LEXICON PHARMACEUTICALS, INC./DE
Form 10-K
March 06, 2009

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

FORM 10-K

(Mark One)

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

For the Fiscal Year Ended December 31, 2008

or

q 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	76-0474169
(State or Other Jurisdiction of Incorporation or Organization)	(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	Name of Each Exchange on which Registered
Common Stock, par value $0.001 per share	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 þ

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 þ

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 þ 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. þ

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 þ 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 þ

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 $127.5 million, based on the closing price of the common stock on the Nasdaq Global Market on June 30, 2008 of $1.60 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 2, 2009, 137,330,254 shares of common stock were outstanding.

Documents Incorporated by Reference

Certain sections of the registrant's definitive proxy statement relating to the registrant's 2009 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, 2008, are incorporated by reference into Part III of this annual report on Form 10-K.

Lexicon Pharmaceuticals, Inc.

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The Lexicon name and logo, LexVision® and OmniBank® are registered trademarks and Genome5000™, e-Biology™ and 10TO10™ are trademarks 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," "shou 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.

PART I

Item 1. Business

Overview

Lexicon Pharmaceuticals, Inc. is a biopharmaceutical company focused on the discovery and development of breakthrough treatments for human disease. We have used our proprietary gene knockout technology and an integrated platform of advanced medical technologies to 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 are presently conducting a Phase 2 clinical trial of our most advanced drug candidate, LX1031, an orally-delivered small molecule compound that we are developing as a potential treatment for irritable bowel syndrome and other gastrointestinal disorders. We have completed Phase 1 clinical trials and intend in the near term to initiate a Phase 2 clinical trial of LX1032, an orally-delivered small molecule compound that we are developing as a potential treatment for the symptoms associated with carcinoid syndrome. We are conducting Phase 1 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 LX4211, an orally-delivered small molecule compound that we are developing as a potential treatment for Type 2 diabetes. 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 substantially 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 and commercializing drug candidates from such programs internally and to collaborate with third parties with respect to the discovery, development and commercialization of small molecule and biotherapeutics drug candidates for other targets, particularly when the collaboration provides us with access to expertise and resources that we do not possess internally or are complementary to our own. We have established drug discovery and development collaborations with a number of leading pharmaceutical and biotechnology companies which have enabled us to generate near-term cash while offering us the potential to retain economic participation in products our collaborators develop through the collaboration. In addition, we have established collaborations and license agreements with other leading pharmaceutical and biotechnology companies, research institutes and academic institutions under which we receive fees and, in some cases, are eligible to receive milestone and royalty payments, in return for granting access to some of our technologies and discoveries for use in the other organization’s own drug discovery efforts.

Lexicon Pharmaceuticals, Inc. 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:

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Drug Program	Potential Indication	Stage of Development
		Preclinical Research / Preclinical Development / IND / Phase 1 / Phase 2 / Phase 3
LX1031	Irritable Bowel Syndrome	
LX1032	Carcinoid Syndrome	
LX2931	Rheumatoid Arthritis	
LX4211	Type 2 Diabetes	
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 initiated a Phase 2 clinical trial in December 2008 to evaluate the safety and tolerability of LX1031 and its effects on symptoms associated with irritable bowel syndrome. The Phase 2 clinical trial is expected to include 150 patients suffering from either diarrhea-predominant or mixed irritable bowel syndrome. We have completed a Phase 1a single ascending-dose study, an initial Phase 1b multiple ascending-dose study and an additional Phase 1b dose escalation study of LX1031. 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, the primary metabolite of serotonin and a biomarker of serotonin production.

We designed LX1031 to reduce production of serotonin in the gastrointestinal tract and therefore reduce the sertonin 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. In our Genome5000 program, 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 Capital Partners, L.P.

LX1032

LX1032 is an orally-delivered small molecule compound that we are developing for the potential treatment of symptoms associated with carcinoid syndrome. We intend to initiate a Phase 2 clinical trial in the near-term to evaluate the safety and tolerability of LX1032 and its effects on symptoms associated with carcinoid syndrome. We have 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 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 Symphony Capital Partners, L.P.

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 drug-drug interaction study in January 2009 of LX2931 in rheumatoid arthritis patients who are also taking methotrexate, a standard therapy. We have 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 1b clinical trial, LX2931 was well tolerated at all doses and results 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. In the Phase 1a clinical trials, LX2931 produced a dose-dependent decrease in absolute lymphocyte counts with a maximal effect correlating with a plateauing of systemic exposure 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.

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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. In our Genome5000 program, 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.

LX4211

LX4211 is an orally-delivered small molecule compound that we are developing for the potential treatment of Type 2 diabetes. We initiated a Phase 1 clinical trial in January 2009 to evaluate the safety, tolerability and pharmacokinetics of LX4211.

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. In our Genome5000 program, our scientists discovered that mice lacking SGLT2 have improved glucose tolerance and increased urinary glucose excretion. In preclinical studies, animals treated with LX4211 demonstrated increased urinary glucose excretion and decreased blood HbA1c levels, a marker of average blood sugar levels, with urinary glucose excretion returning to baseline after treatment was discontinued.

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 its 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. In our Genome5000 program, our scientists found 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. Finally, through the end of 2008, 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 trapping and gene targeting 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.

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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 will contribute 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

Gene Targeting. Our gene targeting technology, which is covered by nine issued patents that we have licensed, 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.

Gene Trapping. Our gene trapping technology, which is covered by ten issued patents that we own, is a high-throughput method of generating knockout mouse clones that we invented. 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 trapping and gene targeting 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.

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We employ portions of the same physiological analysis technology platform that we used in the discovery of gene function 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. Finally, 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 medicinal chemistry operations are housed in a state-of-the-art 76,000 square foot facility in Princeton, New Jersey. Our lead optimization chemistry groups are organized around specific discovery targets and work closely with their therapeutic area counterparts in our facilities in The Woodlands, Texas. The medicinal chemists optimize lead compounds in order to select clinical candidates with the desired absorption, distribution, metabolism, excretion and physicochemical characteristics. We have the capability to profile our compounds using portions of the same battery of in vivo assays that we used to characterize our drug targets. This provides us with valuable detailed information relevant to the selection of the highest quality compounds for preclinical and clinical development.

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 intend to develop and commercialize drug candidates from certain of our small molecule drug programs internally and retain exclusive rights to the benefits of such programs and to collaborate with third parties with respect to the discovery, development and commercialization of small molecule and biotherapeutics drug candidates for other targets, particularly when the collaboration provides us with access to expertise and resources that we do not possess internally or are complementary to our own.

Drug Discovery and Development Collaborations

Bristol-Myers Squibb Company. We established a drug discovery alliance with Bristol-Myers Squibb in December 2003 to discover, develop and commercialize small molecule drugs in the neuroscience field. We initiated the alliance with a number of neuroscience drug discovery programs at various stages of development and are using our gene knockout technology to identify additional drug targets with promise in the neuroscience field. For those targets that are 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 an upfront payment under the agreement and received research funding during the initial three years of the agreement. Bristol-Myers Squibb extended the target discovery term of the alliance in May 2006 in exchange for its payment to us of additional research funding. We will also receive clinical and regulatory milestone payments for each drug target for which Bristol-Myers Squibb develops a drug under the alliance and royalties on sales of drugs commercialized by Bristol-Myers Squibb. The target discovery portion of the alliance is expected to be completed in June 2009.

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Genentech, Inc. We established a drug discovery alliance with Genentech 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 may develop and commercialize biotherapeutic drugs for up to six of these targets, with Genentech having exclusive rights to develop and commercialize biotherapeutic drugs for the other targets. Genentech retains an option on the potential development and commercialization of the biotherapeutic drugs that we develop from the alliance under a cost and profit sharing arrangement, while we have certain conditional rights to co-promote drugs on a worldwide basis. 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 upfront payments in connection with both the initiation of the original collaboration and its expansion and received performance payments for our work in the collaboration as it was completed. We are also entitled to receive milestone payments and royalties on sales of therapeutic proteins and antibodies for which Genentech obtains exclusive rights. Genentech is entitled to receive milestone payments and royalties on sales of therapeutic proteins and antibodies for which we obtain exclusive rights. The collaboration term under the agreement expired in November 2008.

N.V. Organon. We established a drug discovery alliance with Organon in May 2005 to discover, develop and commercialize novel biotherapeutic drugs. In the collaboration, we are creating and analyzing knockout mice for up to 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 are jointly selecting targets for further research and development and will equally share costs and responsibility for research, preclinical and clinical activities. We and Organon will jointly determine the manner in which collaboration products will be commercialized and will equally benefit from product revenue. If fewer than five development candidates are designated under the collaboration, our share of costs and product revenue will be proportionally reduced. We will receive a milestone payment for each development candidate in excess of five. Either party may decline to participate in further research or development efforts with respect to a collaboration product, in which case such party will receive royalty payments on sales of such collaboration product rather than sharing in revenue. Organon will have principal responsibility for manufacturing biotherapeutic products resulting from the collaboration for use in clinical trials and for worldwide sales. Organon, formerly a subsidiary of Akzo Nobel N.V., was acquired by Schering-Plough Corporation in November 2007.

We received an upfront payment under the agreement and received committed research funding during the first two years of the agreement. The target discovery portion of the alliance has an expected term of four years.

Takeda Pharmaceutical Company Limited. We established a drug discovery alliance with Takeda in July 2004 to discover new drugs for the treatment of high blood pressure. In the collaboration, we used our gene knockout technology to identify drug targets that control blood pressure. Takeda was 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 an upfront payment under the agreement and received research milestone payments for each target selected for therapeutic development. In addition, we are entitled to receive clinical development and product launch milestone payments for each product commercialized from the collaboration. We will also earn royalties on sales of drugs commercialized by Takeda. The target discovery portion of the alliance expired in July 2007.

Drug Development Financing Collaborations

Symphony Icon, Inc. 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 shares of our common stock in exchange for $15 million and an exclusive option to acquire all of the equity of Symphony Icon, thereby allowing us to reacquire the programs. The purchase option is exercisable by us at any time, in our sole discretion, until June 15, 2011 at an exercise price of (a) $72 million, if the purchase option is exercised before June 15, 2009, (b) $81 million, if the purchase option is exercised on or after the June 15, 2009 and before the June 15, 2010 and (c) $90 million, if the purchase option is exercised on or after June 15, 2010 and before June 15, 2011. The purchase option exercise price may be paid in cash or a combination of cash and common stock, at our sole discretion, provided that the common stock portion may not exceed 40% of the purchase option exercise price.

