CYTRX CORP
Form 10-K
March 13, 2009

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

Form 10-K

(Mark one)

R 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

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

For the transition period from _____ to _____

Commission file number 0-15327

CytRx Corporation
(Exact name of Registrant as specified in its charter)

Delaware	58-1642740
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
11726 San Vicente Blvd, Suite 650, Los Angeles, California	90049
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: (310) 826-5648

_____

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

Title of each class	Name of exchange on which registered
Common Stock, $0.001 par value per share	The NASDAQ Stock Market LLC
Series A Junior Participating Preferred Stock Purchase Rights	

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 Securities Act Rule 405). Yes £ No R

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 £ No R

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 and (2) has been subject to such filing requirements for the past 90 days. Yes R No £

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 the 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. R

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

Large accelerated filer £	Accelerated filer R	Non-accelerated filer £ (Do not check if a smaller reporting company)	Smaller reporting company £

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 2b-2 of the Act). Yes £ No R

The aggregate market value of the Registrant's common stock held by non-affiliates on June 30, 2008, the last business day of the Registrant's most recently completed second fiscal quarter, was approximately $56.0 million. On March 11, 2009, there were outstanding 93,347,732 shares of the Registrant's common stock, exclusive of treasury shares.

CYTRX CORPORATION
2007 ANNUAL REPORT ON FORM 10-K

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“SAFE HARBOR” STATEMENT

Some of the information contained in this Annual Report may include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. We base these forward-looking statements on our current views with respect to our research and development activities, business strategy, business plan, financial performance and other matters, both with respect to us, specifically, and the biotechnology sector, in general. Statements that include the words “expect,” “intend,” “plan,” “believe,” “project,” “estimate,” “may,” “should,” “anticipate,” “will” and simi of a future or forward-looking nature identify forward-looking statements for purposes of the federal securities laws or otherwise, but the absence of these words does not necessarily mean that a statement is not forward-looking.

All forward-looking statements involve inherent risks and uncertainties, and there are or will be important factors that could cause actual results to differ materially from those indicated in these statements. We believe that these factors include, but are not limited to, those factors set forth in the sections entitled “Business,” “Risk Factors,” “Legal Proceedings,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Quantitative and Qualitative Disclosures About Market Risk” and “Controls and Procedures” in this Annual Report, all of which you should review carefully. Please consider our forward-looking statements in light of those risks as you read this Annual Report. We undertake no obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise, except as required by law.

If one or more of these or other risks or uncertainties materializes, or if our underlying assumptions prove to be incorrect, actual results may vary materially from what we anticipate. All subsequent written and oral forward-looking statements attributable to us or individuals acting on our behalf are expressly qualified in their entirety by the cautionary language above. You should consider carefully all of the factors set forth or referred to in this Annual Report that could cause actual results to differ.

PART I

Item 1. BUSINESS

In this Annual Report, we sometimes refer to CytRx Corporation as "CytRx," to our former subsidiary, RXi Pharmaceuticals Corporation, as "RXi," and to Innovive Pharmaceuticals, Inc., which we acquired in September 2008, as "Innovive." References in this Annual Report to the "company," "we," "us" or "our" refer to CytRx, alone, unless otherw indicated.

COMPANY OVERVIEW

We are a biopharmaceutical research and development company engaged in the development of high-value human therapeutics. Our drug development pipeline includes two product candidates in clinical development for cancer indications, including registration studies of tamibarotene for the treatment of acute promyelocytic leukemia, or APL. In addition to our core oncology programs, we are developing treatments for neurodegenerative and other disorders based upon our small-molecule molecular chaperone amplification technology. We also are engaged in new-drug discovery research at our laboratory facility in San Diego, California, utilizing our master chaperone regulator assay, or MaCRA, technology. Apart from our drug development programs and new-drug discovery research activities, we currently maintain a 45% equity interest in our former subsidiary, RXi Pharmaceuticals Corporation, or RXi (NASDAQ: RXII).

On September 19, 2008, we completed our merger acquisition of Innovive Pharmaceuticals, Inc., or Innovive, and its clinical-stage cancer product candidates, including tamibarotene. As a result of the merger, Innovive became a wholly owned subsidiary of CytRx. On December 30, 2008, we merged the former Innovive subsidiary into CytRx.

Prior to our acquisition of Innovive, we were focused on developing human therapeutics based primarily upon our small-molecule molecular chaperone amplification technology, including arimoclomol for ALS and stroke recovery and iroxanadine for diabetic foot ulcers and other potential indications. After acquiring Innovive, we redirected our efforts from arimoclomol and iroxanadine to developing Innovive's former lead cancer product candidates, tamibarotene for APL and INNO-206 for small cell lung cancer, SCLC, or other solid tumor cancers, which we believe hold greater near-term revenue potential. Our current business strategy is to seek one or more strategic partnerships for the further development of arimoclomol and iroxanadine.

OUR PRODUCT CANDIDATE PIPELINE

The following tables summarize the current pipeline of our product candidates:

Technology	Product Candidate	Indication	Stage of Development
Synthetic retinoid	Tamibarotene	APL (acute promyelocytic leukemia)	Pivotal Phase II
Doxorubicin prodrug	INNO-2006	SCLC (small cell lung cancer) and other solid tumor cancers	Phase II (2H-2009)
Tyrosine kinase inhibitor	Bafetinib (formerly INNO-406)	CML (chronic myeloid leukemia)	Phase I
Molecular chaperone amplification	Arimoclomol	ALS (amyotrophic lateral sclerosis, or Lou Gehrig's disease) and stroke recovery	Phase IIb

Molecular chaperone amplification	Iroxanadine	Diabetic foot ulcers, other indications	Phase I

OUR CLINICAL DEVELOPMENT PROGRAMS

Our current clinical development programs consist of our efforts to develop tamibarotene for APL and INNO-206 for SCLC or other solid tumor types and our planned animal toxicology studies designed to facilitate a Phase IIb clinical study of arimoclomol in ALS, which has been placed on hold by the United States Food and Drug Administration, or FDA.

Tamibarotene. Tamibarotene is a synthetic retinoid designed to overcome resistance and avoid toxic side effects of differentiation therapy with all-trans retinoic acid, or ATRA, a component of the current first-line treatment for APL.

Tamibarotene for the treatment of APL. Acute promyelocytic leukemia, or APL, is a specific type of acute myeloid leukemia characterized by the t(15;17) translocation, which fuses the promyelocytic leukemia, or PML, gene on chromosome 15 to the retinoic acid receptor, or RAR, α gene on chromosome 17. This fusion causes abnormal cell growth.

Differentiation therapy with ATRA, is the basis for the treatment of APL. Differentiation therapy causes leukemic promyelocytes to mature and undergo cell death. Patients typically receive ATRA in combination with chemotherapy as the initial therapy, followed by anthracyline-based consolidation therapy designed to produce complete remission. The majority of patients treated this way generally experience a complete remission of disease. Current National Comprehensive Cancer Network guidelines recommend that patients then undergo one to two years of maintenance therapy with ATRA to prevent a recurrence. ATRA therapy is associated with several toxicities, the most serious of which, retinoic acid syndrome, or RAS. RAS occurs in up to 25% of patients treated with ATRA, a serious and potentially fatal complication characterized by fever, dyspnea (breathing difficulties), weight gain, pulmonary infiltrates (abnormal accumulation in the lungs), and pleural or pericardial effusions (excess fluid around the lungs or heart).

Patients that initially respond to front-line therapy with ATRA plus chemotherapy sometimes relapse, and some of these patients fail to respond to a second course of treatment with ATRA. Currently, patients who fail ATRA-based therapy are treated with arsenic trioxide, a compound administered intravenously and associated with significant toxicity, including irregular heartbeat. There currently is no standard of care for patients who do not respond to ATRA and arsenic trioxide, or who respond but subsequently relapse. In 2007, the FDA granted Orphan Drug Designation and Fast Track Designation for the use of tamibarotene in patients with relapsed or refractory APL following treatment with ATRA and arsenic trioxide.

Tamibarotene was developed to overcome resistance to ATRA. In vitro, tamibarotene is approximately ten times more potent than ATRA at causing APL cells to differentiate and die. In addition, tamibarotene has a lower affinity for cellular retinoic acid binding protein, or CRABP, which we believe should allow for sustained plasma levels during administration. This may enhance tamibarotene's potential efficacy, because patients may be able to experience benefits from the drug over a longer period of time. Tamibarotene does not bind the RAR-γ receptor, the major retinoic acid receptor in the dermal epithelium, which should lessen the occurrence of RAS. In clinical studies, the rate of RAS appeared to be low.

Pre-clinical data. In a variety of preclinical models, tamibarotene was superior to ATRA in its ability to cause APL cells to differentiate and die. In the clinical setting, in vitro response to tamibarotene appeared predictive of clinical response, including activity in patients who had a poor response to ATRA.

Clinical data. Tamibarotene is approved in Japan under the brand name Amnolake for use in relapsed or refractory APL. The approval was based on data from two studies in Japanese patients. In the pivotal study, the effectiveness of orally administered tamibarotene was evaluated in 39 patients with APL, including patients who had never received treatment for APL and patients who had been previously treated with ATRA. Tamibarotene was administered orally at a dose of 6 mg/m2/day for eight weeks. The overall complete response rate in these patients was 61.5%. In patients who had a recurrence of APL following ATRA therapy, the response rate was 81%. RAS was reported in three patients, or 7.3% of the patient group.

Development Plan. We re-initiated a pivotal study in ATRA and arsenic trioxide refractory APL in the second quarter of 2008. The study is designed to collect pharmacokinetic, safety and efficacy data in approximately 50 patients. We anticipate that this study will take approximately 15 months to complete. Depending on its outcome, this study, in combination with the data from the two Japanese studies, would form the basis of a new drug application, or NDA. If the results of the study are positive, and if we are able to manufacture tamibarotene in commercial quantities in

compliance with stringent regulatory requirements, we believe that we would be able to file the NDA with the FDA in 2011.

In addition, a Phase III study is currently being conducted in Japan by the Japan Adult Leukemia Group comparing ATRA to tamibarotene for the maintenance treatment of APL. If positive, these data could potentially form the basis of a supplemental NDA application.

INNO-206. INNO-206 (formerly DOXO-EMCH) is a prodrug for doxorubicin. Specifically, it is the (6-Maleimidocaproyl) hydrazone of doxorubicin. Essentially, this chemical is doxorubicin (DOXO) attached to an acid sensitive linker (EMCH).

INNO-206 for the Treatment of Cancer. Anthracyclines are a class of drugs that are among the most commonly used agents in the treatment of cancer. Doxorubicin, the first anthracycline to gain FDA approval, has demonstrated efficacy in a wide variety of cancers including breast cancer, lung cancer, sarcomas, and lymphomas. However, due to the uptake of doxorubicin by various parts of the

body, it is associated with side effects such as cumulative cardiotoxicity, myelosuppression (decreased production of blood cells by bone marrow), gastrointestinal disorders, mucositis (inflammation of the mucous membranes lining the digestive tract, including the mouth), stomatitis (inflammation of the mouth's soft tissue), and extravasation (the leakage of intravenous drugs from the vein into the surrounding tissue).

We believe INNO-206 has attributes that improve on native doxorubicin, including reduction of adverse events, improvement in efficacy and the ability to reach the tumor more quickly.

Our anticipated mechanism of action for INNO-206 is as follows:

- after administration, INNO-206 rapidly binds endogenous circulating albumin through the EMCH linker;
- circulating albumin preferentially accumulates in tumors, bypassing uptake by other non-specific sites, including the heart, bone marrow and the gastrointestinal tract;
- once albumin-bound INNO-206 reaches the tumor, the acidic environment of the tumor causes cleavage of the acid sensitive linker; and
- free doxorubicin is released at the site of the tumor.

Pre-clinical data. In a variety of preclinical models, INNO-206 was superior to doxorubicin in its ability to increase dosing, antitumor efficacy, and safety, including a reduction in cardiotoxicity.

Clinical data. A Phase I study of INNO-206 that demonstrated safety and objective clinical responses in a variety of tumor types was completed in 2005 and presented at the March 2006 Krebskongress meeting in Berlin. In this study, single doses were administered at up to six times the standard dosing of doxorubicin without an increase in observed side effects over historically observed levels with doxorubicin. Twenty-four of 35 evaluable patients had either a clinical response or stable disease. Objective clinical responses were observed in patients with sarcoma, breast, and lung cancers.

Development Plan. Based on the objective clinical responses seen in the Phase I study, we intend to initially develop INNO-206 as a therapeutic for patients with solid tumors, such as SCLC patients who have relapsed after initial chemotherapy. This indication has a very poor prognosis with the current standard of care, topotecan, which is used in approximately 30% of SCLC patients. Based on the existing preclinical and clinical data for INNO-206, we believe there is the potential to demonstrate superiority to topotecan in the second-line SCLC setting.

Beyond this initial indication, we will explore the utility of INNO-206 in chemotherapy regimens that currently include doxorubicin, both for solid tumors and other indications. If the Phase I data were to hold up in larger randomized studies, we believe the potential exists for INNO-206 to replace doxorubicin based on higher efficacy and improved side effect profile, although this has not been proven.

Bafetinib. Bafetinib (formerly INNO-406) is a novel drug developed by the Japanese pharmaceutical company Nippon Shinyaku, to overcome the limitations of Gleevec and second-line tyrosine kinase inhibitors in resistant chronic myelogenous leukemia, or CML. At present, there are no approved third-line treatments for refractory CML.

Bafetinib for the Treatment of CML. CML is a type of blood cancer that occurs in approximately 4,570 patients per year in the U.S. Approximately 95% of CMLs contain a genetic translocation known as Bcr-Abl, which signals the cells to proliferate. Bcr-Abl does not exist in normal cells.

