purposes of the Lexicon Pharmaceuticals, Inc. Equity Incentive Plan (the “Plan”), by providing Optionee the opportunity to purchase shares of Common Stock, par value \$0.001 per share, of the Company (“Stock”), and in consideration of the mutual agreements and other matters set forth herein and in the Plan, the Company and Optionee hereby agree as follows:

1. **Grant of Option.** The Company hereby grants to Optionee the right and option (the “Option”) to purchase all or any part of an aggregate of «Shares» shares of Stock, on the terms and conditions set forth in this Agreement and in the Plan. The Option shall be treated as an “incentive stock option” within the meaning of section 422(b) of the Internal Revenue Code of 1986, as amended (the “Code”), to the maximum extent permitted under the Code, and as a non-statutory stock option to the extent it exceeds the limitations imposed by the Code for incentive stock options.

2. **Exercise Price.** The price at which Optionee may purchase Stock upon exercise of the Option (the “Exercise Price”) shall be \$«Price» per share, which has been determined to be the Fair Market Value (as defined in the Plan) of the Stock on the Grant Date. The Exercise Price is subject to adjustment under certain circumstances as provided in the Plan.

3. **Term.** The Option shall expire on the 10th anniversary of the Grant Date, subject to earlier termination under the circumstances specified in Section 8 of this Agreement.

4. **Exercisability and Vesting.** (a) Subject to the terms and conditions set forth in this Agreement and the Plan, the Option may be exercised, in whole or in part, at any time and from time to time during the term of the Option, to purchase the number of shares of Stock that have vested and become exercisable in accordance with this Agreement. The Option shall vest and become exercisable with respect to (i) 25% of the total number of shares of Stock subject to the Option on «VestingDate» and (ii) an additional 1/48 of the total number of shares subject to the Option each month thereafter; *provided that* such options shall become vested with respect to all remaining unvested shares in the event of a Change in Control (as defined below); and *provided further*, that, upon the termination of Optionee’s Continuous Service (as defined in the Plan), the Option shall cease to vest and shall terminate with respect to all shares of Stock that have not vested and become exercisable prior to such time.

(b) A “Change in Control” shall be deemed to have occurred if any of the following shall have taken place: (i) any “person” (as such term is used in Sections 13(d) and 14(d)(2) of the Securities Exchange Act of 1934 (the “Exchange Act”)) other than Invus, L.P. and its affiliates (collectively, “Invus”) is or becomes the “beneficial owner” (as defined in Rule 13d-3 under the Exchange Act, or any successor provisions thereto), directly or indirectly, of securities of the Company representing 35% or more of the combined voting power of the Company’s then-outstanding voting securities; (ii) Invus becomes the “beneficial owner” (as defined in Rule 13d-3 under the Exchange Act, or any successor provisions thereto), directly or indirectly, of securities of the Company representing 50% or more of the combined voting power of the Company’s then-outstanding voting securities; (iii) the approval by the stockholders of the Company of a reorganization, merger, or consolidation, in each case with respect to which persons who were stockholders of the Company immediately prior to such reorganization, merger or consolidation do not, immediately thereafter, own or control more than 50% of the combined voting power of the reorganized, merged or consolidated Company’s then-outstanding securities entitled to vote generally in the election of directors in substantially the same proportions as their ownership of the Company’s outstanding voting securities prior to such reorganization, merger or consolidation; (iv) a liquidation or dissolution of the Company or the sale of all or substantially all of the Company’s assets; (v) in the event any person is elected by the stockholders of the Company to the Company’s board of directors (the “Board”) who has not been nominated for election by a majority of the Board or any duly appointed committee thereof; or (vi) following the election or removal of directors, a majority of the Board consists of individuals who were not members of the Board two years before such election or removal, unless the election of each director who is not a director at the beginning of such two-year period has been approved in advance by directors representing at least a majority of the directors then in office who were directors at the beginning of the two-year period. The Compensation Committee of the Board, in its discretion, may deem any other corporate event affecting the Company to be a “Change in Control” hereunder.