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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 such funding requirement to us will terminate on the one-year anniversary of the expiration of the purchase option, subject to limited exceptions.

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 using our proprietary gene trapping technology, which we completed in 2007. We created the library for the Texas Institute for Genomic Medicine, or TIGM, a newly formed non-profit institute whose founding members are Texas A&M University, the Texas A&M University System Health Science Center and us. TIGM researchers may also access specific cells from our current OmniBank library of 270,000 mouse embryonic stem cell lines and have certain rights to utilize our gene targeting technologies. In addition, we equipped TIGM with the bioinformatics software required for the management and analysis of data relating to the library. The Texas Enterprise Fund also made an award to the Texas A&M University System for the creation of facilities and infrastructure to house the library. Under the terms of the 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.

The Wellcome Trust. In November 2006, we entered into a contract to provide selected knockout mouse lines and related phenotypic data to the National Research Center for Environment and Health GmbH, or GSF, under terms substantially similar to those under which knockout mouse lines and related phenotypic data are available to NIH. Under the contract, the Wellcome Trust Limited, in its capacity as trustee of The Wellcome Trust, will work with GSF to select lines of knockout mice and related phenotypic data from among lines that we have elected to make available and has separately agreed to provide a grant to GSF to obtain such knockout mice and phenotypic data. These materials are related to genes that we have already knocked out and analyzed. GSF will make materials acquired from us under the contract available to researchers at academic and other non-profit research institutions, and we retain the sole right to provide these materials to commercial entities. We are entitled to receive staged payments from GSF following delivery and acceptance of materials under the contract.

Taconic Farms, Inc. We established a collaboration with Taconic Farms, Inc. in November 2005 for the marketing, distribution and licensing of certain lines of our knockout mice. 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 more than 2,500 distinct lines of knockout mice for use by pharmaceutical and biotechnology companies and other researchers. Taconic provides breeding services and licenses for these lines and distributes knockout mice to customers. We receive license fees and royalties from payments received by Taconic from customers obtaining access to such knockout mice.

Target Validation Collaborations. We have established target validation collaboration agreements with a number of leading pharmaceutical and biotechnology companies. Under these collaboration agreements, we generate and, in

some cases, analyze knockout mice for genes requested by the collaborator. In addition, we grant non-exclusive licenses to the collaborator for use of the knockout mice in its internal drug discovery programs and, if applicable, analysis data that we generate under the agreement. We receive fees for knockout mice and, if applicable, analysis data under these agreements. In some cases, these agreements also provide for annual minimum commitments and the potential for royalties on products that our collaborators discover or develop using our technology.

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LexVision Collaborations. The collaboration periods have terminated under each of our LexVision collaborations, pursuant to which our LexVision collaborators obtained non-exclusive access to our LexVision database of in vivo-validated drug targets for the discovery of small molecule compounds. We remain entitled to receive milestone payments and royalties on products those LexVision collaborators 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 total of 15 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 develops using our technology.

Our Executive Officers

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

Name	Age	Position with the Company
Arthur T. Sands, M.D., Ph.D.	47	President and Chief Executive Officer and Director
Alan J. Main, Ph.D.	55	Executive Vice President of Pharmaceutical Research
Jeffrey L. Wade, J.D.	44	Executive Vice President and General Counsel
Brian P. Zambrowicz, Ph.D.	46	Executive Vice President and Chief Scientific Officer
Philip M. Brown, M.D., J.D.	47	Senior Vice President of Clinical Development
James F. Tessmer	49	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.

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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.

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 genes, proteins, drug targets, compounds and drug candidates that we discover. Specifically, we seek patent protection for:

- chemical compounds, antibodies and other potential therapeutic agents and their use in treating human diseases and conditions;

- 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. In particular, we license our principal gene targeting technologies from GenPharm International, Inc. Many of these licenses are nonexclusive, although some are exclusive in specified fields. Most of the licenses, including those licensed from GenPharm, have terms that extend for the life of the licensed patents. In the case of our license from GenPharm, the license generally is exclusive in specified fields, subject to specific rights held by third parties, and we are permitted to grant sublicenses.

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.

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We believe that our ability to successfully compete 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 drugs and biologics.

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 drugs, submission of a New Drug Application, or NDA, and, for drug candidates regulated as biologics, 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 with 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. Our submission of an IND may not result in FDA authorization to commence a clinical trial. 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.

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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 or biologic product 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 or biologic 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.

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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, a drug or biologic product is also subject to regulatory approval in other countries in which it is marketed. The conduct of clinical trials of drugs and biologic products 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 or biologic product 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 or biologic product, 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 2008, 2007 and 2006, respectively, we incurred expenses of $108.6 million, $104.3 million and $106.7 million in company-sponsored as well as collaborative research and development activities, including $3.9 million, $5.2 million and $4.4 million of stock-based compensation expense in 2008, 2007 and 2006, 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, 2009, we employed 347 persons, of whom 95 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.

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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 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, 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 anticipate that our existing capital resources, funds available under a credit line with an affiliate of UBS AG that we entered into in January 2009 in connection with a settlement of auction rate securities claims against UBS, and the cash and revenues we expect to derive from drug discovery and development collaborations and other collaborations and licenses 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 and technology licenses;
- 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 and LX1032, and our election whether to exercise our exclusive option to acquire all of the equity of Symphony Icon, thereby allowing us to reacquire the programs;
- 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 and through 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 have 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; if so, we will be forced to significantly curtail or cease operations or obtain funds by entering into financing agreements on unattractive terms.

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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. Invus may exercise its right to require us to conduct the first rights offering by giving us notice within a period of 90 days beginning on November 28, 2009 (which we refer to as the first rights offering trigger date), although we and Invus may agree to change the first rights offering trigger date to as early as August 28, 2009 with the approval of the members of our board of directors who are not affiliated with Invus. Invus may exercise its right to require us to conduct the second rights offering by giving us notice within a period of 90 days beginning on the date that is 12 months after Invus' exercise of its right to require us to conduct the first rights offering or, if Invus does not exercise its right to require us to conduct the first rights offering, within a period of 90 days beginning on the first anniversary of the first rights offering trigger date. The initial investment and subsequent rights offerings, combined with any qualified offerings, were designed to achieve up to $550 million in proceeds to us. Invus would participate in each rights offering for up to its pro rata portion of the offering, and would commit to purchase the entire portion of the offering not subscribed for by other stockholders. Under the securities purchase agreement, 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, 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. If we are not able to issue common stock at prices equal to or greater than $4.50 per share, 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 $76.9 million for the year ended December 31, 2008, $58.8 million for the year ended December 31, 2007 and $54.3 million for the year ended December 31, 2006. As of December 31, 2008, we had an accumulated deficit of $487.4 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 growth, if any, 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 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, granting agencies and licensees, and to negotiate agreements that we believe are in our long-term best interests. We may determine that our interests are better served by retaining rights to our discoveries and advancing our therapeutic programs to a later stage, which could limit our near-term revenues. 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.

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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) $72 million, if the purchase option is exercised before June 15, 2009, (b) $81 million, if the purchase option is exercised on or after the June 15, 2009 and before June 15, 2010 and (c) $90 million, if the purchase option is exercised on or after June 15, 2010 and before June 15, 2011. The purchase option exercise price may be paid in cash or a combination of cash and common stock, at our sole discretion, provided that the common stock portion may not exceed 40% of the purchase option exercise price.

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 have sufficient clinical data in order to determine whether we should exercise the option.

At December 31, 2008, we held $57.0 million (par value), with an estimated fair value of $43.6 million, of auction rate securities for which auctions have failed and, as a result, we may not be able to access at least a portion of these funds without a loss of principal.

At December 31, 2008, we held $57.0 million (par value), with an estimated fair value of $43.6 million, of AAA rated 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. 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 up to an aggregate amount of $35.9 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.

Although we expect to access the maximum amount permitted under the credit line and 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 $21.1 million (par value) 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. 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, which may not be renewed or replaced;

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- 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 technology platform and, specifically, the 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.

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 dealing 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.

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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 test subjects. 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 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. If we are unable to achieve milestones under those collaborations or if our collaborators' efforts fail to yield pharmaceutical products on a timely basis, our opportunities to generate revenues and earn royalties will be reduced.

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 product 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.

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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 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.

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.

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.

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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.

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.

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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 cost containment. Current and future prescription drug benefit programs, including any programs that may be proposed as a result of the change in the presidential administration in January 2009, 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 and technologies that make our products and technologies 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 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. Our future success will depend upon our ability to maintain a competitive position with respect to technological advances. Any products that are developed through our technologies 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 technologies and products that would render our technologies and products, and those of our collaborators, obsolete

and noncompetitive. 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.

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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, 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.

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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 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, such as certain gene targeting technology licensed from GenPharm International, Inc. We do not own the patents that underlie these licenses. Most of these licenses, however, including those licensed from GenPharm, 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. In addition, most of our gene trapping patents and our licensed gene targeting patents cover only the United States and do not apply to discovery activities conducted outside of the United States or, in some circumstances, to importing into the United States products developed using this technology.

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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 and core technologies 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 do 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, we may lose work performed by them, and 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.

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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;

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- 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, technologies or compounds; and
- general market conditions 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.

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 and warrants) 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.

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 committee and corporate governance committee of our board of directors.

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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 ten percent. 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 overallotment (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 ten percent 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 ten percent, (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.

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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 ten percent, 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 ten percent, (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.

Item 1B. Unresolved Staff Comments

None.

ItemProperties
2.

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.
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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%.

In May 2002, our subsidiary Lexicon Pharmaceuticals (New Jersey), Inc. entered into a lease for a 76,000 square-foot 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.

ItemLegal Proceedings
3.

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

We believe that we have materially complied with all of our obligations under the relevant agreements, including those relating to royalty payments due to UURF, and that UURF's claims are inconsistent with the express provisions of the relevant agreements. We accordingly believe UURF's claims are without merit. While the litigation of these matters is at a very early stage, we intend to vigorously pursue our complaint against UURF and dispute UURF's counterclaims.

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

ItemSubmission of Matters to a Vote of Security Holders
4.

None.

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PART II

ItemMarket for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities 5.

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
2007		
First Quarter	$ 4.40	$ 3.10
Second Quarter	$ 3.87	$ 2.91
Third Quarter	$ 3.69	$ 3.04
Fourth Quarter	$ 4.03	$ 2.80
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

As of February 28, 2009, there were approximately 221 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, 2003 and ending December 31, 2008. The graph assumes that the value of the investment in our common stock and each index was $100 at December 31, 2003, and that all dividends were reinvested.