In 2001, Novartis AG won approval in the U.S. for its drug, Gleevec. Gleevec is a chemical molecule specifically designed to stop Bcr-Abl from emitting its signals for cell growth. Gleevec proved effective in treating patients with CML by inhibiting Bcr-Abl. Patients remain on Gleevec as chronic therapy. The reported five-year survival rate for patients with CML has gone from approximately 35% before the approval of Gleevec in 2001 to approximately 90% in 2006. Worldwide sales of Gleevec in 2006 were $2.5 billion.

Unfortunately, resistance to Gleevec has begun to occur. Resistance to Gleevec appears to occur due to amplification of the Bcr-Abl gene and, in many cases, mutations in the Bcr-Abl gene. In other cases, some of the genes that Bcr-Abl signals to turn on are becoming turned on independently of Bcr-Abl, making inhibition of the gene by Gleevec ineffective. Lyn is a member of the Src family of kinases. These kinases are known to be involved in sending out signals that drive cell growth. Lyn has been shown to be one of the genes that is turned on by Bcr-Abl, and Lyn is known to be active in some Gleevec-resistant CMLs. Activation of Lyn is therefore suspected of being another mechanism by which cells become resistant to Gleevec.

The development of resistance to Gleevec means that a second generation of drugs is required to treat CML. Ideally, these new drugs would be able to inhibit Bcr-Abl, even in its mutated form, and also independently turn off other genes that Bcr-Abl normally activates.

Dasatinib, from Bristol-Myers Squibb, is the leading second-generation Bcr-Abl inhibitor. Dasatinib gained conditional U.S. marketing approval in June 2006. Dasatinib has high potency in inhibiting Bcr-Abl and also inhibits Src, a family of kinases known to be involved in cell growth. In clinical studies, Dasatinib has shown good activity in Gleevec-resistant patients. However, there have also been concomitant side effects, including serious and life-threatening pleural effusion. In fact, it is estimated that two-thirds of patients experience dose reductions or interruptions, and in data provided by Bristol-Myers Squibb 20% to 30% of patients that initiate dasatinib therapy discontinue its use due to intolerance. This side effect profile is believed to be due to non-specific kinase inhibition, but that has not yet been proven. It is not clear whether a Bcr-Abl and Lyn inhibitor would have similar side effects.

Nilotinib, another second generation Bcr-Abl inhibitor being developed by Novartis AG, received accelerated approval in the U.S. Nilotinib has potent activity against Bcr-Abl. In its Phase I clinical trial, Nilotinib showed good activity in Gleevec-resistant patients. In Phase II clinical data presented at the American Society for Hematology conference in 2006, Nilotinib showed efficacy similar to dasatinib in Gleevec-resistant patients.

Bafetinib is roughly 25 to 55 times more potent at inhibiting Bcr-Abl than Gleevec in cell culture. Bafetinib is also capable of inhibiting 19 of the 20 tested mutated forms of Bcr-Abl in CML that are resistant to Gleevec. In addition, bafetinib is capable of shutting down the activity of the Lyn protein. This ability to inhibit the activity of Lyn is independent of bafetinib's ability to inhibit Bcr-Abl.

We believe that these properties of bafetinib, including its higher potency than Gleevec, the ability to inhibit the mutated forms of Bcr-Abl and the addition of Lyn inhibition, might make it an effective treatment for CML, although we are in the early stages of the clinical testing only and none of bafetinib's potential advantages have been clinically proven.

Pre-clinical Data. In mice-leukemia models, bafetinib has been shown to markedly extend the survival of animals implanted with Gleevec-resistant leukemic cells. In toxicology studies done in mice, rats, and dogs, bafetinib appeared to be safe and well-tolerated. A dose was described in dogs in which no side effects were seen was used to calculate the starting dose in humans for our recently completed clinical trial.

Phase I Study. In November 2008, we announced that bafetinib demonstrated clinical responses in patients with CML in a Phase I clinical trial conducted in patients with CML and other leukemias that have a certain mutation called the Philadelphia Chromosome (Ph+) and are intolerant of or resistant to Gleevec and, in some cases, second-line tyrosine kinase inhibitors such as dasatinib (Sprycel®) and nilotinib (Tasigna®)). The clinical trial was designed to identify the optimal dose for possible future studies by escalating doses from 30 mg once per day to up to 480 mg twice per day in a total of 56 patients with Ph+ leukemias. Of the patients, 31 had CML in chronic phase (CML-CP), nine were in accelerated phase (CML-AP), seven were in blast phase (CML-BP), and nine had Ph+ acute lymphocytic leukemia. The clinical trial was conducted at seven clinical sites in the US, Germany, and Israel, with Hagop Kantarjian, M.D.,

Professor & Chairman, Department of Leukemia, The University of Texas, M.D. Anderson Cancer Center, serving as the Principal Investigator. A positive, dramatic decrease in the number of leukemia cells in the bone marrow was seen in 35% of the patients that were randomly chosen to begin their treatment with the optimal INNO-406 dose of 240 mg twice per day.

The maximum tolerated dose was determined to be 240 mg given twice per day, based on evidence of increasing potential liver toxicity at higher doses. Common adverse events (observed in greater than 20% of patients in the 240 mg twice per day dose group) were gastrointestinal related, swelling, and fatigue. There was no evidence of fluid accumulating around the lungs, or significant changes in a certain heart rhythm called QTc prolongation, which are serious side effects known to occur in patients treated with approved drugs for this indication. Approximately 13% of patients across all dose groups discontinued dosing due to unacceptable toxicity.

In 2007, the FDA granted Orphan Drug Designation to bafetinib for the treatment of Gleevec-resistant or intolerant CML. Based on the results of our Phase I study, we intend to seek a strategic partner for the further development of bafetinib.

Arimoclomol. Arimoclomol is an orally-administered small-molecule product candidate that we believe functions by stimulating a normal cellular protein repair pathway by amplifying activated molecular chaperone proteins implicated in neurological disorders.

Arimoclomol for the treatment of ALS. ALS, or Lou Gehrig's disease, is a debilitating and ultimately deadly disease involving the progressive degeneration of motor neurons believed to be caused by toxic mis-folding of proteins. According to the ALS Association, approximately 30,000 people in the U.S. are living with ALS and 5,600 new cases are diagnosed each year. Worldwide, an estimated 120,000 people are living with ALS. According to the ALS Survival Guide, 50% of ALS patients die within 18 months of diagnosis and 80% die within five years of diagnosis.

The following is a summary of our clinical development of arimoclomol for treating ALS:

- in July 2006, we completed an 84-patient, multi-center, double-blind, placebo-controlled, multi-dose Phase IIa clinical trial of safety and tolerability of arimoclomol in volunteers with ALS, which we refer to as the Phase IIa trial;

- in May 2007, we completed an open-label extension of the Phase IIa trial in approximately 70 ALS patients from the trial who were administered the highest investigational dose (100 mg three times daily) of arimoclomol for an additional six months;

- in June 2007, we completed a multiple ascending-dose clinical trial of safety and tolerability involving 40 healthy volunteers;

- in November 2007, we completed a 28-day safety clinical trial with 400 mg of arimoclomol three times daily involving 16 healthy volunteers; and

- in December 2007, we initiated patient screening in a double blind, placebo-controlled Phase IIb clinical study. In this trial, we expect to enroll 390 ALS patients at 30 to 40 clinical sites in the U.S. and Canada. The primary purpose of this trial is to evaluate the safety and efficacy of a 400 mg dose of arimoclomol administered orally three times daily. The Phase IIb clinical trial was placed on clinical hold by the FDA in January 2008. Based on written correspondence we received from the FDA, their decision pertained to a previously completed animal toxicology study in rats and was not related to data generated from any human studies with arimoclomol. We are in the process of completing additional animal toxicology studies that we plan to submit to the FDA in the second quarter of 2009.

Phase IIa clinical trial. Participants in the Phase IIa clinical trial of arimoclomol were administered either a placebo capsule, or one of three dosage levels of arimoclomol capsules, three times daily for a period of 12 weeks, immediately followed by a one-month period without the drug. The primary endpoints of the Phase IIa trial were safety and tolerability. Secondary endpoints included a preliminary evaluation of efficacy using two widely accepted disease-progression markers. The first marker, the revised ALS Functional Rating Scale, or ALSFRS-R, is used to determine patients' overall functional capacity and independence in 13 activities. The second marker measures vital capacity, an assessment of lung capacity, which is an important disease indicator since ALS sufferers eventually lose the ability to breathe on their own. The trial was designed to be able to detect only extreme responses in these two markers.

The results from our Phase IIa trial and open-label extension clinical trial indicated that arimoclomol was safe and well tolerated in ALS volunteers, even at the highest administered dose. Arimoclomol was detected in participants' cerebral spinal fluid, demonstrating that it passed the so-called blood:brain barrier, and participants treated with arimoclomol experienced a statistically significant decrease in adverse events of weakness compared with the placebo group. As would be expected based upon the small size and short duration of the Phase IIa trial, we observed no statistically significant effects in disease progression markers. We did, however, observe a trend toward slower disease progression in the highest dosage group. Since there was no concurrent placebo control group in our open-label extension clinical trial, we compared the results with results in an untreated placebo group with similar characteristics in a prior ALS clinical trial published in July 2006 in Annals of Neurology. The results indicated a trend toward a slower average progression in every disease marker in the patients treated with arimoclomol compared to the historical placebo control. In particular, we observed a decrease of 21% in the rate of decline for ALSFRS-R, 8% for vital capacity, 23% for total body weight and 20% for body mass index when compared with that historical control. No definitive conclusions can be drawn from these

data without a concurrent placebo control group, and investors are cautioned against relying on these data as an indication of arimoclomol's potential efficacy.

The favorable safety and tolerability profile observed in our Phase IIa trial, open-label extension clinical trial and animal toxicology studies of arimoclomol suggested that we may be able to safely increase the dose of arimoclomol without causing significant side effects. The results from the subsequent multiple ascending-dose study indicated that arimoclomol was safe and well tolerated, even at doses of 600 mg three times daily (six times higher than the highest dose used in the Phase IIa and open-label studies), when administered to healthy volunteers over a seven-day period. Results from the 28-day safety clinical trial in healthy volunteers indicated that the dosage of 400 mg administered three times daily also was safe and well tolerated.

Phase IIb efficacy trial. In January 2008, the FDA placed on clinical hold our planned efficacy trial to evaluate the safety and efficacy in ALS patients of a 400 mg dose of arimoclomol administered orally three times daily. Based on written correspondence we received from the FDA, their decision pertained to a previously completed animal toxicology study in rats and was not related to data generated from any human studies with arimoclomol. We are completing further animal toxicology studies of arimoclomol, and plan to submit data from those studies to the FDA in the second quarter of 2009. Subject to the results of these studies and our ability to provide satisfactory information to the FDA to remove the clinical hold, we plan to seek a strategic partner for the further development of arimoclomol for all indications.

Other Clinical Development. In February 2009, a Phase II/III adaptive clinical trial commenced to study arimoclomol in a subset of patients with the inherited or familial form ALS. Patients with familial ALS (fALS) who harbor certain mutations in the superoxide dismutase-1 (SOD1) gene suffer from a rapidly progressing form of the disease. The clinical trial is being financially supported by grants from the ALS Association and the U.S. Food and Drug Administration's (FDA's) Office of Orphan Products Development (OOPD), and we are supplying the drug and allowing the sponsor to reference our Investigational New Drug Application for regulatory purposes.

Arimoclomol for recovery from stroke. Stroke results from an acute loss of normal blood flow to the brain caused most often by a blockage in a blood vessel (ischemic) or due to leaking of blood from a vessel (hemorrhagic). According to the American Heart Association: stroke is the third leading cause of death and the number one cause of long-term disability in the U.S.; between 50% and 70% of stroke survivors regain functional independence, but between 15% and 30% are permanently disabled and 20% require institutional care within three months after stroke; and the direct and indirect stroke cost in the U.S. totaled approximately $58 billion in 2006.

After the normal flow of blood is restored to the brain after the initial event, post-stroke neurological function continues to decline. We believe that this continuing decline in neurological function is the consequence of mis-folded protein aggregates generated as a result of oxygen deprivation during the original event.

Preclinical efficacy studies completed by us in April 2007 indicated that arimoclomol accelerated the time to recovery, and improved recovery, in experimental animal models of stroke. These results were obtained even when arimoclomol was administered as long as 48 hours after onset.

By comparison, tissue plasminogen activator, or t-PA, the only treatment currently approved in the U.S. for acute ischemic stroke, must be administered within three hours of stroke, which substantially limits the number of patients who qualify for this treatment.

In light of these preclinical data, we plan to seek a partner for the development of arimoclomol for stroke recovery and other indications.

Iroxanadine. Iroxanadine also is an orally-administered small-molecule product candidate. We believe it functions by stimulating the molecular chaperone protein response in the endothelium, the thin layer of cells that line the interior surface of human blood vessels.

Iroxanadine for the treatment of diabetic ulcers. Type 2 diabetes is a major health problem with significant secondary complications. The American Diabetes Association estimates that there are 21 million type 2 diabetes sufferers in the U.S. The World Health Organization estimates that there are more than 162 million cases of type 2 diabetes worldwide. According to the American Diabetes Association, 15% of all diabetics will develop a foot ulcer during their lifetime, and over 82,000 non-traumatic lower-limb amputations were performed on diabetics in the U.S. in 2002 due to such ulcers and other complications. We believe there is strong

support in the scientific literature for the assertion that diabetic foot ulcers fail to heal efficiently, in part, due to the dysfunction of endothelial cells lining the blood vessels caused by protein mis-folding.

Animal studies completed by us in May 2007 indicated that iroxanadine significantly decreased the time it took for wounds to heal in diabetic mice without affecting healing in healthy mice. Wound healing in the diabetic mice, which normally required twice the time to heal as healthy mice, was accelerated to the extent that healing time of diabetic mice treated with iroxanadine was indistinguishable from that in untreated healthy mice.