5. Procedures for Exercise. Subject to the terms and conditions set forth in this Agreement and the Plan, the Option may be exercised by delivery to the Company at its principal executive office of (i) written notice addressed to the Secretary of the Company specifying the number of shares of Stock as to which the Option is being exercised and (ii) payment in full of the Exercise Price for such shares. The Exercise Price shall be paid in cash or in such other manner as may be authorized by the administrator of the Plan in accordance with the terms of the Plan. If the offering, sale and delivery of the shares of Stock issuable upon exercise of the Option have not been registered under the Securities Act of 1933 (the "Securities Act"), the Company may require Optionee, as a condition to Optionee's exercise of the Option, to enter into a stock purchase agreement containing such representations and warranties as the Company may deem necessary to permit the issuance of the Stock purchased upon exercise of the Option in compliance with the Securities Act and applicable state securities laws.

6. No Rights of Ownership in Stock Before Issuance. No person shall be entitled to the rights and privileges of stock ownership with respect to any shares of Stock issuable upon exercise of the Option until such shares have been issued in accordance with the terms of this Agreement and the Plan.

7. Non-Transferability. The Option may not be transferred by Optionee otherwise than by will or the laws of descent and distribution or pursuant to a qualified domestic relations order (as defined in Title I of the Employee Retirement Income Security Act of 1974, as amended, or the rules thereunder).

8. Termination of Option. If Optionee's Continuous Service is terminated for any reason other than (i) the Disability (as defined in the Plan) or death of Optionee or (ii) the Company's termination of Optionee's employment without cause, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of such termination, for a period of 90 days after the date of such termination (but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which 90-day period this Agreement and Optionee's right to exercise the Option shall terminate. If Optionee's Continuous Service is terminated because of (i) the Disability or death of Optionee or (ii) the Company's termination of Optionee's employment without cause, the Option shall remain exercisable, with respect to the shares of Stock that had vested under the terms of this Agreement before the date of such termination, for a period of one year after the date of such termination (but in no event later than the expiration date of the Option specified in Section 3 of this Agreement), following which one-year period this Agreement and Optionee's right to exercise the Option shall terminate; provided that the Option shall not be treated as an "incentive stock option" within the meaning of the Code if the Option is exercised more than 90 days following the termination of Optionee's Continuous Service as a result of the Company's termination of Optionee's employment without cause. Notwithstanding the foregoing, if the employment of Optionee by the Company is terminated for cause, this Agreement and Optionee's right to exercise any portion of the Option, whether or not vested, shall terminate at the commencement of business on the date of such termination. For purposes of this Agreement, "cause" shall mean (x) the breach of a material obligation of Optionee under any agreement between Optionee and the Company, (y) gross negligence or willful or intentional wrongdoing or misconduct on the part of Optionee, or (z) Optionee's conviction of a felony offense or a crime involving moral turpitude.

9. Withholding of Tax. To the extent that the Company is required under applicable federal or state income tax laws to withhold any amount on account of any present or future tax imposed as a result of the exercise of the Option, Optionee shall pay the Company, at the time of such exercise, funds in an amount sufficient to permit the Company to satisfy such withholding obligations in full. If Optionee fails to pay such amount, the Company shall be authorized (i) to withhold from any cash remuneration then or thereafter payable to Optionee any tax required to be withheld or (ii) to refuse to issue or transfer any shares otherwise required to be issued pursuant to the terms of this Agreement.