	December 31,					
	2003	2004	2005	2006	2007	2008
Lexicon Pharmaceuticals, Inc.	100	132	62	61	51	24
Nasdaq Composite Index	100	109	110	121	132	79
Nasdaq Biotechnology Index	100	106	109	110	115	101

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.

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Item 6. Selected Financial Data

The statement of operations data for the years ended December 31, 2008, 2007 and 2006 and the balance sheet data as of December 31, 2008 and 2007 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, 2005 and 2004, and the balance sheet data as of December 31, 2006, 2005 and 2004 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,				
	2008	2007	2006	2005	2004
Statements of Operations Data:	(in thousands, except per share data)				
Revenues	$ 32,321	$ 50,118	$ 72,798	$ 75,680	$ 61,740
Operating expenses:					
Research and development, including stock-based compensation of $3,941 in 2008, $5,150 in 2007, $4,394 in 2006, ($21) in 2005 and $426 in 2004	108,575	104,332	106,695	93,625	90,586
General and administrative, including stock-based compensation of $2,559 in 2008, $2,776 in 2007, $2,636 in 2006, $0 in 2005 and $412 in 2004	20,281	20,740	21,334	18,174	18,608
Total operating expenses	128,856	125,072	128,029	111,799	109,194
Loss from operations	(96,535)	(74,954)	(55,231)	(36,119)	(47,454)
Interest and other income (expense), net	(349)	3,721	801	(77)	282
Loss before noncontrolling interest in Symphony Icon, Inc.	(96,884)	(71,233)	(54,430)	(36,196)	(47,172)
Loss attributable to noncontrolling interest in Symphony Icon, Inc.	20,024	12,439	—	—	—
Loss before taxes	(76,860)	(58,794)	(54,430)	(36,196)	(47,172)
Income tax provision	—	—	119	(119)	—
Net loss	$ (76,860)	$ (58,794)	$ (54,311)	$ (36,315)	$ (47,172)
Net loss per common share, basic and diluted	$ (0.56)	$ (0.59)	$ (0.81)	$ (0.57)	$ (0.74)
Shares used in computing net loss per common share, basic and diluted	136,797	99,798	66,876	63,962	63,327

	As of December 31,				
	2008	2007	2006	2005	2004
Balance Sheet Data:	(in thousands)				
Cash, cash equivalents and short-term investments, including restricted cash and investments of $430	$ 86,502	$ 222,109	$ 79,999	$ 99,695	$ 87,558
Short-term investments held by Symphony Icon, Inc.	16,610	36,666	—	—	—
Long-term investments	55,686	—	—	—	—
Working capital	87,991	229,303	39,586	48,584	60,038

Total assets	261,508	369,296	190,266	218,714	211,980
Long-term debt, net of current portion	29,529	30,493	31,372	32,189	32,940
Accumulated deficit	(487,395)	(410,535)	(351,741)	(297,430)	(261,115)
Stockholders' equity	185,580	256,300	85,501	85,802	121,594

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Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

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

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

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

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

Since our inception, we have incurred significant losses and, as of December 31, 2008, we had an accumulated deficit of $487.4 million. Our losses have resulted principally from costs incurred in research and development, general and administrative costs associated with our operations, and non-cash stock-based compensation expenses associated with stock options granted to employees and consultants. Research and development expenses consist primarily of salaries and related personnel costs, external research costs related to our preclinical and clinical efforts, material costs, facility costs, depreciation on property and equipment, legal expenses resulting from intellectual property prosecution and other expenses related to our drug discovery and development programs, the development and analysis of knockout mice and our other target validation research efforts, and the development of compound libraries. General and administrative expenses consist primarily of salaries and related expenses for executive and administrative personnel, professional fees and other corporate expenses including information technology, facilities costs and general legal activities. In connection with the expansion of our drug discovery and development programs, we expect to continue to incur significant research and development costs. As a result, we will need to generate significantly higher revenues to achieve profitability.

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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. Patent costs and technology license fees for technologies that are utilized in research and development and have no alternative future use are expensed when incurred.

We are presently conducting a Phase 2 clinical trial of our most advanced drug candidate, LX1031, an orally-delivered small molecule compound that we are developing as a potential treatment for irritable bowel syndrome and other gastrointestinal disorders. We have completed Phase 1 clinical trials and intend in the near term to initiate a Phase 2 clinical trial of LX1032, an orally-delivered small molecule compound that we are developing as a potential treatment for the symptoms associated with carcinoid syndrome. We are conducting Phase 1 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 LX4211, an orally-delivered small molecule compound that

we are developing as a potential treatment for Type 2 diabetes. 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 substantially 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:

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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 drug programs advance in preclinical development and clinical trials. 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 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 in accordance with FASB Interpretation No. 46 (revised 2003), “Consolidation of Variable Interest Entities,” or FIN 46R. While Symphony Icon is defined under FIN46R to be 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.

Stock-based Compensation Expense

Our stock-based compensation plans are accounted for under the recognition and measurement provisions of SFAS, No. 123 (Revised), “Share-Based Payment,” (SFAS No. 123(R)). This statement requires companies to recognize compensation expense in the 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 under SFAS No. 123(R) of $6.5 million for the year ended December 31, 2008, or $0.05 per share. Stock-based compensation expense under SFAS No. 123(R) has no impact on cash flows from operating activities or financing activities. As of

December 31, 2008, stock-based compensation cost for all outstanding unvested options was $8.1 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 granted subsequent to the adoption of SFAS No. 123(R), we segregated 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, 2008, 2007 and 2006, respectively:

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	Expected Volatility	Risk-free Interest Rate	Expected Term	Estimated Forfeitures	Dividend Rate
December 31, 2008:					
Employees, officers and non-employee directors	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%
December 31, 2006:					
Employees	69%	4.6%	7	18%	0%
Officers and non-employee directors	69%	4.7%	9	3%	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 2008.

Valuation of Investments that Do Not Have Active Markets

At December 31, 2008, we held $57.0 million (par value) of AAA rated investments with an auction interest rate 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 market value of these securities at December 31, 2008 was $43.6 million. Because we do not intend to hold these securities until the par value is recoverable through the auction process and we believe the decline in fair values is other-than-temporary, we recorded a loss of $13.4 million for the year ended December 31, 2008 to reflect the decline in value of these securities, which is shown as loss on long-term investments in the consolidated statement of operations.

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

The enforceability of the rights results in a separate asset that will be measured at its fair value. We elected to measure the rights under the fair value option of SFAS 159, "The Fair Value Option for Financial Assets and Financial Liabilities – including an amendment of FASB Statement No. 115," and recorded a gain of approximately $12.1 million, which is reflected in loss on long-term investments, net, and recorded a corresponding long-term investment. As a result of accepting the rights, we elected to classify the rights and reclassify our investments in auction rate securities as trading securities, as defined by SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities." As a result, we will be required to assess the fair value of these two individual assets and record changes each period until the rights are exercised and the auction rate securities are redeemed. 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.

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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

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

In February 2007, the FASB issued SFAS No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities - including an amendment of FASB Statement No. 115," which provides a fair value option election that permits entities to irrevocably elect to measure many financial instruments and certain other items at fair value, with changes in fair value recognized in earnings as they occur. SFAS No. 159 also establishes presentation and disclosure requirements designed to facilitate comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. SFAS No. 159 does not affect any existing accounting literature that requires certain assets and liabilities to be carried at fair value. SFAS No. 159 is effective as of the beginning of an entity's first fiscal year that begins after November 15, 2007. Our adoption of SFAS No. 159 on January 1, 2008 did not materially affect our financial position or results of operations.

In December 2007, the FASB issued SFAS No. 141(Revised), "Business Combinations," which replaces SFAS No. 141, "Business Combinations," and requires an acquirer to recognize the assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at the acquisition date, measured at their fair values as of that date, with limited exceptions. This statement also requires the acquirer in a business combination achieved in stages to recognize the identifiable assets and liabilities, as well as the noncontrolling interest in the acquiree, at the full amounts of their fair values. SFAS No. 141(R) makes various other amendments to authoritative literature intended to provide additional guidance or to confirm the guidance in that literature to that provided in this statement. This statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. We expect to adopt this statement on January 1, 2009. SFAS No. 141(R)'s impact on accounting for business combinations is dependent upon acquisitions, if any, made on or after that time.

In December 2007, the FASB issued SFAS No. 160, "Noncontrolling Interests in Consolidated Financial Statements," which amends Accounting Research Bulletin No. 51, "Consolidated Financial Statements," to improve the relevance, comparability, and transparency of the financial information that a reporting entity provides in its consolidated financial statements. SFAS No. 160 establishes accounting and reporting standards that require the ownership interests in subsidiaries not held by the parent to be clearly identified, labeled and presented in the consolidated statement of financial position within equity, but separate from the parent's equity. This statement also requires the amount of consolidated net income attributable to the parent and to the noncontrolling interest to be clearly identified and

presented on the face of the consolidated statement of income. Changes in a parent's ownership interest while the parent retains its controlling financial interest must be accounted for consistently, and when a subsidiary is deconsolidated, any retained noncontrolling equity investment in the former subsidiary must be initially measured at fair value. The gain or loss on the deconsolidation of the subsidiary is measured using the fair value of any noncontrolling equity investment. The statement also requires entities to provide sufficient disclosures that clearly identify and distinguish between the interests of the parent and the interests of the noncontrolling owners. This statement applies prospectively to all entities that prepare consolidated financial statements and applies prospectively for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. We are currently evaluating the effect, if any, of this statement on our financial condition and results of operations.

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Results of Operations – Comparison of Years Ended December 31, 2008, 2007 and 2006

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,		
	2008	2007	2006
Total revenues	$ 32.3	$ 50.1	$ 72.8
Dollar decrease	$ (17.8)	$ (22.7)	
Percentage decrease	(36%)	(31%)	

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 project funded by our award from the Texas Enterprise Fund, reduced revenues under our alliance with N.V. Organon due to our progress towards completing the target discovery portion of the alliance, and the completion in 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.

Years Ended December 31, 2007 and 2006

- Collaborative research – Revenue from collaborative research decreased 30% in 2007 to $48.1 million, primarily due to decreased revenue under our alliance with Bristol-Myers Squibb resulting from the conclusion of the revenue recognition period for the upfront payment we received under the alliance. Additionally, the prior year included the achievement of a performance milestone under our Takeda alliance.

- Subscription and license fees – Revenue from subscriptions and license fees decreased 54% in 2007 to $2.0 million primarily due to lower royalties received under a technology license agreement with Deltagen.