In Phase I clinical trials in healthy volunteers and Phase II clinical trials in patients with chronic high blood pressure conducted prior to our acquisition of iroxanadine, iroxanadine was determined to be safe and well-tolerated and demonstrated significant improvement in the function of endothelial cells in the brachial artery, a major blood vessel of the upper arm.

Based on our preclinical results and the earlier clinical study data, we plan to seek a strategic partner for the further development of iroxanadine.

Our New-Drug Discovery Research Programs and Other Technologies

We are conducting research at our laboratory facility in San Diego, California, aimed at discovering and validating novel drug targets utilizing our master chaperone regulator assay, or MaCRA, drug discovery process. We have filed a patent application on our MaCRA technology, and plan to file in the second quarter of 2009 our first patent applications on new chemical entities discovered in the laboratory. We intend to assess periodically the costs and potential commercial value of our new-drug discovery activities. Depending on these assessments, we may determine to modify, out-source, partner or suspend these activities.

Our other current technologies, which we developed prior to the acquisition of our molecular chaperone amplification technology, are CRL-5861, an intravenous agent for treatment of sickle cell disease and other acute vaso-occlusive disorders, and TranzFect, a delivery technology for DNA-based and conventional vaccines and other potential uses.

Our Separation from RXi Pharmaceuticals Corporation

Until early 2008, we owned approximately 85% of the outstanding shares of common stock of RXi and our financial statements, including our financial statements as of and for the year ended December 31, 2007, included the consolidated financial condition and results of operations of RXi. On February 14, 2008, our board of directors declared a dividend of one share of RXi common stock for each approximately 20.05 outstanding shares of our common stock, which was paid on March 11, 2008 and which reduced our ownership of RXi shares to less than 50%. As a result, our financial statements since March 11, 2008 no longer consolidate the financial condition and results of operation of RXi, but instead reflect our ongoing investment in RXi based on the equity method of accounting as discussed in the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of this Annual Report. At present, we own approximately 45% of the outstanding shares of RXi common stock.

We are party to a letter agreement with RXi and some of RXi’s current stockholders under which we are entitled to preemptive rights to acquire any “new securities” (as defined) that RXi proposes to sell or issue, so that we may maintain our percentage ownership in RXi. Our preemptive rights will expire on January 8, 2012 or such earlier time at which we own less than 10% of RXi’s outstanding common stock.

Under the letter agreement with RXi, we agreed to vote our RXi shares for the election of RXi directors and take other actions to ensure that a majority of the board of directors of RXi are independent of us. We further agreed to approve of actions that may be adopted and recommended by the RXi board of directors to facilitate any future financing by

RXi.

Manufacturing

We have no capability to manufacture supplies of any of our products, and rely on third-party manufacturers to produce materials needed for research and clinical trials. We have contracted with various contract manufacturing facilities for supply of our active pharmaceutical ingredient, or API, for our product candidates. Pursuant to our license with TMRC Co., Ltd., or TMRC, relating to tamibarotene, TMRC will provide us with tamibarotene at a fixed price and in a quantity and quality sufficient to meet our clinical and commercial needs.

To be commercialized, our products also must be capable of being manufactured in commercial quantities in compliance with stringent regulatory requirements and at an acceptable cost. We intend to rely on third-party manufacturers to produce commercial quantities of any products for which we are able to obtain marketing approval. We have not commercialized any product, and so we also have not demonstrated that any of our product candidates can be manufactured in commercial quantities in accordance with regulatory requirements or at an acceptable cost.

If our product candidates cannot be manufactured in suitable quantities and in accordance with regulatory standards, our clinical trials, regulatory approvals, and marketing efforts for such products may be delayed. Such delays could adversely affect our competitive position and our chances of generating significant recurring revenues. If our products are not able to be manufactured at an acceptable cost, the commercial success of our products may be adversely affected.

Marketing

Our tentative plan is to establish our own sales force and marketing capability in order to commercialize tamiboratene and INNO-206 in the U.S. and to seek a marketing partner for commercialization in other territories.

Patents and Proprietary Technology

We actively seek patent protection for our technologies, processes, uses, and ongoing improvements and consider our patents and other intellectual property to be critical to our business. We acquired patents and patent applications, and have filed several new patent applications, in connection with our molecular chaperone program.

We regularly evaluate the patentability of new inventions and improvements developed by us or our collaborators, and, whenever appropriate, will endeavor to file U.S. and international patent applications to protect these new inventions and improvements. We cannot be certain that any of the current pending patent applications we have filed or licensed, or any new patent applications we may file or license, will ever be issued in the U.S. or any other country. There also is no assurance that any issued patents will be effective to prevent others from using our products or processes. It is also possible that any patents issued to us, as well as those we have licensed or may license in the future, may be held invalid or unenforceable by a court, or third parties could obtain patents that we would need to either license or to design around, which we may be unable to do. Current and future competitors may have licensed or filed patent applications or received patents, and may acquire additional patents and proprietary rights relating to molecular chaperone amplification and other small molecule technology or other compounds, products or processes that may be competitive with ours.

In addition to patent protection, we attempt to protect our proprietary products, processes and other information by relying on trade secrets and non-disclosure agreements with our employees, consultants and certain other persons who have access to such products, processes and information. Under the agreements, all inventions conceived by employees are our exclusive property, but there is no assurance that these agreements will afford significant protection against misappropriation or unauthorized disclosure of our trade secrets and confidential information.

LICENSE AGREEMENTS

Tamibarotene

We have succeeded to Innovive’s agreement with TMRC for the license of patent rights held by TMRC for the North American development and commercialization of tamibarotene. The license is exclusive, applies to all products that may be subject to the licensed intellectual property and may be used in the treatment of APL. We may sublicense the intellectual property in our sole discretion. The agreement also grants us an option to include within the license the use

of the drug in other fields in oncology including multiple myeloma, myelodysplastic syndrome, and solid tumors.

Under the agreement, we must pay TMRC royalties based on net sales and make payments to TMRC in the aggregate of $4.165 million upon meeting clinical, regulatory, and sales milestones up to and including the first commercial sale of the product for the treatment of APL.

Under the agreement, we must use commercially reasonable efforts to conduct the research and development activities we determine are necessary to obtain regulatory approval to market the product in those countries in North America that we determine are commercially feasible.

The agreement will expire upon the expiration of the subject patent rights, or 15 years from the date of first commercial sale of product in North America, whichever is later. The agreement may be terminated if either party is in breach and the breach is not cured within a required amount of time. We may also terminate the agreement in the event of a material change in the safety profile of the technology that makes continued development impossible.

INNO-206

We also have succeeded to Innovive's agreement with KTB Tumorforschungs GmbH, or KTB, for the license of patent rights held by KTB for the worldwide development and commercialization of INNO-206. The license is exclusive and worldwide, applies to all product that may be subject to the licensed intellectual property and may be used in all fields of use. We may sublicense the intellectual property in our sole discretion. The agreement also grants us an option to include within the license any technology that is claimed or disclosed in the licensed patents and patent applications for use in the field of oncology and the right of first refusal on any license that KTB wishes to make to a third party regarding any technology that is claimed or disclosed in the licensed patents and patent applications for use in the field of oncology.

Under the agreement, we must make payments to KTB in the aggregate of $7.5 million upon meeting clinical and regulatory milestones up to and including the product's second final marketing approval. We also agreed to pay:

- commercially reasonable royalties based on a percentage of net sales (as defined in the agreement);
- a percentage of non-royalty sub-licensing income (as defined in the agreement); and
- milestones of $1 million for each additional final marketing approval that we might obtain.

In the event that we must pay a third party in order to exercise our rights to the intellectual property under the agreement, we will deduct a percentage of those payments from the royalties due KTB, up to an agreed upon cap. This deduction includes a percentage of any payments that might be required to be made by us to Bristol-Myers Squibb. Bristol-Myers Squibb holds a patent on technology that might be considered to block the patents and patent applications that are the subject of the agreement with KTB.

Under the agreement with KTB, we must use commercially reasonable efforts to conduct the research and development activities we determine are necessary to obtain regulatory approval to market the product in those countries that we determine are commercially feasible. Under the agreement, KTB is to use its commercially reasonable efforts to provide us with access to suppliers of the API of the product on the same terms and conditions as may be provided to KTB by those suppliers.

The agreement will expire on a product-by-product basis upon the expiration of the subject patent rights. We have the right to terminate the agreement on 30 days notice, provided we pay a cash penalty to KTB. KTB may terminate the agreement if we are in breach and the breach is not cured within a specified cure period or if we fail to use diligent and commercial efforts to meet specified clinical milestones.

Bafetinib

We likewise have succeeded to Innovive's exclusive, worldwide (with the exception of Japan) royalty-bearing license agreement with Nippon Shinyaku, including the right to grant sublicenses, for the intellectual property relating to bafetinib in all fields. The license agreement will expire on a country-by-country basis upon the expiration of the subject patent rights. The bafetinib license covers two Patent Cooperation Treaty, or PTC, applications filed in 2003 and 2004, respectively.

Under the agreement, we are obliged to pay Nippon Shinyaku an aggregate of $13.35 million (including $5 million upon the product's initial final marketing approval) upon the achievement of clinical and regulatory milestones up to and including approvals in the U.S. and Europe. We also will be obliged to pay:

- commercially reasonable royalties based on a percentage of net sales (as defined in the Nippon Shinyaku license agreement), dependent on reaching certain revenue thresholds;

- annual minimum payments if sales of bafetinib do not meet specified levels; and

- a percentage of non-royalty sub-licensing income (as defined in the license agreement).

The agreement includes covenants that require us to, among other things, file an NDA by a specific date and use our commercially reasonable efforts to bring a licensed product to market. In the event that we breach a material term of the Nippon Shinyaku license agreement, Nippon Shinyaku has the option to terminate the agreement following the giving of notice and an opportunity to cure any such breach.

Under the merger agreement by which we acquired Innovive, we agreed to pay the former Innovive stockholders up to $1.01 per Innovive share of future earnout merger consideration, subject to our achievement of specified net sales under the Innovive license agreements. The earnout merger consideration, if any, will be payable in shares of our common stock, subject to specified conditions, or, at our election, in cash or by a combination of shares of our common stock and cash. Our common stock will be valued for purposes of any future earnout merger consideration based upon the trading price of our common stock at the time the earnout merger consideration is paid.

Competition

To our knowledge, there are no competitors in clinical development for refractory APL. Currently, treatment of APL is based on induction and maintenance therapy with ATRA and chemotherapy (typically idarubicin). ATRA and idarubicin are both generic compounds. Arsenic trioxide, currently marketed by Cephalon, is approved for use in patients who have relapsed after ATRA-based therapy in APL. There are no FDA-approved therapies for patients who have failed arsenic trioxide. In practice, it appears that patients who fail arsenic trioxide are retreated with ATRA or receive Mylotarg, which is marketed by Wyeth Pharmaceuticals.

We are aware of two compounds in late-stage testing for SCLC. The first compound is picoplatin from Poniard Pharmaceuticals. Picoplatin is a platinum agent that is currently in a Phase III study in SCLC. The Phase III study looks to compare picoplatin in combination with best supportive care alone in patients who were refractory to platinum therapy or failed to respond to platinum therapy within six months. We will test INNO-206 in patients who initially had a response on platinum therapy.

The second compound in development in SCLC is amrubicin from Celgene. Amrubicin is a synthetic anthracycline currently approved in Japan for use in lung cancer. Celgene commenced a Phase III study in the second half of 2007 in relapsed and refractory SCLC patients based on Phase II data from Japan showing a survival of between 9.2 months and 11.7 months in this population.

Amrubicin and doxorubicin are both anthracyclines. We believe that the albumin-binding ability of INNO-206 will allow the compound to overcome many of the side effect issues typically associated with anthracyclines. We also believe that using albumin as a carrier will allow for higher dosing and greater efficacy.

There are currently two main competitors to INNO-406 in the Gleevec-resistant CML market, Dasatanib and nilotinib. Although both of these drugs are ahead of us in clinical testing and commercialization, we believe the head-start in development will not prove critical in the commercial setting, because CML is becoming a chronic condition much like HIV or depression and the market for treatment is large enough to accommodate several drugs.

Dasatinib from Bristol-Myers Squibb, was the first of the second-generation Bcr-Abl inhibitors to gain U.S. marketing approval from the FDA. Bristol-Myers Squibb began distributing the product in July 2006. Dasatinib has high potency in inhibiting Bcr-Abl and also inhibits Src, a family of kinases known to be involved in cell growth. In clinical studies, dasatinib has shown good activity in Gleevec-resistant patients. However, there have also been concomitant side effects, including serious and life threatening pleural effusion. In various studies presented to date, roughly 20% to 30% of the patients that start therapy are discontinuing. We believe a significant number of these

patients are discontinuing due to the side effect profile of the drug. This side effect profile may be related to Src inhibition, but that has not yet been proven.

Nilotinib from Novartis AG, has completed its Phase II clinical study and was granted accelerated marketing approval by the FDA in October 2007 for the treatment of chronic phase and accelerated phase Philadelphia chromosome positive (Ph+) CML in adult patients resistant or intolerant to prior treatment with Gleevec. Nilotinib has potent activity against Bcr-Abl. In its Phase I clinical trial, Nilotinib showed good activity in Gleevec-resistant patients. In Phase II clinical data presented at the American Society for Hematology conference in 2006, nilotinib showed efficacy similar to dasatinib in Gleevec-resistant patients.

Other clinical compounds in development for CML include:

- Wyeth's SKI-606 is a dual Abl and Src kinase inhibitor similar to dasatinib and is currently in a Phase III trial in newly diagnosed Ph+ CML patients;

- Ceflatonin from Chemgenix, a plant alkaloid primarily targeting a single Bcr-Abl mutation known as T315I, which is in a Phase II/III clinical trial;

- Exelixis' XL228,a multi-kinase inhibitor that targets Src and Abl , has shown preclinical activity against the T315I mutation and is in a Phase I clinical trial in CML patients; and

- AP24534 from Ariad Pharmaceuticals is a multi-kinase inhibitor that targets Bcr-Abl including the T315I mutation and is in a Phase I clinical trial in CML patients.