10. Status of Stock. (a) Unless the offering, sale and delivery of the shares of Stock issuable upon exercise of the Option have been registered under the Securities Act, Optionee agrees that any shares of Stock purchased upon exercise of the Option shall be acquired for investment without a view to distribution, within the meaning of the Securities Act, and shall not be sold, transferred, assigned, pledged or hypothecated in the absence of an effective registration statement under the Securities Act and applicable state securities laws or an applicable exemption from the registration requirements of the Act and any applicable state securities laws. Optionee further agrees that the shares of Stock which Optionee may acquire by exercising the Option will not be sold or disposed of in any manner which would constitute a violation of any other applicable federal or state securities laws. In addition, Optionee agrees (i) that the certificates representing the shares of Stock issued under this Agreement may bear such legend or legends as the administrator of the Plan deems appropriate in order to assure compliance with applicable securities laws, and (ii) that the Company may give instruction to its transfer agent, if any, to stop transfer of the shares of Stock issued under this Agreement on the stock transfer records of the Company, if such proposed transfer would, in the opinion of counsel to the Company, constitute a violation of any applicable securities law or any such agreements.

(b) Optionee further agrees that the Option granted herein shall be subject to the requirement that if at any time the administrator of the Plan shall determine, in its discretion, that the listing, registration or qualification of the shares of Stock subject to such Option upon any securities exchange or market or under any state or federal law, or the consent or approval of any governmental regulatory body, is necessary or desirable as a condition of, or in connection with, the purchase or issuance of shares of Stock hereunder, such Option may not be exercised in whole or in part unless such listing, registration, qualification, consent or approval shall have been effected or obtained free of any conditions not reasonably acceptable to the administrator of the Plan.

11. Stock Option Plan. The Plan, a copy of which is available for inspection by Optionee or other persons entitled to exercise this Option at the Company's principal executive office during business hours, is incorporated by reference in this Agreement. The Option is subject to, and the Company and Optionee agree to be bound by, all of the terms and conditions of the Plan. In the event of a conflict between this Agreement and the Plan, the terms of the Plan shall control. Subject to the terms of the Plan, the administrator of the Plan shall have authority to construe the terms of this Agreement, and the determinations of the administrator of the Plan shall be final and binding on Optionee and the Company.

12. Binding Agreement. This Agreement shall be binding upon and inure to the benefit of any successors to the Company and all persons lawfully claiming under Optionee.

13. Governing Law. This Agreement and all actions taken hereunder shall be governed by and construed in accordance with the laws of the State of Delaware.

IN WITNESS WHEREOF, the Company has caused this Agreement to be duly executed and Optionee has executed this Agreement as of the day and year first above written.

LEXICON PHARMACEUTICALS, INC.

By:

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

OPTIONEE

[Name]

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- (1) Registration Statement (Form S-8 No. 333-41532) pertaining to the Equity Incentive Plan and to the Non-Employee Directors' Stock Option Plan of Lexicon Pharmaceuticals, Inc.,
- (2) Registration Statement (Form S-8 No. 333-66380) pertaining to the Coelacanth Corporation 1999 Stock Option Plan of Lexicon Pharmaceuticals, Inc.,
- (3) Registration Statement (Form S-3 No. 333-67294) of Lexicon Pharmaceuticals, Inc.,
- (4) Registration Statement (Form S-3 No. 333-108855) of Lexicon Pharmaceuticals, Inc.,
- (5) Registration Statement (Form S-3 No. 333-111821) of Lexicon Pharmaceuticals, Inc.,
- (6) Registration Statement (Form S-3 No. 333-144933) of Lexicon Pharmaceuticals, Inc., and
- (7) Registration Statement (Form S-3 No. 333-161696) of Lexicon Pharmaceuticals, Inc.

of our report dated March 5, 2010, with respect to the consolidated financial statements of Lexicon Pharmaceuticals, Inc. incorporated herein by reference, and our report dated March 5, 2010, with respect to the effectiveness of internal control over financial reporting of Lexicon Pharmaceuticals, Inc., included in this annual report of Lexicon Pharmaceuticals, Inc. (Form 10-K) for the year ended December 31, 2009.

/s/ ERNST & YOUNG LLP

Houston, Texas
March 5, 2010

CERTIFICATIONS

I, Arthur T. Sands, certify that:

1. I have reviewed this Annual Report on Form 10-K 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 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: March 5, 2010

/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 Annual Report on Form 10-K 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 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: March 5, 2010

/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 Annual Report on Form 10-K for the year ended December 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 5th day of March, 2010.

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