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. In 2006, Bristol-Myers Squibb, Organon and Takeda represented 35%, 21% and 12% 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,		
	2008	2007	2006
Total research and development expense	$ 108.6	$ 104.3	$ 106.7
Dollar increase (decrease)	$ 4.2	$ (2.4)	
Percentage increase (decrease)	4%	(2%)	

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

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Years Ended December 31, 2008 and 2007

- Personnel – Personnel costs decreased 7% to $41.4 million, primarily due to lower salary, bonus and benefit costs as a result of a reduction in personnel in May 2008 as part of our reorganization reallocating resources from research and discovery to our drug development pipeline, offset in part by associated severance costs. Salaries, bonuses, employee benefits, payroll taxes, recruiting and relocation costs are included in personnel costs.

- Facilities and equipment – Facilities and equipment costs decreased 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.

- Third-party and other services – Third-party and other services increased 69% to $31.3 million, primarily due to an increase in external preclinical and clinical research and development costs. Third-party and other services include third-party research, technology licenses, legal and patent fees and subscriptions to third-party databases.

- Stock-based compensation – Stock-based compensation expense decreased 23% to $3.9 million, primarily as a result of the reduction in our personnel.

- Other – Other costs increased by 2% to $4.9 million.

Years Ended December 31, 2007 and 2006

- Personnel – Personnel costs decreased 13% in 2007 to $44.4 million, primarily due to lower salary and benefit costs as a result of a reduction in our personnel in January 2007 as part of our strategic realignment reallocating resources from genetics research efforts to drug development, offset in part by associated severance costs.

- Facilities and equipment – Facilities and equipment costs decreased 5% in 2007 to $20.1 million, primarily due to a decrease in depreciation expense.

- Laboratory supplies – Laboratory supplies expense decreased 23% in 2007 to $11.4 million, primarily due to the reduction in personnel in January 2007.

- Third-party and other services – Third-party and other services increased 87% in 2007 to $18.4 million, primarily due an increase in external preclinical and clinical research and development costs.

- Stock-based compensation – Stock-based compensation expense increased 17% in 2007 to $5.1 million.

- Other – Other costs decreased 7% in 2007 to $4.8 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,		
	2008	2007	2006
Total general and administrative expense	$ 20.3	$ 20.7	$ 21.3
Dollar decrease	$ (0.5)	$ (0.6)	

Percentage decrease	(2%)	(3%)

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

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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. Salaries, bonuses, employee benefits, payroll taxes, recruiting and relocation costs are included in personnel costs.

- Facilities and equipment – Facilities and equipment costs were $2.5 million, consistent with the prior year.

- Professional fees – Professional fees increased 19% to $2.9 million, primarily due to increased market research and other consulting costs.

- Stock-based compensation – Stock-based compensation expense decreased 8% to $2.6 million.

- Other – Other costs decreased 16% to $1.9 million.

Years Ended December 31, 2007 and 2006

- Personnel – Personnel costs decreased 10% in 2007 to $10.6 million, primarily due to lower salary and benefit costs as a result of a reduction in personnel in January 2007, offset in part by associated severance costs.

- Facilities and equipment – Facilities and equipment costs decreased 18% in 2007 to $2.5 million, primarily due to a decrease in depreciation expense.

- Professional fees – Professional fees increased 55% in 2007 to $2.5 million primarily due to increased professional, consulting and litigation costs.

- Stock-based compensation – Stock-based compensation expense increased 5% in 2007 to $2.8 million.

- Other – Other costs increased 3% in 2007 to $2.3 million.

Loss on Long-term Investments, net, Interest Income, Interest Expense and Other (Expense) Income, Net

Loss on Long-term Investments, Net. Loss on long-term investments was $13.4 million for the year ended December 31, 2008, representing the other-than-temporary decline in fair value of our student loan auction rate securities. This loss was partially offset by a gain on long-term investments of $12.1 million for the year ended December 31, 2008, representing the fair value of the rights obtained from UBS AG, the investment bank that sold us our auction rate securities.

Interest Income. Interest income decreased 21% in 2008 to $5.8 million from $7.3 million in 2007 primarily due to lower average cash and investment balances as well as lower yields on our investments. Interest income increased 99% in 2007 from $3.7 million in 2006, primarily due to higher average cash and investment balances.

Interest Expense. Interest expense decreased 3% in 2008 to $2.7 million from $2.8 million in 2007 and 15% in 2007 from $3.3 million in 2006.

Other (Expense) Income, Net. Other expense, net was $2.1 million in 2008 compared to other expense, net of $0.8 million in 2007. The change was 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). Other income, net was $0.4 million in 2006.

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Noncontrolling Interest in Symphony Icon, Inc.

For the years ended December 31, 2008, 2007 and 2006, the losses attributed to the noncontrolling interest holders of Symphony Icon were $20.0 million, $12.4 million and none, respectively.

Net Loss and Net Loss per Common Share

Net Loss and Net Loss per Common Share. Net loss increased to $76.9 million in 2008 from $58.8 million in 2007 and $54.3 million in 2006. Net loss per common share decreased to $0.56 in 2008 from $0.59 in 2007 and $0.81 in 2006.

Liquidity and Capital Resources

We have financed our operations from inception primarily through sales of common and preferred stock, contract and milestone payments to us under our drug discovery and development collaborations, target validation, database subscription and technology license agreements, government grants and contracts, and financing obtained under debt and lease arrangements. We have also financed certain of our research and development activities under our agreements with Symphony Icon, Inc. From our inception through December 31, 2008, we had received net proceeds of $550.0 million from issuances of common and preferred stock, including $203.2 million of net proceeds from the initial public offering of our common stock in April 2000, $50.1 million from our July 2003 common stock offering, $37.5 million from our October 2006 common stock offering and $198.0 million from our August 2007 sale of common stock to Invus, L.P. In addition, from our inception through December 31, 2008, we received $443.0 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 $424.0 million had been recognized as revenues through December 31, 2008.

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 as discussed below in Disclosure about Market Risk, and $16.6 million in investments held by Symphony Icon. We had $222.1 million in cash, cash equivalents and short-term investments as of December 31, 2007. We used cash of $95.6 million in operations in 2008. This consisted primarily of the net loss for the year of $76.9 million, a $20.0 million loss attributable to noncontrolling interest, a $14.3 million decrease in deferred revenue, a $12.1 million non-cash gain on auction rate security rights and a net increase in other operating assets net of liabilities of $2.3 million, partially offset by non-cash charges of $13.4 million related to loss on auction rate securities, $7.9 million related to depreciation expense, $6.5 million related to stock-based compensation expense and $2.1 million related to the non-cash amortization of the Symphony Icon purchase option. Investing activities provided cash of $159.4 million in the year ended December 31, 2008, primarily due to net maturities of investments of $161.6 million, partially offset by purchases of property and equipment of $2.2 million. Financing activities used cash of $0.9 million in the year ended December 31, 2008, due primarily to $0.9 million in principal repayments on our mortgage loan.

In January 2009, we entered into a credit line agreement with UBS Bank USA that provides up to an aggregate amount of $35.9 million in the form of an uncommitted, demand, revolving line of credit. We entered into the credit line in connection with our acceptance of an offer from UBS AG, the investment bank that sold us our auction rate securities, providing us with rights to require UBS to purchase our $57.0 million (par value) of auction rate securities at par value during the period from June 30, 2010 through July 2, 2012. The credit line is secured only by these auction rate securities and advances under the credit line will be made on a “no net cost” basis, meaning that the interest paid by us on advances will not exceed the interest or dividends paid to us by the issuer of the auction rate securities.

In June 2007, we entered into a securities purchase agreement with Invus, L.P, pursuant to which Invus purchased 50,824,986 shares of our common stock for approximately $205.4 million in August 2007. This purchase resulted in

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

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

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

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

In April 2004, we obtained a $34.0 million mortgage on our facilities in The Woodlands, Texas. The mortgage loan has a ten-year term with a 20-year amortization and bears interest at a fixed rate of 8.23%. In May 2002, our subsidiary Lexicon Pharmaceuticals (New Jersey), Inc. signed a ten-year lease for a 76,000 square-foot 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.

Including the lease and debt obligations described above, we had incurred the following contractual obligations as of December 31, 2008:

	Payments due by period (in millions)				
Contractual Obligations	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Debt	$ 30.5	$ 1.0	$ 2.2	$ 2.6	$ 24.7
Interest payment obligations	12.3	2.5	4.7	4.4	0.7
Operating leases	11.5	2.5	5.1	3.9	—
Licensing agreements	5.0	5.0	—	—	—
Total	$ 59.3	$ 11.0	$ 12.0	$ 10.9	$ 25.4

Our future capital requirements will be substantial and will depend on many factors, including our ability to obtain drug discovery and development collaborations and other collaborations and technology license agreements, the

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

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

At December 31, 2008, observable auction rate securities market information was not available to determine the fair value of our investments. We have estimated the fair value of these securities at $43.6 million as of December 31, 2008 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, 2008. The underlying sources of these assumptions are volatile and the assumptions are subject to change as those sources and market conditions change. Because we do not intend to hold these securities until the par value is recoverable through the auction process and we believe the decline in fair value is other-than-temporary, we recorded a loss of $13.4 million in the year ended December 31, 2008 to reflect the decline in value of these securities, which is shown as loss on long-term investments in the consolidated statement of operations. 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 rights related to our auction rate securities. The rights permit us to require UBS to purchase our $57.0 million (par value) of auction rate securities at par value during the period from June 30, 2010 through July 2, 2012. Conversely, UBS has the right, in its discretion, to purchase or sell the securities at any time by paying us the par value of such securities. We expect to exercise the rights and sell our auction rate securities back to UBS on June 30, 2010, the earliest date allowable under the rights.

The enforceability of the rights results in a separate asset that will be measured at its fair value. We elected to measure the rights under the fair value option of SFAS 159, and recorded a gain of approximately $12.1 million, which is reflected in loss on long-term investments, net, and recorded a corresponding long-term investment. 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, as defined by SFAS No. 115. As a result, we will be required to assess the fair value of these two individual assets and record changes each period until the rights are exercised and the auction rate securities are redeemed. 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.

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Excluding auction rate securities and the related rights, at December 31, 2008, we had approximately $103.1 million in cash and cash equivalents and short-term investments, including $16.6 million in investments held by Symphony Icon. We believe that the working capital available to us excluding the funds held in auction rate securities and the UBS credit line entered into in January 2009 will be sufficient to meet our cash requirements for at least the next 12 months.