We are aware of only one drug, rilutek, developed by Aventis Pharma AG, that has been approved by the FDA for the treatment of ALS. Many companies are working to develop pharmaceuticals to treat ALS, including Aeolus Pharmaceuticals, Mitsubishi Tanabe Pharma Corporation, Ono Pharmaceuticals, Trophos SA, Knopp Neurosciences Inc., Faust Pharmaceuticals SA, Oxford BioMedica plc, Phytopharm plc and Teva Pharmaceutical Industries Ltd., as well as RXi. ALS patients often take over-the-counter supplements, including vitamin E, creatine and coenzyme Q10, or drugs such as lithium that are approved for other indications. ALS belongs to a family of neurodegenerative diseases that includes Alzheimer's, Parkinson's and Huntington's diseases. Due to similarities between these diseases, a new treatment for one such disease potentially could be useful for treating others. There are many companies producing and developing drugs used to treat neurodegenerative diseases other than ALS, including Amgen, Inc., Biogen Idec, Boehringer Ingelheim, Cephalon, Inc., Ceregene, Inc., Elan Pharmaceuticals, plc, Forest Laboratories, Inc., H. Lundbeck A/S, Phytopharm plc, UCB Group and Wyeth.

Current drug classes used to treat stroke include antiplatelet agents, anticoagulants, salycylates, neuroprotectants and thrombolytic agents. Prescription antiplatelet agents include Aggrenox by Boehringer Ingelheim, Plavix by Sanofi-Aventis and Bristol-Myers Squibb, and Ticlid by Roche Pharmaceuticals. Coumadin by Bristol-Myers Squibb and Jantoven by Upsher-Smith Laboratories are branded forms of warfarin, an anticoagulant. Moreover, Salicylates, like aspirin, are commonly used to treat patients after stroke. In Europe, Ferrer Grupo markets the neroprotectant, Somazina. Activase, also known as tissue plasminogen activator, or t-PA, is a thrombolytic agent marketed by Genentech. Many new drug candidates are in development by pharmaceutical and biotech companies, including GlaxoSmithKline, Ipsen, Merck & Co., Ono Pharmaceuticals, PAION AG and Wyeth. In addition to drug therapy, companies such as Medtronic and Northstar Neurosciences are developing neurostimulation medical devices to aid in recovery after stroke.

Many companies, including large pharmaceutical and biotechnology firms with financial resources, research and development staffs, and facilities that may be substantially greater than those of ours or our strategic partners or licensees, are engaged in the research and development of pharmaceutical products that could compete with our potential products. To the extent that we seek to acquire, through license or otherwise, existing or potential new products, we will be competing with numerous other companies, many of which will have substantially greater financial resources, large acquisition and research and development staffs that may give those companies a competitive advantage over us in identifying and evaluating these drug acquisition opportunities. Any products that we acquire will be competing with products marketed by companies that in many cases will have substantially greater marketing resources than we have. The industry is characterized by rapid technological advances and competitors may develop their products more rapidly and such products may be more effective than those currently under development or that may be developed in the future by our strategic partners or licensees. Competitive products for a number of the disease indications that we have targeted are currently being marketed by other parties, and additional competitive

products are under development and may also include products currently under development that we are not aware of or products that may be developed in the future.

Government Regulation

The U.S. and other developed countries extensively regulate the preclinical and clinical testing, manufacturing, labeling, storage, record-keeping, advertising, promotion, export, marketing and distribution of drugs and biologic products. The FDA, under the Federal Food, Drug, and Cosmetic Act, the Public Health Service Act and other federal statutes and regulations, regulates pharmaceutical and biologic products.

To obtain approval of our product candidates from the FDA, we must, among other requirements, submit data supporting safety and efficacy for the intended indication as well as detailed information on the manufacture and composition of the product candidate. In most cases, this will require extensive laboratory tests and preclinical and clinical trials. The collection of these data, as well as the preparation of applications for review by the FDA involve significant time and expense. The FDA also may require post-marketing testing to monitor the safety and efficacy of approved products or place conditions on any approvals that could restrict the therapeutic claims and commercial applications of these products. Regulatory authorities may withdraw product approvals if we fail to comply with regulatory standards or if we encounter problems at any time following initial marketing of our products.

The first stage of the FDA approval process for a new biologic or drug involves completion of preclinical studies and the submission of the results of these studies to the FDA. These data, together with proposed clinical protocols, manufacturing information, analytical data and other information submitted to the FDA, in an investigational new drug application, or IND, must become effective before human clinical trials may commence. Preclinical studies generally involve FDA regulated laboratory evaluation of product characteristics and animal studies to assess the efficacy and safety of the product candidate.

After the IND becomes effective, a company may commence human clinical trials. These are typically conducted in three sequential phases, but the phases may overlap. Phase I trials consist of testing of the product candidate in a small number of patients or healthy volunteers, primarily for safety at one or more doses. Phase II trials, in addition to safety, evaluate the efficacy of the product candidate in a patient population somewhat larger than Phase I trials. Phase III trials typically involve additional testing for safety and clinical efficacy in an expanded population at multiple test sites. A company must submit to the FDA a clinical protocol, accompanied by the approval of the Institutional Review Boards at the institutions participating in the trials, prior to commencement of each clinical trial.

To obtain FDA marketing authorization, a company must submit to the FDA the results of the preclinical and clinical testing, together with, among other things, detailed information on the manufacture and composition of the product candidate, in the form of a new drug application, or NDA.

The amount of time taken by the FDA for approval of an NDA will depend upon a number of factors, including whether the product candidate has received priority review, the quality of the submission and studies presented, the potential contribution that the compound will make in improving the treatment of the disease in question, and the workload at the FDA.

The FDA may, in some cases, confer upon an investigational product the status of a fast track product. A fast track product is defined as a new drug or biologic intended for the treatment of a serious or life-threatening condition that demonstrates the potential to address unmet medical needs for this condition. The FDA can base approval of an NDA for a fast track product on an effect on a surrogate endpoint, or on another endpoint that is reasonably likely to predict clinical benefit. If a preliminary review of clinical data suggests that a fast track product may be effective, the FDA may initiate review of entire sections of a marketing application for a fast track product before the sponsor completes the application. The FDA has granted fast track designation and orphan drug status to arimoclomol for the treatment of ALS.

We anticipate that our products will be manufactured by our strategic partners, licensees or other third parties. Before approving an NDA, the FDA will inspect the facilities at which the product is manufactured and will not approve the product unless the manufacturing facilities are in compliance with the FDA's cGMP, which are regulations that govern the manufacture, holding and distribution of a product. Our manufacturers also will be subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Nuclear Energy and Radiation Control Act, the Toxic Substance Control Act and the Resource Conservation and Recovery Act. Following approval, the FDA periodically inspects drug and biologic manufacturing facilities to ensure continued compliance with the good

manufacturing practices regulations. Our manufacturers will have to continue to comply with those requirements. Failure to comply with these requirements subjects the manufacturer to possible legal or regulatory action, such as suspension of manufacturing or recall or seizure of product. Adverse patient experiences with the product must be reported to the FDA and could result in the imposition of marketing restrictions through labeling changes or market removal. Product approvals may be withdrawn if compliance with regulatory requirements is not maintained or if problems concerning safety or efficacy of the product occur following approval.

The labeling, advertising, promotion, marketing and distribution of a drug or biologic product also must be in compliance with FDA and Federal Trade Commission requirements which include, among others, standards and regulations for off-label promotion, industry sponsored scientific and educational activities, promotional activities involving the internet, and direct-to-consumer advertising. We also will be subject to a variety of federal, state and local regulations relating to the use, handling, storage and disposal of hazardous materials, including chemicals and radioactive and biological materials. In addition, we will be subject to

various laws and regulations governing laboratory practices and the experimental use of animals. In each of these areas, as above, the FDA has broad regulatory and enforcement powers, including the ability to levy fines and civil penalties, suspend or delay issuance of product approvals, seize or recall products, and deny or withdraw approvals.

We will also be subject to a variety of regulations governing clinical trials and sales of our products outside the U.S. Whether or not FDA approval has been obtained, approval of a product candidate by the comparable regulatory authorities of foreign countries and regions must be obtained prior to the commencement of marketing the product in those countries. The approval process varies from one regulatory authority to another and the time may be longer or shorter than that required for FDA approval. In the European Union, Canada and Australia, regulatory requirements and approval processes are similar, in principle, to those in the U.S.

Employees

As of March 11, 2009, we have 35 employees, four of whom are part-time employees. As of that date, 26 of those employees were engaged in research and development activities and nine were involved in management and administrative operations.

Available Information

We maintain a website at www.cytrx.com and make available there, free of charge, our periodic reports filed with the Securities and Exchange Commission, or SEC, as soon as is reasonably practicable after filing. The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains a website at http:/www.sec.gov that contains reports, proxy and information statements, and other information regarding issuers such as us that file electronically with the SEC. We post on our website our Code of Business Conduct and Ethics.

Item 1A. RISK FACTORS

We are subject to a number of risks and uncertainties, including the risks and uncertainties discussed below, as well as any modification, replacement or update to these risks and uncertainties that are reflected in any subsequent filings we make with the Securities and Exchange Commission, or SEC. If any of these risks or uncertainties actually occur, our business, results of operations, financial condition and prospects could be materially and adversely affected. In that case, the trading price of our common stock could decline. These risks and uncertainties are not the only ones facing us. Additional risks and uncertainties not presently known to us, or that we currently perceive as immaterial, also may adversely affect us.

Risks Associated With Our Business

We have operated at a loss and will likely continue to operate at a loss for the foreseeable future.

We have operated at a loss due to our ongoing expenditures for research and development of our product candidates and for general and administrative purposes and lack of significant recurring revenue. We incurred net losses of $27.0 million, $21.9 million and $16.8 million for the years ended December 31, 2008, 2007 and 2006, respectively, and we had an accumulated deficit as of December 31, 2008 of approximately $192.0 million. We are likely to continue to incur losses unless and until we are able to commercialize one or more of our product candidates. These losses, among other things, have had and will continue to have an adverse effect on our stockholders' equity and working capital. Because of the numerous risks and uncertainties associated with our product development efforts, we are unable to predict when we may become profitable, if at all. If we are unable to achieve and then maintain profitability, the

market value of our common stock will likely decline.

Because we have no source of significant recurring revenue, we must depend on financing to sustain our operations.

Developing products and conducting clinical trials require substantial amounts of capital. To date, we have relied primarily upon proceeds from sales of our equity securities and the exercise of options and warrants to generate funds needed to finance our business and operations. We will need to raise additional capital to, among other things:

- fund our clinical trials and pursue regulatory approval of our existing and possible future product candidates;

- expand our research and development activities;

- finance our general and administrative expenses;
- acquire or license new technologies;
- prepare, file, prosecute, maintain, enforce and defend our patent and other proprietary rights; and
- develop and implement sales, marketing and distribution capabilities to successfully commercialize any product for which we obtain marketing approval and choose to market ourselves.

Our revenues were $6.3 million, $7.5 million and $2.1 million, respectively, for years ended December 31, 2008, 2007 and 2006, which included $6.2 million, $7.2 million and $1.8 million, respectively, of deferred revenue recognized from our sale in August 2006 of a one-percent royalty interest in worldwide sales of arimoclomol for the treatment of ALS. We will have no significant recurring revenue unless we are able to commercialize one or more of our product candidates in development, which may require us to first enter into license or other strategic arrangements with third parties.

At December 31, 2008, we had cash, cash equivalents and short-term investments of $25.0 million. We believe that CytRx's current resources will be sufficient to support its currently planned level of operations through the first quarter of 2010. This estimate is based, in part, upon our currently projected expenditures for 2009 of approximately $22 million, including approximately $7.1 million for our clinical program for tamibarotene, approximately $3.4 million for our clinical program for INNO-206, approximately $0.6 million for our clinical program for INNO-406, approximately $0.5 million for our animal toxicology studies and related activities for arimoclomol, approximately $1.8 million for operating our clinical programs, approximately $2.7 million for research activities at its laboratory in San Diego, California, and approximately $5.9 million for other general and administrative expenses. As described in the risk factor that follows below in this section, these projected expenditures are based upon numerous assumptions and subject to many uncertainties, and our actual expenditures may be significantly different from these projections.

If we obtain marketing approval as currently planned and successfully commercialize our product candidates, we anticipate it will take a minimum of three years, and possibly longer, for us to generate significant recurring revenue, and we will be dependent on future financing until such time, if ever, as we can generate significant recurring revenue. Our ability to raise capital has been materially and adversely affected by the downturn in the financial markets and poor economy, which have severely depressed the market for private investment in public equities, or PIPEs, transactions on which we have relied for raising needed capital. These conditions also have materially and adversely affected the market for our RXi shares. We have no commitments from third parties to provide us with any additional financing, and we may not be able to obtain future financing on favorable terms, or at all. Failure to obtain adequate financing would adversely affect our ability to operate as a going concern. If we raise additional funds by issuing equity securities, dilution to stockholders may result and new investors could have rights superior to holders of the shares issued in this offering. In addition, debt financing, if available, may include restrictive covenants. If adequate funds are not available to us, we may have to liquidate some or all of our assets or to delay or reduce the scope of or eliminate some portion or all of our development programs or clinical trials. We also may have to license to other companies our product candidates or technologies that we would prefer to develop and commercialize ourselves.

If we do not achieve our projected development goals in the time frames we announce and expect, or if our financial projections prove to be materially inaccurate, the commercialization of our products may be delayed and our business prospects may suffer.

From time to time, we estimate the timing of the accomplishment of various scientific, clinical, regulatory and other product development goals, which we sometimes refer to as milestones. These milestones may include the commencement or completion of scientific studies and clinical trials and the submission of regulatory filings. For

example, we have stated in this Annual Report the expected timing of certain milestones relating to our tamibarotene, INNO-206 and arimoclomol clinical development programs.