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

Item 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 sufficiently effective to ensure that the information required to be disclosed by us in the reports we file under the Securities Exchange Act is gathered, analyzed and disclosed with adequate timeliness, accuracy and completeness, based on an evaluation of such controls and procedures as of the end of the period covered by this report.

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

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, 2008. 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, 2008, our internal control over financial reporting is effective.

Our independent auditors have also audited our internal control over financial reporting as of December 31, 2008 as stated in the audit report which appears on page F-2 and is incorporated under Item 15 in Part IV of this report.

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Item 9B. Other Information

None.

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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, 2008 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, 2008. 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, 2008.

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, 2008.

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, 2008.

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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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Consolidated Balance Sheets	F-3
Consolidated Statements of Operations	F-4
Consolidated Statements of Stockholders' Equity	F-5
Consolidated Statements of Cash Flows	F-6
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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	—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	—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).
4.3	—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).

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).

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Exhibit No.	Description
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	—Employment Agreement with Julia P. Gregory (filed as Exhibit 10.5 to the Company's Registration Statement on Form S-1 (Registration No. 333-96469) 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	—Consulting Agreement with Julia P. Gregory dated April 29, 2008 (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated April 29, 2008 and incorporated by reference herein).
10.9	—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).
10.10	—Summary of Non-Employee Director Compensation (filed as Exhibit 10.11 to the Company's Annual Report on Form 10-K for the period ended December 31, 2005 and incorporated by reference herein).
10.11	—Summary of 2009 Named Executive Officer Cash Compensation (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated February 12, 2009 and incorporated by reference herein).
10.12	—2000 Equity Incentive Plan (filed as Exhibit 10.10 to the Company's Annual Report on Form 10-K for the period ended December 31, 2004 and incorporated by reference herein).
10.13	—2000 Non-Employee Directors' Stock Option Plan (filed as Exhibit 10.14 to the Company's Annual Report on Form 10-K for the period ended December 31, 2005 and incorporated by reference herein).
10.14	—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).
10.15	—Form of Stock Option Agreement with Chairman of Board of Directors under the 2000 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).
10.16	—Form of Stock Option Agreement with Directors under the 2000 Non-Employee Directors' Stock Option Plan (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2004 and incorporated by reference herein).
10.17	—Form of Stock Option Agreement with Officers under the 2000 Equity Incentive Plan (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated February 7, 2008 and incorporated by reference herein).

10.18 —Form of Restricted Stock Bonus Agreement with Officers under the 2000 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).

†10.19 —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).

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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	—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).
10.25	—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).
†10.26	—Collaboration and License Agreement, dated July 15, 2005, with the Texas A&M University System and the Texas Institute for Genomic Medicine (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2005 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).

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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.

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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 4, 2009 By: /s/ Arthur T. Sands
Arthur T. Sands, M.D., Ph.D.
President and Chief Executive Officer

Date: March 4, 2009 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
/s/ Arthur T. Sands Arthur T. Sands, M.D., Ph.D.	President and Chief Executive Officer (Principal Executive Officer)	March 4, 2009
/s/ James F. Tessmer James F. Tessmer	Vice President, Finance and Accounting (Principal Financial and Accounting Officer)	March 4, 2009
/s/ Samuel L. Barker Samuel L. Barker, Ph.D.	Chairman of the Board of Directors	March 4, 2009
/s/ Philippe J. Amouyal Philippe J. Amouyal	Director	March 4, 2009
/s/ Raymond Debbane Raymond Debbane	Director	March 4, 2009
/s/ Robert J. Lefkowitz Robert J. Lefkowitz, M.D.	Director	March 4, 2009
/s/ Alan S. Nies Alan S. Nies, M.D.	Director	March 4, 2009

/s/ Frank P. Palantoni Frank P. Palantoni	Director	March 4, 2009
/s/ Christopher J. Sobecki Christopher J. Sobecki	Director	March 4, 2009
/s/ Judith L. Swain Judith L. Swain, M.D.	Director	March 4, 2009
/s/ Kathleen M. Wiltsey Kathleen M. Wiltsey	Director	March 4, 2009

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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, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2008. 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, 2008 and 2007, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2008, 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, 2008, 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 3, 2009 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Houston, Texas
March 3, 2009

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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, 2008, 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, 2008, 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, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2008 and our report dated March 3, 2009 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Houston, Texas
March 3, 2009

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Lexicon Pharmaceuticals, Inc.

Consolidated Balance Sheets
(In thousands, except par value)

	As of December 31,	
	2008	2007
Assets		
Current assets:		
Cash and cash equivalents	$ 85,873	$ 22,938
Short-term investments, including restricted investments of $430	629	199,171
Short-term investments held by Symphony Icon, Inc.	16,610	36,666
Accounts receivable, net of allowances of $35	568	1,763
Prepaid expenses and other current assets	5,487	4,112
Total current assets	109,167	264,650
Long-term investments	55,686	—
Property and equipment, net of accumulated depreciation and amortization of $71,102 and $65,004, respectively	65,087	70,829
Goodwill	25,798	25,798
Other assets	5,770	8,019
Total assets	$ 261,508	$ 369,296
Liabilities, Noncontrolling Interest and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 7,926	$ 7,344
Accrued liabilities	6,615	9,093
Current portion of deferred revenue	5,672	18,030
Current portion of long-term debt	963	880
Total current liabilities	21,176	35,347
Deferred revenue, net of current portion	14,212	16,126
Long-term debt	29,529	30,493
Other long-term liabilities	764	759
Total liabilities	65,681	82,725
Noncontrolling interest in Symphony Icon, Inc.	10,247	30,271
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $.01 par value; 5,000 shares authorized; no shares issued and outstanding	—	—
Common stock, $.001 par value; 300,000 shares authorized; 136,797 and 136,796 shares issued and outstanding, respectively	137	137
Additional paid-in capital	672,838	666,702
Accumulated deficit	(487,395)	(410,535)
Accumulated other comprehensive loss	—	(4)
Total stockholders' equity	185,580	256,300
Total liabilities and stockholders' equity	$ 261,508	$ 369,296

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

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Lexicon Pharmaceuticals, Inc.

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

	Year Ended December 31,		
	2008	2007	2006
Revenues:			
Collaborative research	$ 27,177	$ 48,080	$ 68,373
Subscription and license fees	5,144	2,038	4,425
Total revenues	32,321	50,118	72,798
Operating expenses:			
Research and development, including stock-based compensation of $3,941, $5,150 and $4,394, respectively	108,575	104,332	106,695
General and administrative, including stock-based compensation of $2,559, $2,776 and $2,636, respectively	20,281	20,740	21,334
Total operating expenses	128,856	125,072	128,029
Loss from operations	(96,535)	(74,954)	(55,231)
Loss on long-term investments, net	(1,314)	—	—
Interest income	5,762	7,286	3,653
Interest expense	(2,691)	(2,771)	(3,253)
Other (expense) income, net	(2,106)	(794)	401
Loss before noncontrolling interest in Symphony Icon, Inc.	(96,884)	(71,233)	(54,430)
Loss attributable to noncontrolling interest in Symphony Icon, Inc.	20,024	12,439	—
Loss before taxes	(76,860)	(58,794)	(54,430)
Income tax provision	—	—	119
Net loss	$ (76,860)	$ (58,794)	$ (54,311)
Net loss per common share, basic and diluted	$ (0.56)	$ (0.59)	$ (0.81)
Shares used in computing net loss per common share, basic and diluted	136,797	99,798	66,876

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

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Lexicon Pharmaceuticals, Inc.

Consolidated Statements of Stockholders' Equity
(In thousands)

	Common Stock						
	Shares	Par Value	Additional Paid-In Capital	Deferred Stock Compensation	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total Stockholders' Equity
Balance at December 31, 2005	64,554	$ 64	$ 383,222	$ (2)	$ (297,430)	$ (52)	$ 85,802
Stock-based compensation	—	—	7,030	2	—	—	7,032
Direct placement of common stock, net of offering costs	11,582	12	41,084	—	—	—	41,096
Common stock issued for note repayment	1,512	2	5,489	—	—	—	5,491
Exercise of common stock options	156	—	355	—	—	—	355
Net loss	—	—	—	—	(54,311)	—	(54,311)
Unrealized gain on investments	—	—	—	—	—	36	36
Comprehensive loss							(54,275)
Balance at December 31, 2006	77,804	78	437,180	—	(351,741)	(16)	85,501
Stock-based compensation	—	—	7,926	—	—	—	7,926
Issuance of common stock to Invus, L.P., net of fees	50,825	51	197,911	—	—	—	197,962
Issuance of common stock to Symphony Holdings, LLC, net of fees	7,651	8	22,793	—	—	—	22,801
Issuance of common stock	516	—	892	—	—	—	892
Net loss	—	—	—	—	(58,794)	—	(58,794)
Unrealized gain on investments	—	—	—	—	—	12	12
Comprehensive loss							(58,782)
Balance at December 31, 2007	136,796	137	666,702	—	(410,535)	(4)	256,300
Stock-based compensation	—	—	6,135	—	—	—	6,135
Exercise of common stock options	1	—	1	—	—	—	1
Net loss	—	—	—	—	(76,860)	—	(76,860)

Unrealized gain on investments	—	—	—	—	—	4	4
Comprehensive loss							(76,856)
Balance at December 31, 2008	136,797	$ 137	$ 672,838	$ —$	(487,395)	$ —$	185,580

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

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Lexicon Pharmaceuticals, Inc.

Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2008	2007	2006
Cash flows from operating activities:			
Net loss	$ (76,860)	$ (58,794)	$ (54,311)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	7,929	9,262	10,561
Amortization of intangible assets, other than goodwill	—	—	640
Amortization of Symphony Icon purchase option	2,141	1,160	—
Loss attributable to noncontrolling interest	(20,024)	(12,439)	—
Stock-based compensation	6,500	7,926	7,030
Loss on auction rate securities	13,374	—	—
Gain on ARS Rights	(12,060)	—	—
Loss on disposal of property and equipment	—	—	35
Changes in operating assets and liabilities:			
(Increase) decrease in receivables	1,195	(577)	1,423
(Increase) decrease in prepaid expenses and other current assets	(1,375)	255	(623)
Decrease in other assets	108	109	240
Increase (decrease) in accounts payable and other liabilities	(2,256)	2,619	1,678
Decrease in deferred revenue	(14,272)	(23,844)	(23,582)
Net cash used in operating activities	(95,600)	(74,323)	(56,909)
Cash flows from investing activities:			
Purchases of property and equipment	(2,187)	(1,900)	(3,579)
Proceeds from disposal of property and equipment	—	1	56
Purchases of investments held by Symphony Icon, Inc.	—	(44,991)	—
Maturities of investments held by Symphony Icon, Inc.	20,056	8,325	—
Purchase of short-term investments	(39,847)	(260,739)	(67,688)
Sale of short-term investments	181,393	111,353	95,676
Net cash provided by (used in) investing activities	159,415	(187,951)	24,465
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	1	892	41,451
Repayment of debt borrowings	(881)	(815)	(751)
Proceeds from purchase of noncontrolling interest by preferred shareholders of Symphony Icon, Inc.	—	42,710	—
Net cash provided by (used in) financing activities	(880)	254,986	40,700
Net increase (decrease) in cash and cash equivalents	62,935	(7,288)	8,256
Cash and cash equivalents at beginning of year	22,938	30,226	21,970
Cash and cash equivalents at end of year	$ 85,873	$ 22,938	$ 30,226
Supplemental disclosure of cash flow information:			
Cash paid for interest	$ 2,599	$ 2,665	$ 2,725

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	$ 36
Deferred stock compensation, net of reversals	$ —	$ —	$ 2
Issuance of common stock to repay note and accrued interest	$ —	$ —	$ 5,491

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

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Lexicon Pharmaceuticals, Inc.

Notes to Consolidated Financial Statements

December 31, 2008

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, 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, discover additional promising candidates for drug discovery and development using its gene knockout technology, 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"), for which the Company is the primary beneficiary as defined by the Financial Accounting Standards Board ("FASB") Interpretation No. 46 (revised 2003), "Consolidation of Variable Interest Entities" ("FIN 46R"). Intercompany transactions and balances are eliminated in consolidation.

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, 2008, short-term investments consist of certificates of deposit. As of December 31, 2007, short-term investments consisted of certificates of deposit, U.S. government agency debt obligations, corporate debt securities and auction rate securities. Short-term investments 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. 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, 2008 and 2007, 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 consist of 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). Lexicon has elected to classify its long-term investments as trading securities, as defined by Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities," which requires recording these securities at fair value.

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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 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. In 2006, customers in the United States, Europe and Japan represented 66%, 21% and 13% of revenue, respectively. At December 31, 2008, 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 2008, Bristol-Myers Squibb Company, N.V. 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. In 2006, Bristol-Myers Squibb, Organon and Takeda Pharmaceutical Company Limited represented 35%, 21% and 12% 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: Under SFAS No. 144, "Accounting for the Impairment or Disposal 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: Under SFAS No. 142, "Goodwill and Other Intangible Assets," goodwill is not amortized, but is tested at least annually for impairment at the reporting unit level. 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 2008, 2007 or 2006.

Revenue Recognition: Revenues are recognized under Staff Accounting Bulletin ("SAB") No. 104, "Revenue Recognition," 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.

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.

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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 in accordance with Emerging Issues Task Force ("EITF") No. 00-21, "Revenue Arrangements with Multiple Deliverables." 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. Patent costs and 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: Lexicon's stock-based compensation plans are accounted for under the recognition and measurement provisions of SFAS No. 123 (Revised), "Share-Based Payment" ("SFAS No. 123(R)"). This statement requires companies to recognize compensation expense in the 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, 2008, stock-based compensation cost for all outstanding unvested options was $8.1 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 granted subsequent to the adoption of SFAS No. 123(R), the Company segregated 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, 2008, 2007 and 2006, respectively:

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	Expected Volatility	Risk-free Interest Rate	Expected Term	Estimated Forfeitures	Dividend Rate
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%
December 31, 2006:					
Employees	69%	4.6%	7	18%	0%
Officers and non-employee directors	69%	4.7%	9	3%	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. There were $4,000, $12,000 and $36,000 of unrealized gains in the years ended December 31, 2008, 2007 and 2006, respectively.

3. Recent Accounting Pronouncements

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

In February 2007, the FASB issued SFAS No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities - including an amendment of FASB Statement No. 115," which provides a fair value option election that permits entities to irrevocably elect to measure many financial instruments and certain other items at fair value, with changes in fair value recognized in earnings as they occur. SFAS No. 159 also establishes presentation and disclosure requirements designed to facilitate comparisons between entities that choose different measurement attributes for similar types of assets and liabilities. SFAS No. 159 does not affect any existing accounting literature that requires certain assets and liabilities to be carried at fair value. SFAS No. 159 is effective as of the beginning of an entity's first fiscal year that begins after November 15, 2007. The Company's adoption of SFAS No. 159 on January 1, 2008 did not materially affect its financial position or results of operations.

In December 2007, the FASB issued SFAS No. 141(Revised), "Business Combinations," which replaces SFAS No. 141, "Business Combinations," and requires an acquirer to recognize the assets acquired, the liabilities assumed, and any

noncontrolling interest in the acquiree at the acquisition date, measured at their fair values as of that date, with limited exceptions. This statement also requires the acquirer in a business combination achieved in stages to recognize the identifiable assets and liabilities, as well as the noncontrolling interest in the acquiree, at the full amounts of their fair values. SFAS No. 141(R) makes various other amendments to authoritative literature intended to provide additional guidance or to confirm the guidance in that literature to that provided in this statement. This statement applies prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. The Company expects to adopt this statement on January 1, 2009. SFAS No. 141(R)'s impact on accounting for business combinations is dependent upon acquisitions, if any, made on or after that time.

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

4. Cash and Cash Equivalents and Investments

The fair value of cash and cash equivalents and investments held at December 31, 2008 and 2007 are as follows:

	As of December 31, 2008			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(In thousands)			
Cash and cash equivalents	$ 85,873	$ —	$ —	$ 85,873
Securities maturing within one year:				
Certificates of deposit	629	—	—	629
Total short-term investments	$ 629	$ —	$ —	$ 629
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	$ 57,000	$ 12,060	$ (13,374)	$ 55,686
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.	$ 16,610	$ —	$ —	$ 16,610
Total cash and cash equivalents and investments	$ 160,112	$ 12,060	$ (13,374)	$ 158,798

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	As of December 31, 2007			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
	(In thousands)			
Cash and cash equivalents	$ 22,950	$ —	$ (12)	$ 22,938
Securities maturing within one year:				
Certificates of deposit	6,312	—	(3)	6,309
Corporate debt securities	41,162	12	(51)	41,123
Commercial papers	71,214	47	—	71,261
U.S. government agencies securities	2,500	3	—	2,503
Total securities maturing within one year	121,188	62	(54)	121,196
Securities maturing after ten years:				
Auction rate securities	77,975	—	—	77,975
Total available-for-sale investments	$ 199,163	$ 62	$ (54)	$ 199,171
Short-term investments held by Symphony Icon, Inc.:				
Cash and cash equivalents	36,666	—	—	36,666
Total short-term investments held by Symphony Icon, Inc.	$ 36,666	$ —	$ —	$ 36,666
Total cash and cash equivalents and investments	$ 258,779	$ 62	$ (66)	$ 258,775

There were $123,000 of realized gains for the year ended December 31, 2008. There were no realized gains or losses for the years ended December 31, 2007 and 2006.

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

At December 31, 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 $43.6 million as of December 31, 2008 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, 2008. The underlying sources of these assumptions are volatile and the assumptions are subject to change as those sources and market conditions change. Because Lexicon does not intend to hold these securities until

the par value is recoverable through the auction process and management believes the decline in fair value is other-than-temporary, Lexicon recorded a loss of $13.4 million for the year ended December 31, 2008 to reflect the decline in value of these securities, which is shown as loss on long-term investments in the consolidated statement of operations. 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.

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In November 2008, Lexicon accepted an offer from UBS AG, the investment bank that sold Lexicon the auction rate securities, providing Lexicon with rights related to its auction rate securities ("ARS Rights"). The ARS Rights permit Lexicon to require UBS to purchase its $57.0 million (par value) of auction rate securities at par value during the period from June 30, 2010 through July 2, 2012. Conversely, UBS has the right, in its discretion, to purchase or sell the securities at any time by paying Lexicon the par value of such securities. Management expects to exercise the ARS Rights and sell Lexicon's auction rate securities back to UBS on June 30, 2010, the earliest date allowable under the ARS Rights. Lexicon is also eligible to borrow from an affiliate of UBS at no net cost up to 75% of the market value of the securities, as determined by such affiliate, which loans would become payable upon the investment bank's purchase or sale of the securities (see note 9).

The enforceability of the ARS Rights results in a separate asset that will be measured at its fair value. Lexicon elected to measure the ARS Rights under the fair value option of SFAS 159, and recorded a gain of approximately $12.1 million, which is reflected in loss on long-term investments, net, and recorded a corresponding long-term investment. 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, as defined by SFAS No. 115. 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.

Excluding auction rate securities and the ARS Rights, at December 31, 2008, Lexicon had approximately $103.1 million in cash and cash equivalents and short-term investments, including $16.6 million in investments held by Symphony Icon. Management believes that the working capital available to Lexicon excluding the funds held in auction rate securities will be sufficient to meet its cash requirements for at least the next 12 months.

5. Fair Value of Financial Instruments

The Company uses various inputs in determining the fair value of its investments and measures these assets on a quarterly 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. SFAS No. 157 defines the following levels directly related to the amount of subjectivity associated with the inputs to fair valuation of these financial assets:

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

The inputs or methodology used for valuing securities are not necessarily an indication of the credit risk associated with investing in those securities. 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 SFAS No. 157's valuation levels since the Company's initial adoption of SFAS No. 157 on January 1, 2008. 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 by SFAS No. 157 as of December 31, 2008 and 2007.

	Financial Assets at Fair Value as of December 31, 2008		
	Level 1	Level 2	Level 3
	(in thousands)		
Cash and cash equivalents	$ 85,873	$ —	$ —
Short-term investments	629	—	—
Short-term investments held by Symphony Icon, Inc.	16,610	—	—
Long-term investments	—	—	55,686
Total cash and cash equivalents and investments	$ 103,112	$ —	$ 55,686

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	Financial Assets at Fair Value as of December 31, 2007		
	Level 1	Level 2	Level 3
	(in thousands)		
Cash and cash equivalents	$ 22,938	$ —	$ —
Short-term investments	199,171	—	—
Short-term investments held by Symphony Icon, Inc.	36,666	—	—
Total cash and cash equivalents and investments	$ 258,775	$ —	$ —

The table presented below summarizes the change in consolidated balance sheet carrying value associated with Level 3 financial assets for the year ended December 31, 2008.