We also may disclose projected expenditures or other forecasts for future periods such as the statements above in this Annual Report regarding any current projected expenditures for fiscal year 2009. These and other financial projections are based on management's current expectations and do not contain any margin of error or cushion for any specific uncertainties, or for the uncertainties inherent in all financial forecasting. The assumptions management has used to produce these projections may significantly change or prove to be inaccurate. Accordingly, you should not unduly rely on any of these projections.

The actual timing of milestones and actual expenditures or other financial results can vary dramatically compared to our estimates, in some cases for reasons beyond our control. If we do not meet milestones or financial projections as announced from time to time, the development and commercialization of our products may be delayed and our business prospects may suffer.

If our products are not successfully developed and approved by the FDA, we may be forced to reduce or curtail our operations.

All of our product candidates in development must be approved by the FDA or similar foreign governmental agencies before they can be marketed. The process for obtaining FDA and foreign government approvals is both time-consuming and costly, with no certainty of a successful outcome. This process typically includes the conduct of extensive pre-clinical and clinical testing, including post-approval testing, which may take longer or cost more than we or our licensees, if any, anticipate, and may prove unsuccessful due to numerous factors. Product candidates that may appear to be promising at early stages of development may not successfully reach the market for a number of reasons. The results of preclinical and initial clinical testing of these product candidates may not necessarily be predictive of the results that will be obtained from later or more extensive testing. Companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier trials.

Numerous factors could affect the timing, cost or outcome of our product development efforts, including the following:

- difficulty in securing centers to conduct trials;
- difficulty in enrolling patients in conformity with required protocols or projected timelines;
- unexpected adverse reactions by patients in trials;
- difficulty in obtaining clinical supplies of the product;
- changes in or our inability to comply with FDA or foreign governmental product testing, manufacturing or marketing requirements;
- regulatory inspections of clinical trials or manufacturing facilities, which may, among other things, require us or our manufacturers or licensees to undertake corrective action or suspend or terminate the affected clinical trials if investigators find them not to be in compliance with applicable regulatory requirements;
- inability to generate statistically significant data confirming the safety and efficacy of the product being tested;
- modification of the product during testing; and
- reallocation of our limited financial and other resources to other clinical programs.

In addition, the FDA and other regulatory agencies may lack experience in evaluating our product candidates. For example, we are aware of only one drug that the FDA has approved to treat ALS. This inexperience may lengthen the regulatory review process, increase our development costs and delay or prevent commercialization of arimoclomol or our other product candidates. It is possible that none of the product candidates we develop will obtain the regulatory approvals necessary for us to begin selling them. The time required to obtain FDA and foreign governmental approvals is unpredictable, but often can take years following the commencement of clinical trials, depending upon

the complexity of the product candidate. Any analysis we perform on data from clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. Furthermore, even if we obtain regulatory approvals, our products and the manufacturing facilities used to produce them will be subject to continual review, including periodic inspections and mandatory post- approval clinical trials by the FDA and other US and foreign regulatory authorities. Any delay or failure in obtaining required approvals or to comply with post-approval regulatory requirements could have a material adverse effect on our ability to generate revenue from the particular product candidate. The failure to comply with any post-approval regulatory requirements also could also result in the rescission of the related regulatory approvals or the suspension of sales of the offending product.

Our current and planned clinical trials of our product candidates may fail to show that these product candidates are clinically safe and effective.

Our Phase IIa clinical trial and open-label extension clinical trial of arimoclomol for the treatment of ALS indicated that arimoclomol was safe and well-tolerated in patients, but the results of the open-label extension clinical trial indicated only a non-statistically significant trend of improvement in the ALSFRS-R in the arimoclomol high-dose group as compared with reports of previous studies of untreated patients. This trial did not have concurrent placebo control group, so we could draw no definitive conclusions with respect to efficacy. Further development of arimoclomal for ALS and stroke recovery, as well as clinical development of iroxanadine for diabetic foot ulcers, would require significant additional testing, and it is possible that the favorable safety data we observed in earlier trials may not be reproduced in any later trials.

Tamibarotene has been shown to be safe, well-tolerated, and efficacious in the Japanese population. However, it is possible that the response to the drug may be different in American/European populations. Furthermore, the efficacy studies that led to approval in Japan occurred prior to the advent of the use of ATO for second line therapy. It is possible that the current use of ATO could alter the safety or efficacy of tamibarotene. Finally, the FDA may not accept the Japanese studies as a database for safety in the US.

INNO-206 was no more toxic than free doxorubicin in a Phase I clinical trial and showed limited biological responses against tumors. However, these conclusions may not be reproducible in larger clinical trials. Furthermore, future clinical trials will likely include multiple dosing with INNO-206 instead of the single doses used in the Phase I clinical trial.

Later trials also may not yield statistically significant data indicating that these product candidates are clinically effective. Accordingly, we, or any development partners, may ultimately be unable to provide the FDA with satisfactory data on clinical safety and efficacy sufficient to obtain FDA approval of tamibarotene, INNO-206, arimoclomol or iroxanadine for these indications.

The FDA placed a clinical hold on our Phase IIb efficacy trial of arimoclomol for ALS, which will delay further development of arimoclomol.

In January 2008, the FDA placed a clinical hold on our Phase IIb clinical efficacy trial of arimoclomol for the treatment of ALS due to concerns relating to previous toxicology studies of arimoclomol in rats. We have submitted additional information to the FDA regarding these concerns, and we are completing additional animal toxicology studies to obtain additional safety data that we plan to submit to the FDA in the second quarter of 2009. We cannot predict the results of these additional studies, however, or how long the FDA may take to complete its review. Depending on the outcome of the FDA's review, the FDA could require:

- additional toxicology or human studies prior to or in parallel with the resumption of clinical trials, which would result in substantial additional expenses and possible significant delays in completing the clinical trials; or

- changes in the design of our previously planned Phase IIb clinical efficacy trial, including a reduction in the planned dosage of arimoclomol, which could delay further or increase the cost of the trial, adversely affect our ability to demonstrate the efficacy of arimoclomol in the trial or cause the cancellation of the trial altogether due to one or more of these consideration.

If we are unable to resolve the FDA's safety concerns, the FDA may prohibit the resumption of trials of arimoclomol for the treatment of ALS and all other indications.

Even if we obtain regulatory approval for our product candidates, these product candidates may not achieve market acceptance or be profitable.

We do not expect to receive regulatory approvals for the commercial sale of any of our product candidates for several years, if at all. Even if we do receive regulatory approvals, the future commercial success of these drug candidates will depend, among other things, on their acceptance by physicians, patients, healthcare payors and other members of the medical community as therapeutic and cost-effective alternatives to commercially available products. If our product candidates fail to gain market acceptance, we may not be able to earn sufficient revenues to continue our business.

Any drugs we develop may become subject to unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives, which could have a material adverse effect on our business.

We intend to sell our products primarily to hospitals which receive reimbursement for the health care services they provide to their patients from third-party payors, such as Medicare, Medicaid and other domestic and international government programs, private insurance plans and managed care programs. Most third-party payors may deny reimbursement if they determine that a medical product was not used in accordance with cost-effective treatment methods, as determined by the third-party payor, or was used for an unapproved indication. Third-party payors also may refuse to reimburse for experimental procedures and devices. Furthermore, because our programs are in the early stages of development, we are unable at this time to determine their cost-effectiveness and the level or method of reimbursement. Increasingly, the third-party payors who reimburse patients are requiring that drug companies provide them with predetermined discounts from list prices, and are challenging the prices charged for medical products. If the price we are able to charge for any products we develop is inadequate in light of our development and other costs, our profitability could be adversely effected.

We currently expect that any drugs we develop may need to be administered under the supervision of a physician. Under currently applicable law, drugs that are not usually self-administered may be eligible for coverage by the Medicare program if:

- they are “incidental” to a physician’s services,
- they are “reasonable and necessary” for the diagnosis or treatment of the illness or injury for which they are administered according to accepted standard of medical practice,
- they are not excluded as immunizations, and
- they have been approved by the FDA.

We may rely upon third parties in connection with the commercialization of our products.

We currently plan to continue the development of tamibarotene for the treatment of APL through a third-party clinical trials management service, and may retain the services of site management and clinical research organizations to help conduct our other clinical trials. We may seek to complete the development of tamibarotene and market it ourselves if it is approved by the FDA. However, the completion of the development of tamibarotene and our other product candidates, as well as the marketing of these products, may require us to enter into strategic alliances, license agreements or other collaborative arrangements with other pharmaceutical companies under which those companies will be responsible for one or more aspects of the commercial development and eventual marketing of our products.

Our products may not have sufficient potential commercial value to enable us to secure strategic arrangements with suitable companies on attractive terms, or at all. If we are unable to enter into such arrangements, we may not have the financial or other resources to complete the development of any of our products and may have to sell our rights in them to a third party or abandon their development altogether.

To the extent we enter into collaborative arrangements, we will be dependent upon the timeliness and effectiveness of the development and marketing efforts of our contractual partners. If these companies do not allocate sufficient personnel and resources to these efforts or encounter difficulties in complying with applicable FDA and other regulatory requirements, we may not obtain regulatory approvals as planned, if at all, and the timing of receipt or the amount of revenue from these arrangements may be materially and adversely affected. By entering into these arrangements rather than completing the development and then marketing these products on our own, the profitability

to us of these products may decline.

We may be unable to protect our intellectual property rights, which could adversely affect our ability to compete effectively.

We believe that obtaining and maintaining patent and other intellectual property rights for our technologies and potential products is critical to establishing and maintaining the value of our assets and our business. We will be able to protect our technologies from unauthorized use by third parties only to the extent that we have rights to valid and enforceable patents or other proprietary rights that cover them. Although we have patents and patent applications directed to our molecular chaperone amplification technologies, these

patents and applications may not prevent third parties from developing or commercializing similar or identical technologies. In addition, our patents may be held to be invalid if challenged by third parties, and our patent applications may not result in the issuance of patents.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions for which important legal principles remain unresolved. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date in the U.S. and in many foreign countries. The application and enforcement of patent laws and regulations in foreign countries is even more uncertain. Accordingly, we may not be able to effectively file, protect or defend our proprietary rights on a consistent basis. Many of the patents and patent applications on which we rely were issued or filed by third parties prior to the time we acquired rights to them. The validity, enforceability and ownership of those patents and patent applications may be challenged, and if a court decides that our patents are not valid, we will not have the right to stop others from using our inventions. There is also the risk that, even if the validity of our patents is upheld, a court may refuse to stop others on the ground that their activities do not infringe our patents.

Any litigation brought by us to protect our intellectual property rights could be costly and have a material adverse effect on our operating results or financial condition, make it more difficult for us to enter into strategic alliances with third parties to develop our products, or discourage our existing licensees from continuing their development work on our potential products. If our patent coverage is insufficient to prevent third parties from developing or commercializing similar or identical technologies, the value of our assets is likely to be materially and adversely affected.

We also rely on certain proprietary trade secrets and know-how, especially where we believe patent protection is not appropriate or obtainable. However, trade secrets and know-how are difficult to protect. Although we have taken measures to protect our unpatented trade secrets and know-how, including the use of confidentiality and invention assignment agreements with our employees, consultants and some of our contractors, it is possible that these persons may disclose our trade secrets or know-how or that our competitors may independently develop or otherwise discover our trade secrets and know-how.

If our product candidates infringe the rights of others, we could be subject to expensive litigation or be required to obtain licenses from others to develop or market them.

Our competitors or others may have patent rights that they choose to assert against us or our licensees, suppliers, customers or potential collaborators. Moreover, we may not know about patents or patent applications that our products would infringe. For example, because patent applications can take many years to issue, there may be currently pending applications, unknown to us, that may later result in issued patents that our arimoclomol, iroxanadine or other product candidates would infringe. In addition, if third parties file patent applications or obtain patents claiming technology also claimed by us in issued patents or pending applications, we may have to participate in interference proceedings in the US Patent and Trademark Office to determine priority of invention. If third parties file oppositions in foreign countries, we may also have to participate in opposition proceedings in foreign tribunals to defend the patentability of our foreign patent applications.

If a third party claims that we infringe its proprietary rights, any of the following may occur:

- we may become involved in time-consuming and expensive litigation, even if the claim is without merit;
- we may become liable for substantial damages for past infringement if a court decides that our technology infringes a competitor’s patent;

- a court may prohibit us from selling or licensing our product without a license from the patent holder, which may not be available on commercially acceptable terms, if at all, or which may require us to pay substantial royalties or grant cross licenses to our patents; and

- we may have to redesign our product candidates or technology so that it does not infringe patent rights of others, which may not be possible or commercially feasible.

If any of these events occurs, our business and prospects will suffer and the market price of our common stock will likely decline substantially.

We have reported, in the past, material weaknesses in the effectiveness of our internal controls over financial reporting, and if we cannot maintain effective internal controls or provide reliable financial and other information, investors may lose confidence in our SEC reports.

Within the past several years:

- we identified a material weakness related to our accounting for an equity transaction by RXi and our tax withholding in connection with exercises of employee stock options. As a result, we restated our financial statements for the quarter ended June 30, 2007 and extended the filing of our quarterly report for the quarter ended September 30, 2007;

    - we identified a material weakness related to our accounting for transactions at our former laboratory facility in Worcester, Massachusetts. As a result, we restated our financial statements for the quarters ended March 31, 2006, June 30, 2006 and September 30, 2006;

    - we improperly applied generally accepted accounting principles related to our accounting for deemed dividends incurred in connection with anti-dilution adjustments made to our outstanding warrants. This misapplication of accounting principles constituted a material weakness and caused us to twice restate our financial statements for the quarters ended March 31, 2005, June 30, 2005 and September 30, 2005 and for the year ended December 31, 2005, as well as restate our financial statements for the quarters ended March 31, 2006, June 30, 2006 and September 30, 2006; and

- we miscalculated pro forma employee stock option compensation figures disclosed in the footnotes to our financial statements. As a result, we restated our financial statements for the quarters ended March 31, 2005, June 30, 2005 and September 30, 2005 and for the year ended December 31, 2005.