	Long-term Investments (in thousands)
Balance at December 31, 2007	$ —
Unrealized losses included in earnings as loss on long-term investments	(13,374)
Unrealized gains included in earnings as gain on long-term investments	12,060
Net sales and settlements	(21,050)
Transfers into Level 3	78,050
Balance at December 31, 2008	$ 55,686

6. Property and Equipment

Property and equipment at December 31, 2008 and 2007 are as follows:

	Estimated Useful Lives In Years	As of December 31, 2008	2007
		(In thousands)	
Computers and software	3-5	$ 12,328	$ 12,166
Furniture and fixtures	5-7	7,648	7,594
Laboratory equipment	3-7	39,385	39,427
Leasehold improvements	7-10	9,756	9,740
Buildings	15-40	63,508	63,342
Land	—	3,564	3,564
Total property and equipment		136,189	135,833
Less: Accumulated depreciation and amortization		(71,102)	(65,004)
Net property and equipment		$ 65,087	$ 70,829

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.

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The components of Lexicon's deferred tax assets (liabilities) at December 31, 2008 and 2007 are as follows:

	As of December 31,	
	2008	2007
	(In thousands)	
Deferred tax assets:		
Net operating loss carryforwards	$ 159,917	$ 121,473
Research and development tax credits	25,000	21,291
Stock-based compensation	8,815	7,855
Deferred revenue	6,368	13,478
Other	902	699
Total deferred tax assets	201,002	164,796
Deferred tax liabilities:		
Property and equipment	—	(165)
Other	(397)	(394)
Total deferred tax liabilities	(397)	(559)
Less: valuation allowance	(200,605)	(164,237)
Net deferred tax assets	$ —	$ —

At December 31, 2008, Lexicon had both federal and state NOL carryforwards of approximately $441.5 million and $104.0 million, respectively. The federal and state NOL carryforwards begin to expire in 2011. The Company has R&D tax credit carryforwards of approximately $25.0 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, 2008, the valuation allowance increased $36.4 million, primarily due to the Company's current year net loss. Lexicon reversed a previously recorded income tax provision of $119,000 representing alternative minimum tax payable in the year ended December 31, 2006. 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, 2008 and 2007, the Company had no accruals for interest or penalties related to income tax matters.

8. Goodwill and Other Intangible Assets

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, 2008. In accordance with SFAS No. 142, the goodwill balance is not subject to amortization, but is tested at least annually for impairment at the reporting unit level, which is the Company's single operating segment. The Company performed an impairment test of goodwill on its annual impairment assessment date. This test did not result in an impairment of

goodwill.

Other intangible assets represented Coelacanth's technology platform, which consists of its proprietary ClickChem™ reactions, novel building blocks and compound sets, automated production systems, high-throughput ADMET (Absorption, Distribution, Metabolism, Excretion and Toxicity) capabilities, and its know-how and trade secrets. The Company amortized other intangible assets on a straight-line basis over an estimated life of five years.

The amortization expense for the year ended December 31, 2006 was $0.6 million. Other intangible assets are now fully amortized.

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9. Debt Obligations

Genentech Loan: On December 31, 2002, Lexicon borrowed $4.0 million under an unsecured note agreement with Genentech, Inc. The proceeds of the loan were to be used to fund research efforts under the alliance agreement with Genentech discussed in Note 16. On November 30, 2005, the note agreement was amended to extend the maturity date of the loan by one year to December 31, 2006. No other terms of the note agreement were changed. The note permitted the Company to repay the note, at any time, at its option, in cash, in shares of common stock valued at the then-current market price, or in a combination of cash and shares, subject to certain limitations. The note accrued interest at an annual rate of 8%, compounded quarterly. On December 31, 2006, the Company repaid in full the principal and accrued interest outstanding under the note by issuing to Genentech 1,511,670 shares of common stock.

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 following table includes the aggregate future principal payments of the Company's long-term debt as of December 31, 2008:

	For the Year Ending December 31 (In thousands)
2009	$ 963
2010	1,047
2011	1,138
2012	1,230
2013	1,343
Thereafter	24,771
	30,492
Less current portion	(963)
Total long-term debt	$ 29,529

The fair value of Lexicon's debt financial instruments approximates their carrying value. The fair value of Lexicon's long-term debt 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 up to an aggregate amount of $35.9 million in the form of an uncommitted, demand, revolving line of credit. Lexicon entered into the credit line in connection with its acceptance of an offer from UBS AG, the investment bank that sold Lexicon its auction rate securities, providing Lexicon with rights to require UBS to purchase its $57.0 million (par value) of auction rate securities at par value during the period from June 30, 2010 through July 2, 2012. The credit line is secured only by these auction rate securities and advances under the credit line will be made on a "no net cost" basis, meaning that the interest paid by Lexicon on advances will not exceed the interest or dividends paid to Lexicon by the issuer of the auction rate securities.

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 LX6171, 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.

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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 (subject to an earlier exercise right in limited circumstances) at an exercise price of (i) $72 million, if the Purchase Option is exercised before June 15, 2009, (ii) $81 million, if the Purchase Option is exercised on or after June 15, 2009 and before June 15, 2010 and (iii) $90 million, if the Purchase Option is exercised on or after June 15, 2010 and before June 15, 2011. The Purchase Option exercise price may be paid in cash or a combination of cash and common stock, at the Company's sole discretion, provided that the common stock portion may not exceed 40% of the Purchase Option exercise price. Lexicon has calculated the value of the Purchase Option as the difference between the fair value of the common stock issued to Holdings of $23.6 million 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 $5.3 million and $7.4 million is recorded in other assets in the accompanying consolidated balance sheets as of December 31, 2008 and 2007, respectively, and the amortization expense of $2.1 million and $1.2 million is recorded in other expense, net in the accompanying consolidated statements of operations for the years ended December 31, 2008 and 2007, respectively.

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.

In accordance with FIN 46R, Lexicon has determined that Symphony Icon is a variable interest entity for which it is the primary beneficiary. This determination was based on Holdings' lack of controlling rights with respect to Symphony Icon's activities and the limitation on the amount of expected residual returns Holdings may expect from Symphony Icon if Lexicon exercises its Purchase Option. Lexicon has determined it is a variable interest holder of Symphony Icon due to its contribution of the intellectual property relating to the Programs and its issuance of shares of its common stock in exchange for the Purchase Option, which Lexicon intends to exercise if the development of the Programs is successful. Lexicon has determined that it is a primary beneficiary as a result of certain factors, including its primary responsibility for the development of the Programs and its contribution of the intellectual property relating to the Programs. As a result, Lexicon has included the financial condition and results of operations of Symphony Icon in its consolidated financial statements. Symphony Icon's cash and cash equivalents have been recorded on Lexicon's consolidated financial statements as short-term investments held by Symphony Icon. The noncontrolling interest in Symphony Icon on Lexicon's consolidated balance sheet initially reflected the $45 million proceeds contributed into

Symphony Icon less $2.3 million of structuring and legal fees. As the collaboration progresses, this line item will be reduced by Symphony Icon's losses, which were $20.0 million and $12.4 million in the years ended December 31, 2008 and 2007, respectively. The reductions to the noncontrolling interest in Symphony Icon will be reflected in Lexicon's consolidated statements of operations using a similar caption and will reduce the amount of Lexicon's reported net loss. Through December 31, 2008, 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.

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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, 2008 and 2007. Additionally, Lexicon leases certain equipment under operating leases.

Rent expense for all operating leases was approximately $2.5 million, $2.5 million and $2.4 million for the years ended December 31, 2008, 2007 and 2006, respectively. The following table includes non-cancelable, escalating future lease payments for the facility in New Jersey:

	For the Year Ending December 31 (In thousands)
2009	$ 2,516
2010	2,518
2011	2,555
2012	2,609
2013	1,304
Total	$ 11,502

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

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

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

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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 90 days 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. The First Rights Offering Trigger Date could be changed to as early as August 28, 2009 with the approval of the members of the Company's board of directors who are not affiliated with Invus (the "Unaffiliated Board"). All stockholders would have oversubscription rights with respect to the First Rights Offering, and Invus would be required to purchase the entire portion of the First Rights Offering that is not subscribed for by other stockholders.

For a period of 90 days following the date (the "Second Rights Offering Trigger Date") which is 12 months 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 the entire portion of the Second Rights Offering that is not subscribed for by other stockholders. Lexicon has determined that the First Rights Offering and the Second Rights Offering should be treated as equity instruments in accordance with EITF 00-19, "Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock," 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. 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.

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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 September 2006, Lexicon issued and sold 1,000,000 shares of its common stock to Azimuth Opportunity Ltd. under its June 2006 equity line agreement with Azimuth at a purchase price of approximately $3.67 per share. After deducting offering expenses, Lexicon received net proceeds from the sale of approximately $3.6 million.

In October 2006, Lexicon completed the registered direct offering and sale of 10,582,011 shares of its common stock to selected institutional investors at a price of $3.78 per share, resulting in net proceeds of $37.5 million, after deducting placement agent fees of $2.4 million and offering expenses of $0.1 million.

14. Stock Options and Warrants

Stock Option Plans

2000 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 (the "Equity Incentive Plan"). The Equity Incentive Plan will terminate in 2010 unless the Board of Directors terminates it sooner. The Equity Incentive Plan provides that it will be administered by the Board of Directors, or a committee appointed by the Board of Directors, which determines recipients and types of options to be granted, including number of shares under the option and the exercisability of the shares. The Equity Incentive Plan is presently administered by the Compensation Committee of the Board of Directors.

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 bonuses and restricted stock purchase awards. Incentive stock options have an exercise price of 100% or more of the fair market value of our common stock on the date of grant. Nonstatutory stock options may have an exercise price as low as 85% of fair market value on the date of grant. The purchase price of other stock awards may not be less than 85% of fair market value. However, the plan administrator may award bonuses in consideration of past services 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 Board of Directors initially authorized and reserved an aggregate of 11,250,000 shares of common stock for issuance under the Equity Incentive Plan. On January 1 of each year for ten years, beginning in 2001, the number of shares reserved for issuance under the Equity Incentive Plan automatically will be increased by the greater of:

- 5% of Lexicon's outstanding shares on a fully-diluted basis; or
- that number of shares that could be issued under awards granted under the Equity Incentive Plan during the prior 12-month period;

provided that the Board of Directors may provide for a lesser increase in the number of shares reserved under the Equity Incentive Plan for any year. The total number of shares reserved in the aggregate may not exceed 30,000,000 shares over the ten-year period.