In addition, we concluded in our annual report for the year ended December 31, 2007 and in our quarterly reports for the quarters ended March 31, 2008 and June 30, 2008, that our disclosure controls and procedures were ineffective as of those dates. Disclosure controls generally include controls and procedures designed to ensure that information required to be disclosed by us in the reports we file with the SEC is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. In January 2008, we also filed an amendment to an SEC report to correct certain form errors.

Effective internal controls over financial reporting and disclosure controls and procedures are necessary for us to provide reliable financial and other reports and effectively prevent fraud. If we cannot maintain effective internal controls or provide reliable financial or SEC reports or prevent fraud, investors may lose confidence in our SEC reports, our operating results and the trading price of our common stock could suffer and we may become subject to litigation.

We are subject to intense competition, and we may not compete successfully.

We and our strategic partners or licensees may be unable to compete successfully against our current or future competitors. The pharmaceutical, biopharmaceutical and biotechnology industries are characterized by intense competition and rapid and significant technological advancements. Many companies, research institutions and universities are working in a number of areas similar to our primary fields of interest to develop new products. There also is intense competition among companies seeking to acquire products that already are being marketed. Many of the companies with which we compete have or are likely to have substantially greater research and product development capabilities and financial, technical, scientific, manufacturing, marketing, distribution and other resources than us and at least some of our present or future strategic partners or licensees.

As a result, these competitors may:

- succeed in developing competitive products sooner than us or our strategic partners or licensees;
- obtain FDA or foreign governmental approvals for their products before we can obtain approval of any of our products;
- obtain patents that block or otherwise inhibit the development and commercialization of our product candidate candidates;
- develop products that are safer or more effective than our products;

- devote greater resources than us to marketing or selling products;
- introduce or adapt more quickly than us to new technologies and other scientific advances;
- introduce products that render our products obsolete;
- withstand price competition more successfully than us or our strategic partners or licensees;
- negotiate third-party strategic alliances or licensing arrangements more effectively than us; and
- take better advantage than us of other opportunities.

Companies that currently sell generic and proprietary compounds for the treatment of cancer and related diseases include, but are not limited to, Abraxis BioScience, Amgen, Sanofi-Aventis, Bayer, Bristol-Myers Squibb, Celgene, Cephalon, Genentech, Eli Lilly, Johnson & Johnson and Novartis. Alternative technologies are being developed to treat cancer and related diseases by numerous companies including Bristol-Myers Squibb, Eisai, Merck and Genentech, several of which are in advanced clinical trials. There also are FDA approved cancer therapies that are in the late stage of development by larger established companies for new cancer indications: Alimta (Eli Lilly), Avastin (Genentech), Eloxatin (Sanofi-Aventis), Erbitux (Bristol-Myers Squibb and Imclone Systems) and Tarceva (Genentech). Poniard Pharmaceuticals and Celgene are developing compounds for SCLC. Novartis and Bristol-Myers Squibb have each developed a treatment for chronic myelogenous leukemia that would compete with INNO-406. ATRA and Cephalon's Trisenox (arsenic trioxide) could compete with tamibarotene. In addition, companies pursuing different but related fields represent substantial competition. Any of these competing therapies could prove to be more effective than INNO-406, tamibarotene, INNO-206 or any future therapy of ours.

We are aware of only one drug, Rilutek, which was developed by Aventis Pharma AG, that has been approved by the FDA for the treatment of ALS. Many companies are working to develop pharmaceuticals to treat ALS, including Aeolus Pharmaceuticals, Celgene Corporation, Mitsubishi Tanabe Pharma Corporation, Ono Pharmaceuticals, Trophos SA, Knopp Neurosciences Inc., Faust Pharmaceuticals SA, Oxford BioMedica plc, Phytopharm plc and Teva Pharmaceutical Industries Ltd., as well as RXi. ALS patients often take over-the-counter supplements, including vitamin E, creatine and coenzyme Q10, or drugs such as lithium that are approved for other indications. ALS belongs to a family of neurodegenerative diseases that includes Alzheimer's, Parkinson's and Huntington's diseases. Due to similarities between these diseases, a new treatment for one such disease potentially could be useful for treating others. There are many companies producing and developing drugs used to treat neurodegenerative diseases other than ALS, including Amgen, Inc., Biogen Idec, Boehringer Ingelheim, Cephalon, Inc., Ceregene, Inc., Elan Pharmaceuticals, plc, Forest Laboratories, Inc., H. Lundbeck A/S, Phytopharm plc, UCB Group and Wyeth.

Current drug classes used to treat stroke include antiplatelet agents, anticoagulants, salycylates, neuroprotectants and thrombolytic agents. Prescription antiplatelet agents include Aggrenox by Boehringer Ingelheim, Plavix by Sanofi-Aventis and Bristol-Myers Squibb, and Ticlid by Roche Pharmaceuticals. Coumadin by Bristol-Myers Squibb and Jantoven by Upsher-Smith Laboratories are branded forms of warfarin, an anticoagulant. Moreover, Salicylates, like aspirin, are commonly used to treat patients after stroke. In Europe, Ferrer Grupo markets the neroprotectant, Somazina. Activase, also known as tissue plasminogen activator, or t-PA, is a thrombolytic agent marketed by Genentech. Many new drug candidates are in development by pharmaceutical and biotech companies, including GlaxoSmithKline, Ipsen, Merck & Co., Ono Pharmaceuticals, PAION AG and Wyeth. In addition to drug therapy, companies such as Medtronic and Northstar Neurosciences are developing neurostimulation medical devices to aid in recovery after stroke.

Most of our competitors have substantially greater research and product development capabilities and financial, technical, scientific, manufacturing, marketing, distribution and other resources than us.

We will be required to pay substantial milestone and other payments relating to the commercialization of our products.

The agreement under which we have North American rights to tamibarotene provides for our payment of royalties based on net sales of any products, as well as aggregate payments of $4.165 million upon meeting specified clinical, regulatory and sales milestones up to and including the first commercial sale of tamibarotene for the treatment of APL.

The agreement relating to our worldwide rights to INNO-206 provides for our payment of an aggregate of $7.5 million upon meeting specified clinical and regulatory milestones up to and including the product's second final marketing approval. We also will be obliged to pay:

- commercially reasonable royalties based on a percentage of net sales (as defined in the agreement);
- a percentage of non-royalty sub-licensing income (as defined in the agreement); and
- milestones of $1,000,000 for each additional final marketing approval that we might obtain.

If we are required to pay any third party in order to exercise our rights under the agreement, we will deduct a percentage of those payments from the royalties due under the agreement, up to an agreed-upon cap.

Our agreement relating to our worldwide (except Japan) bafetinib provides for our payment of an aggregate of $13.35 million (including $5 million upon the product's initial final marketing approval) upon the achievement of specified clinical and regulatory milestones up to and including approvals in the U.S. and Europe. We also will be obliged to pay:

- commercially reasonable royalties based on a percentage of net sales (as defined in the agreement), dependent on reaching certain revenue thresholds;
- annual minimum payments if sales of bafetinib do not meet specified levels; and
- a percentage of non-royalty sub-licensing income (as defined in the agreement).

Under the merger agreement by which we acquired Innovive, we agreed to pay the former Innovive stockholders also will be entitled to receive up to $1.01 per Innovive share of future earnout merger consideration, subject to our achievement of specified net sales under the Innovive license agreements. The earnout merger consideration, if any, will be payable in shares of our common stock, subject to specified conditions, or, at our election, in cash or by a combination of shares of our common stock and cash. Our common stock will be valued for purposes of any future earnout merger consideration based upon the trading price of our common stock at the time the earnout merger consideration is paid.

Our agreement by which we acquired rights to arimoclomol and our other molecular chaperone amplification product candidates provides for milestone payments by us upon the occurrence of specified regulatory filings and approvals related to the acquired products. In the event that we successfully develop arimoclomol or any of these other product candidates, these milestone payments could aggregate as much as $3.7 million, with the most significant payments due upon the first commercialization of any of these products. In addition, our agreement with the ALS CRT requires us to pay a one-percent royalty interest on worldwide sales of arimoclomol for the treatment of ALS. Also, any future license, collaborative or other agreements we may enter into in connection with our development and commercialization activities may require us to pay significant milestone, license and other payments in the future.

We will rely upon third parties for the manufacture of our clinical product supplies.

We do not have the facilities or expertise to manufacture supplies of any of our product candidates, including tamibarotene, INNO-206, arimoclomol or iroxanadine. Accordingly, we are dependent upon third-party manufacturers, or potential future strategic alliance partners, to manufacture these supplies. We have manufacturing supply arrangements in place with respect to a portion of the clinical supplies needed for the clinical development programs for tamibarotene and arimoclomol. However, we have no supply arrangements for the commercial

manufacture of these product candidates or any manufacturing supply arrangements for any other potential product candidates, and we may not be able to secure needed supply arrangements on attractive terms, or at all. Our failure to secure these arrangements as needed could have a materially adverse effect on our ability to complete the development of our products or to commercialize them.

If our product candidates cannot be manufactured in suitable quantities and in accordance with regulatory standards, our clinical trials, regulatory approvals and marketing efforts for such products may be delayed. Such delays could adversely affect our competitive position and our chances of generating significant recurring revenues. If our products are not able to be manufactured at an acceptable cost, the commercial success of our products may be adversely affected.

We are subject to potential liabilities from clinical testing and future product liability claims.

If any of our products are alleged to be defective, they may expose us to claims for personal injury by patients in clinical trials of our products or, if we obtain marketing approval and commercialize our products, by patients using our commercially marketed products. Even if the commercialization of one or more of our products is approved by the FDA, users may claim that such products caused unintended adverse effects. We maintain clinical trial insurance for our Phase II clinical trial of tamibarotene for APL, and we plan to seek to obtain similar insurance for any other clinical trials that we conduct. We also would seek to obtain product liability insurance covering the commercial marketing of our product candidates. We may not be able to obtain additional insurance, however, and any insurance obtained by us may prove inadequate in the event of a claim against us. Any claims asserted against us also may divert management's attention from our operations, and we may have to incur substantial costs to defend such claims even if they are unsuccessful.

We may be unable to successfully acquire additional technologies or products. If we require additional technologies or products, our product development plans may change and the ownership interests of our shareholders, or our ownership interest in RXi, could be diluted.

We may seek to acquire additional technologies by licensing or purchasing such technologies, or through a merger or acquisition of one or more companies that own such technologies. We have no current understanding or agreement to acquire any technologies, however, and we may not be able to identify or successfully acquire any additional technologies. We also may seek to acquire products from third parties that already are being marketed or have been approved for marketing, although we have not currently identified any of these products. We do not have any prior experience in acquiring or marketing products approved for marketing and may need to find third parties to market any products that we might acquire.

Following our acquisition of Innovive in September 2008, we refocused our product development efforts on tamiboratene, which we acquired from Innovive and which we believe has the greatest near-term revenue potential of all of our other product candidates. If we acquire additional technologies or product candidates, we may determine to make further changes to our product development plans and business strategy to capitalize on opportunities presented by the new technologies and product candidates.

We may determine to issue shares of our common stock, or to use shares of RXi common stock owned by us, or both, to acquire additional technologies or products or in connection with a merger or acquisition of another company. To the extent we do so, the ownership interest of our stockholders, or our ownership interest in RXi, or both, will be diluted accordingly.

We use hazardous materials and must comply with environmental, health and safety laws and regulations, which can be expensive and restrict how we do business.

Our research and development and manufacturing processes involve the controlled storage, use and disposal of hazardous materials, including biological hazardous materials. We are subject to federal, state and local regulations governing the use, manufacture, storage, handling and disposal of these materials and waste products. Although we believe that our safety procedures for handling and disposing of these hazardous materials comply with the standards prescribed by law and regulation, we cannot completely eliminate the risk of accidental contamination or injury from hazardous materials. In the event of an accident, we could be held liable for any damages that result. We could incur significant costs to comply with current or future environmental laws and regulations.

Risks Associated With Our Investment in RXi

We may sell or dispose of some of our RXi shares, and may not be able to do so on attractive terms.

As of March 11, 2009, we owned approximately 6,268,881 shares of common stock of RXi, or approximately 45% of the outstanding RXi common stock. RXi shares are listed on The Nasdaq Capital Market under the symbol “RXi.” During the 12-month period ended March 11, 2009, the market prices for RXi shares as reported on The Nasdaq Capital Market has fluctuated from a high of $23.95 per share to a low of $2.71 per share, and the market price of RXi shares and the value of our RXi shares may continue to experience significant volatility. We believe that the downturn in the financial markets, in particular, and poor economy, generally, have contributed to the volatility of the market price of RXi shares.

We may determine to sell or otherwise dispose of our RXi shares in one or more transactions in order to obtain funds to carry on our operations or in connection with our acquisition of new technologies or products. There is no assurance, however, whether, or on what terms, we might be able to sell or dispose of our RXi shares. We believe that the downturn in the financial markets has adversely affected the market for shares of development-stage companies such as RXi.

If we undertake to sell our RXi shares, we may have to do so pursuant to Rule 144 under the Securities Act, which includes certain manner of sale and volume limitations, or seek to negotiate private sales with third parties who are willing to buy those shares. We may be unable to sell or divest our RXi shares at attractive prices, if at all. In addition, any sales or other disposition of RXi shares by us, or the possibility of such sales or disposition, could adversely affect the market price of our remaining RXi shares.

If RXi undertakes future financings, our ownership interest in RXi may be diluted.