As of December 31, 2008, an aggregate of 26,000,000 shares of common stock had been reserved for issuance, options to purchase 16,336,404 shares were outstanding, and 4,189,629 shares had been issued upon the exercise of stock options issued under the Equity Incentive Plan.

2000 Non-Employee Directors' Stock Option Plan: In February 2000, Lexicon adopted the 2000 Non-Employee Directors' Stock Option Plan (the "Directors' Plan") to provide for the automatic grant of options to purchase shares of common stock to non-employee directors of the Company. Under the Directors' Plan, non-employee directors first elected after the closing of the Company's initial public offering 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, beginning with the annual meeting in 2001, each non-employee director who has been a director for at least six months was automatically granted an option to purchase 6,000 shares of common stock. Beginning with the annual meeting in 2005, the annual grant was increased to an option to purchase 10,000 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 term of ten years from the date of grant.

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The Board of Directors initially authorized and reserved a total of 600,000 shares of its common stock for issuance under the Directors' Plan. On the day following each annual meeting of Lexicon's stockholders, for 10 years, starting in 2001, the share reserve will automatically be increased by a number of shares equal to the greater of:

- 0.3% of the Company's outstanding shares on a fully-diluted basis; or
- that number of shares that could be issued under options granted under the Directors' Plan during the prior 12-month period;

provided that the Board of Directors may provide for a lesser increase in the number of shares reserved under the Directors' Plan for any year.

As of December 31, 2008, an aggregate of 650,000 shares of common stock had been reserved for issuance, options to purchase 504,000 shares were outstanding, and no options 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 our 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, 2008, an aggregate of 85,677 shares of common stock had been reserved for issuance, options to purchase 57,760 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:

	2008		2007		2006	
(In thousands, except exercise price data)	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price	Options	Weighted Average Exercise Price
Outstanding at beginning of year	16,351	$ 5.65	15,815	$ 5.99	13,802	$ 6.36
Granted	4,077	2.08	2,952	3.85	2,651	4.07
Exercised	(1)	1.89	(516)	1.80	(156)	2.30
Expired	(2,663)	4.32	(1,137)	8.11	(248)	8.96
Forfeited	(866)	3.03	(763)	4.68	(234)	5.23
Outstanding at end of year	16,898	5.13	16,351	5.65	15,815	5.99
Exercisable at end of year	11,410	$ 6.28	11,946	$ 6.21	11,675	$ 6.40

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The weighted average estimated grant date fair value of options granted during the years ended December 31, 2008, 2007 and 2006 were $1.43, $2.71 and $2.99, respectively. The total intrinsic value of options exercised during the years ended December 31, 2008, 2007 and 2006 were $300, $982,000 and $343,000, respectively. The weighted average remaining contractual term of options outstanding and exercisable was 5.5 and 4.0 years, respectively, as of December 31, 2008. At December 31, 2008, the aggregate intrinsic value of the outstanding options and the exercisable options was $310 and none, respectively.

The following is a summary of the nonvested options as of December 31, 2008, and changes during the year then ended, under Lexicon's stock option plans:

	Options	Weighted Average Grant Date Fair Value
Nonvested at beginning of year	4,405	$ 2.96
Granted	4,077	1.43
Vested	(2,128)	3.07
Canceled	(866)	2.10
Nonvested at end of year	5,488	$ 1.91

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 expire on March 31, 2009. The fair value of the warrants was included in the total purchase price for the acquisition. As of December 31, 2008, warrants to purchase 16,483 shares of common stock, with an exercise price of $11.93 per share, remained outstanding.

Aggregate Shares Reserved for Issuance

As of December 31, 2008, an aggregate of 16,914,647 shares of common stock were reserved for issuance upon exercise of outstanding stock options and warrants and 5,601,994 additional shares were available for future grants under Lexicon's stock option plans.

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 $828,000, $862,000 and $907,000, in the years ended December 31, 2008, 2007 and 2006, 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

Lexicon has entered into the following alliances for the discovery and development of therapeutics based on its in vivo drug target discovery efforts:

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Bristol-Myers Squibb Company: Lexicon established an alliance with Bristol-Myers Squibb 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 is continuing to use its gene knockout technology to identify additional drug targets with promise in the neuroscience field. For those targets that are 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 will 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 is in consideration for additional research and phenotypic analysis of knockout mice which supplements the phenotypic analysis conducted in the initial target function discovery term. Lexicon will also receive clinical and regulatory milestone payments for each drug target for which Bristol-Myers Squibb develops a drug 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 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 is being 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 $9.3 million, $10.0 million and $21.8 million for the years ended December 31, 2008, 2007 and 2006, respectively.

Genentech, Inc. Lexicon established an alliance with Genentech in December 2002 to discover novel therapeutic proteins and antibody targets. Under the original alliance agreement, 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. The terms of the loan are discussed in Note 9. In addition, Lexicon received $24.0 million in performance payments for its work in the collaboration as it was completed. The original 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 may develop and commercialize drugs for up to six of the targets included in the alliance. Genentech retains an option on the potential development and commercialization of these drugs under a cost and profit sharing arrangement, with Lexicon having certain conditional rights to co-promote drugs on a worldwide basis. Genentech is entitled to receive milestone payments in the event of regulatory approval and royalties on net sales of products commercialized by Lexicon outside of a cost and profit sharing arrangement. Lexicon will receive payments from Genentech upon achievement of milestones related to the development and regulatory approval of certain drugs resulting from the alliance that are developed and commercialized by Genentech. Lexicon is also entitled to receive royalties on net sales of these products, provided they are not included in a cost and profit sharing arrangement. Lexicon retains non-exclusive rights for the development and commercialization of small molecule drugs addressing the targets included in the alliance.

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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, $4.3 million and $5.0 million for the years ended December 31, 2008, 2007 and 2006, respectively.

N.V. Organon. Lexicon established an alliance with Organon in May 2005 to jointly discover, develop and commercialize novel biotherapeutic drugs. In the alliance, Lexicon is creating and analyzing knockout mice for up to 300 genes selected by the parties that encode secreted proteins or potential antibody targets, including two of Lexicon's existing drug discovery programs. The parties are jointly selecting targets for further research and development and will equally share costs and responsibility for research, preclinical and clinical activities. The parties will jointly determine the manner in which alliance products will be commercialized and will equally benefit from product revenue. If fewer than five development candidates are designated under the alliance, Lexicon's share of costs and product revenue will be proportionally reduced. Lexicon will receive a milestone payment for each development candidate in excess of five. Either party may decline to participate in further research or development efforts with respect to an alliance product, in which case such party will receive royalty payments on sales of such alliance product rather than sharing in revenue. Organon will have principal responsibility for manufacturing biotherapeutic products resulting from the alliance for use in clinical trials and for worldwide sales. Organon, formerly a subsidiary of Akzo Nobel N.V., was acquired by Schering-Plough Corporation in November 2007.

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 will also provide Lexicon with annual research funding totaling up to $50.0 million for its 50% share of the alliance's costs during this same period.

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 $9.2 million, $13.5 million and $15.5 million for the years ended December 31, 2008, 2007 and 2006, respectively.

Takeda Pharmaceutical Company Limited. Lexicon established an alliance with Takeda in July 2004 to discover new drugs for the treatment of high blood pressure. In the collaboration, Lexicon used its gene knockout technology 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. Takeda will make research milestone payments to Lexicon for each target selected for therapeutic development. In addition, Takeda will make clinical development and product launch milestone payments to Lexicon 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.

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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 and $9.0 million for the years ended December 31, 2007 and 2006, respectively.

Other Collaborations and Arrangements

Lexicon has entered into the following other collaborations and arrangements:

Bristol-Myers Squibb Company. Lexicon entered into a drug target validation agreement with Bristol-Myers Squibb in December 2004. Under this agreement, Lexicon developed mice and phenotypic data for certain genes previously requested by Bristol-Myers Squibb under its LexVision agreement (but that Lexicon was not required to deliver thereunder) and certain additional genes requested by Bristol-Myers Squibb. The collaboration term under the agreement expired after the final phenotypic data set was delivered by Lexicon. The Company received payments totaling $5.0 million under the agreement. Revenue recognized under this agreement was none, $0.2 million and $1.4 million for the years ended December 31, 2008, 2007 and 2006, respectively.

Lexicon also entered into separate drug target validation agreements with Bristol-Myers Squibb in January 2006, October 2006 and November 2007, under which Lexicon is developing mice and phenotypic data for certain additional 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 $4.8 million under these agreements through December 31, 2008. Revenue recognized under these agreements was $1.1 million, $1.5 million and $1.4 million for the years ended December 31, 2008, 2007 and 2006, respectively.

Genentech, Inc. 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 expired after the final delivery of the selected mice has been performed by Lexicon. The Company received payments totaling $1.0 million under the agreement through December 31, 2008. Revenue recognized under this agreement was $0.1 and $0.9 million for the years ended December 31, 2008 and 2007, respectively.

Texas Institute for Genomic Medicine. In July 2005, Lexicon was awarded $35.0 million from the Texas Enterprise Fund for the creation of a knockout mouse embryonic stem cell library containing 350,000 cell lines using Lexicon's proprietary gene trapping technology, which Lexicon completed in 2007. Lexicon created the library for the Texas Institute for Genomic Medicine ("TIGM"), a newly formed non-profit institute whose founding members are Texas A&M University, the Texas A&M University System Health Science Center and Lexicon. TIGM researchers may also access specific cells from Lexicon's current gene trap library of 270,000 mouse embryonic stem cell lines and have certain rights to utilize Lexicon's patented gene targeting technologies. In addition, Lexicon 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, $10.6 million and $7.0 million for the years ended December 31, 2008, 2007 and 2006, 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.

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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 2008 and 2007:

(In thousands, except per share data)

	Quarter Ended			
	March 31	June 30	September 30	December 31
	(Unaudited)			
2008				
Revenues	$ 8,893	$ 9,566	$ 7,512	$ 6,350
Loss from operations	$ (24,438)	$ (26,386)	$ (24,822)	$ (20,889)
Net loss	$ (17,950)	$ (20,034)	$ (23,459)	$ (15,417)
Net loss 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
2007				
Revenues	$ 13,495	$ 12,648	$ 10,167	$ 13,808
Loss from operations	$ (19,095)	$ (17,950)	$ (19,442)	$ (18,467)
Net loss	$ (18,915)	$ (13,591)	$ (14,111)	$ (12,177)
Net loss per common share, basic and diluted	$ (0.24)	$ (0.17)	$ (0.14)	$ (0.09)
Shares used in computing net loss per common share	77,938	79,568	104,196	136,794