Under our agreement with RXi, with some exceptions, we will have preemptive rights to acquire a portion of any new securities sold or issued by RXi so as to maintain our percentage ownership of RXi. Depending upon the terms and provisions of any proposed sale of new securities by RXi, our financial condition and other factors, we may be unwilling or unable to exercise our preemptive rights. We agreed to waive our preemptive rights in connection with a private placement by RXi in June 2008, which resulted in a reduction in our percentage ownership of RXi from approximately 49% to approximately 45%. If RXi undertakes future issuances of equity securities, our percentage ownership interest in RXi may be diluted further.

We do not control RXi, and the officers, directors and other RXi stockholders may have interests that are different from ours.

Although we currently own a significant portion of RXi's outstanding common stock, we do not control its management or operations. RXi has its own board of directors and management, who are responsible for the affairs and policies of RXi and its development plans. We have entered into letter agreements with RXi and certain of its stockholders under which we agree to vote our shares of RXi common stock for the election of directors of RXi and to take other actions to ensure that a majority of RXi's board of directors are independent of us. The board of directors and other stockholders of RXi may have interests that are different from ours, and RXi may engage in actions in connection with its business and operations that we believe are not in our best interests.

Risks Associated with Our Common Stock

Our common stock may be delisted from The Nasdaq Capital Market if the stock price does not increase.

We received notice from The Nasdaq Stock Market on May 28, 2008 that we were not in compliance with the minimum $1.00 closing bid price required by Nasdaq Marketplace Rule 4310(c)(4) and, in accordance with Marketplace Rule 4310(c)(8)(D), could regain compliance if, by November 24, 2008, our common stock closes at or above $1.00 for 10 consecutive business days and we otherwise meet the Nasdaq's continuing listing requirements. On October 16, 2008, Nasdaq announced that it had temporarily suspended until January 16, 2009 the enforcement of its rules requiring a minimum $1.00 closing bid price. On December 19, 2008, Nasdaq extended the temporary suspension of its minimum bid price rule. As a result, we will have until April 20, 2009 to regain compliance with this rule, assuming no further actions by Nasdaq in this regard. However, in its original notice to us on May 28, 2008, Nasdaq also informed us that, if we did not regain compliance by the stated deadline, we would be granted up to an additional 180 calendar days to regain full compliance while continuing to trade during such time if we meet the Nasdaq's initial listing requirements other than the minimum bid price rule. If we eventually fail to comply with this condition for continued listing and our common stock is delisted from The Nasdaq Small Capital

Market, there is no assurance that our common stock will be listed for trading or quoted elsewhere and an active trading market for our common stock may cease to exist, which would materially and adversely impact the market value of our common stock.

Our anti-takeover provisions may make it more difficult to change our management, or may discourage others from acquiring us, and thereby adversely affect stockholder value.

We have a stockholder rights plan and provisions in our bylaws that are intended to protect our stockholders' interests by encouraging anyone seeking control of our company to negotiate with our board of directors. These provisions may discourage or prevent a person or group from acquiring us without the approval of our board of directors, even if the acquisition would be beneficial to our stockholders.

We have a classified board of directors, which means that at least two stockholder meetings, instead of one, will be required to effect a change in the majority control of our board of directors. This applies to every election of directors, not just an election occurring after a change in control. The classification of our board increases the amount of time it takes to change majority control of our board of directors and may cause potential acquirers to lose interest in a potential purchase of us, regardless of whether our purchase would be beneficial to us or our stockholders. The additional time and cost to change a majority of the members of our board of directors makes it more difficult and may discourage our existing stockholders from seeking to change our existing management in order to change the strategic direction or operational performance of our company.

Our bylaws provide that directors may only be removed for cause by the affirmative vote of the holders of at least a majority of the outstanding shares of our capital stock then entitled to vote at an election of directors. This provision prevents stockholders from removing any incumbent director without cause. Our bylaws also provide that a stockholder must give us at least 120 days notice of a proposal or director nomination that such stockholder desires to present at any annual meeting or special meeting of stockholders. Such provision prevents a stockholder from making a proposal or director nomination at a stockholder meeting without us having advance notice of that proposal or director nomination. This could make a change in control more difficult by providing our directors with more time to prepare an opposition to a proposed change in control. By making it more difficult to remove or install new directors, these bylaw provisions may also make our existing management less responsive to the views of our stockholders with respect to our operations and other issues such as management selection and management compensation.

We are also subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law, which may also prevent or delay a takeover of us that may be beneficial to you.

Our outstanding options and warrants and the availability for resale of our shares issued in our private financings may adversely affect the trading price of our common stock.

As of December 31, 2008, there were outstanding stock options and warrants to purchase approximately 18.0 million shares of our common stock at a weighted-average exercise price of $1.58 per share. Our outstanding options and warrants could adversely affect our ability to obtain future financing or engage in certain mergers or other transactions, since the holders of options and warrants can be expected to exercise them at a time when we may be able to obtain additional capital through a new offering of securities on terms more favorable to us than the terms of outstanding options and warrants. For the life of the options and warrants, the holders have the opportunity to profit from a rise in the market price of our common stock without assuming the risk of ownership. The issuance of shares upon the exercise of outstanding options and warrants will also dilute the ownership interests of our existing stockholders. Many of our outstanding warrants contain anti-dilution provisions pertaining to dividends with respect to our common stock. Outstanding warrants to purchase approximately 9.3 million shares contain anti-dilution provisions that are triggered upon any issuance of securities by us below the prevailing market price of our common stock. Our distribution to our stockholders of RXi shares on March 11, 2008 required us to reduce the exercise price of those warrants. In the event that these anti-dilution provisions are triggered by us in the future, we would likewise be required to reduce the exercise price, and increase the number of shares underlying, those warrants, which would have a dilutive effect on our stockholders.

We have registered with the SEC the resale by the holders of all or substantially all shares of our common stock issuable upon exercise of our outstanding options and warrants. The availability of these shares for public resale, as well as actual resales of these shares, could adversely affect the trading price of our common stock.

We may issue preferred stock in the future, and the terms of the preferred stock may reduce the value of our common stock.

We are authorized to issue shares of preferred stock in one or more series. Our board of directors may determine the terms of future preferred stock offerings without further action by our stockholders. If we issue preferred stock, it could affect your rights or reduce the value of our outstanding common stock. In particular, specific rights granted to future holders of preferred stock may include voting rights, preferences as to dividends and liquidation, conversion and redemption rights, sinking fund provisions, and restrictions on our ability to merge with or sell our assets to a third party.

We may experience volatility in our stock price, which may adversely affect the trading price of our common stock.

The market price of our common stock has ranged from $0.23 to $5.49 per share since January 1, 2007, and it may continue to experience significant volatility from time to time. Our ability to raise capital has been materially and adversely affected by the

downturn in the financial markets and poor economy, which have severely depressed the market for PIPEs transactions on which we have relied for raising needed capital.

Other factors that may affect the market price of our common stock include the following:

- announcements of regulatory developments or technological innovations by us or our competitors;
- changes in our relationship with our licensors and other strategic partners;
- changes in our ownership of or other relationships with RXi;
- our quarterly operating results;
- litigation involving or affecting us;
- shortfalls in our actual financial results compared to our guidance or the forecasts of stock market analysts;
- developments in patent or other technology ownership rights;
- acquisitions or strategic alliances by us or our competitors;
- public concern regarding the safety of our products; and
- government regulation of drug pricing.

We have not declared or paid any cash dividends on our common stock or other securities, and we currently do not anticipate paying any cash dividends in the foreseeable future. Because we do not anticipate paying cash dividends for the foreseeable future, our stockholders will not realize a return on their investment in our common stock except to the extent of any appreciation in the value of our common stock. Our common stock may not appreciate in value, or may decline in value.

Item 2. PROPERTIES

Our headquarters are located in leased facilities in Los Angeles, California. The lease covers approximately 4,700 square feet of office space and expires in June 2012. This lease currently requires us to make monthly payments of approximately $18,081.

We also lease approximately 10,000 square feet of office and laboratory space in San Diego, California. The lease expires in July 2010, although we have the option to extend the lease for up to two additional three-year terms. Our headquarters and laboratory facilities are sufficient for our current purposes.

We also acquired a sublease to approximately 5,526 square feet of office space at 555 Madison Avenue, New York, New York, in connection with our acquisition of Innovive in September 2008. This lease currently requires us to make annual payments of approximately $210,000, plus certain taxes and operating expenses, and it expires on August 30, 2012. On December 4, 2008, we sub-subleased the space to Red Pine Advisors LLC through August 29, 2012. Under the sub-sublease, we are entitled to base annual rent of approximately $350,000, plus certain taxes and operating expenses.

Item 3. LEGAL PROCEEDINGS

We are occasionally involved in claims arising in the normal course of business. As of March 11, 2009, there were no such claims that we expect, individually or in the aggregate, to have a material adverse affect on us.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock is traded on The NASDAQ Capital Market under the symbol "CYTR." The following table sets forth the high and low sale prices for our common stock for the periods indicated as reported by The NASDAQ Capital Market:

	High	Low
Fiscal Year 2008:		
Fourth Quarter	$0.65	$0.23
Third Quarter	$0.68	$0.40
Second Quarter	$1.27	$0.61
First Quarter	$2.98	$1.00
Fiscal Year 2007:		
Fourth Quarter	$4.70	$2.60
Third Quarter	$4.09	$3.00
Second Quarter	$5.36	$2.97
First Quarter	$5.49	$1.74

Holders

On March 11, 2009, there were approximately 785 holders of record of our common stock. The number of record holders does not reflect the number of beneficial owners of our common stock for whom shares are held by brokerage firms and other nominees.

Dividends

We have not paid any cash dividends since our inception and do not contemplate paying any cash dividends in the foreseeable future. On March 11, 2008, we distributed to our stockholders approximately 36% of the outstanding shares of RXi on approximately a 1-for-20 basis.

Equity Compensation Plans

The following table sets forth certain information as of December 31, 2008, regarding securities authorized for issuance under our equity compensation plans:

	(a) Number of Securities to be Issued Upon Exercise of	(b) Weighted-Average Exercise Price of Outstanding Options,	Number of Securities Remaining Available for Issuance Under Equity Compensation

Plan Category	Outstanding Options, Warrants and Rights	Warrants and Rights	Plans (Excluding Securities Reflected in Column (a))
Equity compensation plans approved by our security holders:			
2000 Long-Term Incentive Plan	7,054,940	$ 1.92	697,000
Equity compensation plans not approved by our security holders:			
2008 Stock Incentive Plan (1)	350,000	0.35	—
Outstanding warrants (2)	10,634,848	1.40	—
Total	18,039,788	$ 1.58	697,000

(1) Our board of directors adopted this plan on November 21, 2008. The plan will be submitted for approval by our stockholders at our 2009 Annual Meeting of stockholders. In the meantime, we may make awards under the plan, whose effectiveness is conditioned upon obtaining stockholder approval.

(2) The warrants shown were issued in discreet transactions from time to time as compensation for services rendered by consultants, advisors or other third parties, and do not include warrants sold in private placement transactions. The material terms of such warrants were determined based upon arm's-length negotiations with the service providers. The warrant exercise prices approximated the market price of our common stock at or about the date of grant, and the warrant terms range from five to ten years from the grant date. The warrants contain customary anti-dilution adjustments in the event of a stock split, reverse stock split, reclassification or combination of our outstanding common stock and similar events and certain of the warrants contain anti-dilution adjustments triggered by other corporate events, such as dividends and sales of equity below market price.

On November 21, 2008, our compensation committee granted to Joseph Rubinfeld, Ph.D. stock options under our newly adopted 2008 Stock Incentive Plan to purchase up to 350,000 shares of our common stock at an exercise price of $0.35 per share, which equaled the market price of our common stock on the grant date. The options were granted in connection with the consulting agreement entered into between us and Dr. Rubinfeld described in the "Certain Relationships and Related Transactions" section of this Annual Report, and will become exercisable only upon stockholder approval of the plan. The grant was made without registration under the Federal securities laws in reliance upon exemptions from such registration for offers and sales not involving a public offering.

Comparison of Cumulative Total Returns

The following line graph presentation compares cumulative total stockholder returns of CytRx with The NASDAQ Stock Market Index and the NASDAQ Pharmaceutical Index (the "Peer Index") for the five-year period from December 31, 2003 to December 31, 2008. The graph and table assume that $100 was invested in each of CytRx's common stock, the NASDAQ Stock Market Index and the Peer Index on December 31, 2003, and that all dividends were reinvested. This data was furnished by Zacks Investment Research.

Comparison of Cumulative Total Returns

	December 31,				
	2004	2005	2006	2007	2008
CytRx Corporation	75.27	55.37	102.68	152.67	23.42
NASDAQ Stock Market Index	109.16	111.47	123.05	140.12	84.12
NASDAQ Pharmaceutical Index	106.51	117.29	114.81	120.74	112.34

Item 6. SELECTED FINANCIAL DATA

General

The following selected financial data are derived from our audited financial statements. Our financial statements for 2008, 2007, and 2006 have been audited by BDO Seidman, LLP, our independent registered public accounting firm. These historical results do not necessarily indicate future results. When you read this data, it is important that you also read our financial statements and related notes, as well as the "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Risk Factors" sections of this Annual Report. Financial information provided below has been rounded to the nearest thousand.

	2008	2007	2006	2005	2004
Statement of Operations Data:					
Revenues					
Service revenue	$ 6,166,000	$ 7,242,000	$ 1,859,000	$ 83,000	$ —
Licensing revenue	100,000	101,000	101,000	101,000	428,000
Grant revenue	—	116,000	106,000	—	—
Total revenues	$ 6,266,000	$ 7,459,000	$ 2,066,000	$ 184,000	$ 428,000
Deemed dividend for anti-dilution adjustments made to outstanding common stock warrants	(757,000)	—	(488,000)	(1,076,000)	—
Net loss applicable to common stockholders	$ (27,803,000)	$ (21,890,000)	$ (17,240,000)	$ (16,169,000)	$ (16,392,000)
Basic and diluted loss per share applicable to common stock	$ (0.30)	$ (0.26)	$ (0.25)	$ (0.28)	$ (0.48)
Balance Sheet Data:					
Cash, cash equivalents and short-term investments	$ 25,042,000	$ 60,450,000	$ 30,381,000	$ 8,299,000	$ 1,988,000
Total assets	$ 28,324,000	$ 64,146,000	$ 31,636,000	$ 9,939,000	$ 5,049,000
Total stockholders' equity	$ 15,698,000	$ 40,224,000	$ 5,150,000	$ 7,208,000	$ 1,595,000

Factors Affecting Comparability

On September 19, 2008, we purchased all of the common stock of Innovive Pharmaceuticals in a transaction that for accounting purposes is considered an asset acquisition. The fair value of Innovive's assets and liabilities at September 19, 2008, in millions of dollars, are presented below:

In-process research and development	$ 8.0
Leasehold interests	0.1
Prepaid expenses	0.3
Accounts payable	(6.1)
Net assets acquired through issuance of common stock	$ 2.3

As a result of the March 11, 2008 distribution by us to our stockholders of approximately 36% of the outstanding shares of RXi Pharmaceuticals Corporation, we deconsolidated that previously majority-owned subsidiary. As part of the transaction, we deconsolidated $3.7 million of total assets and $4.6 million of total liabilities.

In connection with applicable antidilution adjustments to the price of certain outstanding warrants in March 2008, we recorded a deemed dividend of approximately $757,000. The deemed dividend was recorded as a charge to accumulated deficit and a corresponding credit to additional paid-in capital.

On April 19, 2007, we completed a $37.0 million private equity financing in which we issued 8.6 million shares of our common stock at $4.30 per share. Net of investment banking commissions, legal, accounting and other expenses related to the transaction, we received approximately $34.2 million of proceeds.

In August 2006, we received approximately $24.5 million in marketable securities (which were sold by us for approximately $24.3 million) from the privately-funded ALS Charitable Remainder Trust, or ALSCRT, in exchange for our commitment to continue

research and development of arimoclomol and other potential treatments for ALS and a one percent royalty from worldwide sales of arimoclomol. We have recorded the value received under the arrangement as deferred service revenue. We are recognizing the service revenue using the proportional performance method of revenue recognition, under which service revenue will be recognized as a percentage of actual research and development expense. During 2008 and 2007, we recognized approximately $6.2 million and $7.2 million of service revenue related to this transaction, respectively.

Our Statements of Operations as of and for the years ended December 31, 2008, 2007 and 2006 reflect the impact of Statement of Financial Accounting Standards 123(R), “Share Based Payment” (“SFAS 123(R)”). In accordance with the modified prospective transition method, our results of operations for prior periods have not been restated to reflect the impact of SFAS 123(R). Share-based compensation expense recognized under SFAS 123(R) for the years ended December 31, 2008, 2007 and 2006 were $2.1 million, $2.7 million and $1.2 million, respectively. As of December 31, 2008, there was $2.1 million of unrecognized compensation cost related to outstanding options that is expected to be recognized as a component of our operating expenses through 2012. Compensation costs will be adjusted for future changes in estimated forfeitures.

On March 2, 2006, we completed a $13.4 million private equity financing in which we issued 10,650,795 shares of our common stock and warrants to purchase an additional 6,070,953 shares of our common stock at an exercise price of $1.54 per share. Net of investment banking commissions, legal, accounting and other expenses related to the transaction, we received approximately $12.4 million of proceeds.

In January 2005, we completed a $21.3 million private equity financing in which we issued 17,334,494 shares of our common stock and warrants to purchase an additional 8,667,247 shares of our common stock at an exercise price of $2.00 per share. Net of investment banking commissions, legal, accounting and other fees related to the transaction, we received proceeds of approximately $19.4 million.

In connection with our adjustment to the exercise terms of certain outstanding warrants to purchase common stock on March 2, 2006 and January 20, 2005, we recorded deemed dividends of $488,000 and $1.1 million, respectively. These deemed dividends are reflected as an adjustment to net loss for the first quarter of 2006 and the year ended 2005 to arrive at net loss applicable to common stockholders on the consolidated statement of operations and for purposes of calculating basic and diluted earnings per shares.

Item 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with the discussion under “Selected Financial Data” and our consolidated financial statements included in this Annual Report. This discussion contains forward-looking statements, based on current expectations and related to future events and our future financial performance, that involve risks and uncertainties. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of many important factors, including those set forth under the caption “Risk Factors” and elsewhere in this Annual Report.

Overview

CytRx Corporation

We are a biopharmaceutical research and development company engaged in the development of high-value human therapeutics. Our drug development pipeline includes two product candidates in clinical development for cancer indications, including registration studies of tamibarotene for the treatment of acute promyelocytic leukemia, or APL.

In addition to our core oncology programs, we are developing treatments for neurodegenerative and other disorders based upon our small-molecule molecular chaperone amplification technology. We also are engaged in new-drug discovery research at our laboratory facility in San Diego, California, utilizing our master chaperone regulator assay, or MaCRA, technology. Apart from our drug development programs and new-drug discovery research activities, we currently maintain a 45% equity interest in our former subsidiary, RXi Pharmaceuticals Corporation, or RXi (NASDAQ: RXII).

We have relied primarily upon selling equity securities and upon proceeds received upon the exercise of options and warrants and, to a much lesser extent, upon payments from our strategic partners and licensees, to generate funds needed to finance our business and operations.

At December 31, 2008, we had cash, cash equivalents and short-term investments of $25.0 million. We believe that CytRx's current resources will be sufficient to support its currently planned level of operations through the first quarter of 2010. This estimate is based, in part, upon our currently projected expenditures for 2009 of approximately $22 million, including approximately $7.1 million for our clinical program for tamibarotene, approximately $3.4 million for our clinical program for INNO-206, approximately $0.6 million for our clinical program for INNO-406, approximately $0.5 million for our animal toxicology studies and related activities for arimoclomol, approximately $1.8 million for operating our clinical programs, approximately $2.7 million for research activities at its laboratory in San Diego, California, and approximately $5.9 million for other general and administrative expenses. Projected expenditures are based upon numerous assumptions and subject to many uncertainties, and our actual expenditures may be significantly different from these projections. We will be required to obtain additional funding in order to execute its long-term business plans, although we do not currently have commitments from any third parties to provide us with capital. We cannot assure that additional funding will be available on favorable terms, or at all. If we fail to obtain additional funding when needed, we may not be able to execute our business plans and our business may suffer, which would have a material adverse effect on our financial position, results of operations and cash flows.

Our Separation from RXi Pharmaceuticals Corporation

RXi Pharmaceuticals Corporation was founded in April 2006 by us and four researchers in the field of RNAi, including Dr. Craig Mello, recipient of the 2006 Nobel Prize for Medicine for his co-discovery of RNAi. RNAi is a naturally occurring mechanism for the regulation of gene expression that has the potential to selectively inhibit the activity of any human gene. In January 2007, we transferred to RXi substantially all of our RNAi-related technologies and assets, and RXi began operating on a stand-alone basis for the purpose of accelerating the discovery of RNAi therapeutics previously sponsored by us. RXi's initial focus is on developing RNAi-based product candidates for treating neurological and metabolic disorders and cancer.

Until early 2008, we owned approximately 85% of the outstanding shares of common stock of RXi and our financial statements, including our financial statements as of and for the year ended December 31, 2007, included the consolidated financial condition and results of operations of RXi. On February 14, 2008, our board of directors declared a dividend of one share of RXi common stock for each approximately 20.05 shares of our common stock held by such stockholders, which was paid on March 11, 2008 and which reduced our ownership of RXi shares to less than 50%.

For periods beginning with the first quarter of 2008, if CytRx owns more than 20% but less than 50% of the outstanding shares of RXi, CytRx will account for its investment in RXi using the equity method. Under the equity method, CytRx will record its pro-rata share of the gains or losses of RXi against its historical basis investment in RXi.

Research and Development

Expenditures for research and development activities related to continuing operations were $10.5 million, $18.8 million and $9.8 million for the years ended December 31, 2008, 2007 and 2006, respectively, with research and development expenses representing approximately 35%, 55% and 50% of our total expenses for the years ended December 31, 2008, 2007 and 2006, respectively.

Research and development expenses are further discussed below under "Critical Accounting Policies and Estimates" and "Results of Operations."

Our currently projected expenditures for 2009 include approximately $7.1 million for our clinical program for tamibarotene, approximately $3.4 million for our clinical program for INNO-206, approximately $0.6 million for our

INNO-406 program, approximately $0.5 million for our animal toxicology studies and related activities for arimoclomol, approximately $1.8 million for operating our clinical programs, and approximately $2.7 million for research activities at our laboratory in San Diego, California. The actual cost of our clinical programs could differ significantly from our current projections due to any additional requirements or delays imposed by the FDA in connection with our planned trials, or if actual costs are higher than current management estimates for other reasons, including complications with manufacturing. In the event that actual costs of our clinical program, or any of our other ongoing research activities, are significantly higher than our current estimates, we may be required to significantly modify our planned level of operations.

There is a risk that any drug discovery and development program may not produce revenue because of the risks inherent in drug discovery and development. The successful development of any product candidate is highly uncertain. We cannot reasonably estimate or know the nature, timing and costs of the efforts necessary to complete the development of, or the period in which material net cash

inflows are expected to commence from any product candidate, due to the numerous risks and uncertainties associated with developing drugs, including the uncertainty of:

- our ability to advance product candidates into pre-clinical and clinical trials;
- the scope, rate and progress of our pre-clinical trials and other research and development activities;
- the scope, rate of progress and cost of any clinical trials we commence;
- the cost of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;
- future clinical trial results;
- the terms and timing of any collaborative, licensing and other arrangements that we may establish;
- the cost and timing of regulatory approvals;
- the cost and timing of establishing sales, marketing and distribution capabilities;
- the cost of establishing clinical and commercial supplies of our product candidates and any products that we may develop; and
- the effect of competing technological and market developments.

Any failure to complete any stage of the development of our products in a timely manner could have a material adverse effect on our operations, financial position and liquidity. A discussion of the risks and uncertainties associated with our business is set forth in the “Risk Factors” section of this Annual Report.

Critical Accounting Policies and Estimates

Management’s discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, management evaluates its estimates, including those related to revenue recognition, stock options, impairment of long-lived assets, including finite lived intangible assets, accrued liabilities and certain expenses. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ materially from these estimates under different assumptions or conditions.

Our significant accounting policies are summarized in Note 2 of the Notes to Financial Statements included in this Annual Report. We believe the following critical accounting policies are affected by our more significant judgments and estimates used in the preparation of our consolidated financial statements:

Revenue Recognition

Biopharmaceutical revenues consist of license fees from strategic alliances with pharmaceutical companies as well as service and grant revenues. Service revenues consist of contract research and laboratory consulting. Grant revenues

consist of government and private grants.

Monies received for license fees are deferred and recognized ratably over the performance period in accordance with Staff Accounting Bulletin (“SAB”) No. 104, Revenue Recognition. Milestone payments will be recognized upon achievement of the milestone as long as the milestone is deemed substantive and we have no other performance obligations related to the milestone and

collectability is reasonably assured, which is generally upon receipt, or recognized upon termination of the agreement and all related obligations. Deferred revenue represents amounts received prior to revenue recognition.

Revenues from contract research, government grants, and consulting fees are recognized over the respective contract periods as the services are performed, provided there is persuasive evidence or an arrangement, the fee is fixed or determinable and collection of the related receivable is reasonably assured. Once all conditions of the grant are met and no contingencies remain outstanding, the revenue is recognized as grant fee revenue and an earned but unbilled revenue receivable is recorded.

In August 2006, we received approximately $24.3 million in proceeds from the privately-funded ALS Charitable Remainder Trust ("ALSCRT") in exchange for the commitment to continue research and development of arimoclomol and other potential treatments for ALS and a one percent royalty in the worldwide sales of arimoclomol. Under the arrangement, we retain the rights to any products or intellectual property funded by the arrangement and the proceeds of the transaction are non-refundable. Further, the ALSCRT has no obligation to provide any further funding to us. We have concluded that due to the research and development components of the transaction that it is properly accounted for under Statement of Financial Accounting Standards No. 68, Research and Development Arrangements. Accordingly, we have recorded the value received under the arrangement as deferred service revenue and will recognize service revenue using the proportional performance method of revenue recognition, meaning that service revenue is recognized on a dollar-for-dollar basis for each dollar of expense incurred for the research and development of arimoclomol and other potential ALS treatments. We believe that this method best approximates the efforts expended related to the services provided. We adjust our estimates of expense incurred for this research and development on a quarterly basis. For the years ended December 31, 2008, 2007 and 2006, we recognized approximately $6.2 million, $7.2 million and $1.8 million, respectively, of service revenue related to this transaction. Any significant change in ALS related research and development expense in any particular quarterly or annual period will result in a change in the recognition of revenue for that period and consequently affect the comparability or revenue from period to period.

The amount of "deferred revenue, current portion" is the amount of deferred revenue that is expected to be recognized in the next twelve months and is subject to fluctuation based upon management's estimates. Management's estimates include an evaluation of what pre-clinical and clinical trials are necessary, the timing of when trials will be performed and the estimated clinical trial expenses. These estimates are subject to changes and could have a significant effect on the amount and timing of when the deferred revenues are recognized.

Research and Development Expenses

Research and development expenses consist of costs incurred for direct and overhead-related research expenses and are expensed as incurred. Costs to acquire technologies, including licenses, that are utilized in research and development and that have no alternative future use are expensed when incurred. Technology developed for use in its products is expensed as incurred until technological feasibility has been established.

Clinical Trial Expenses

Clinical trial expenses, which are included in research and development expenses, include obligations resulting from our contracts with various clinical research organizations in connection with conducting clinical trials for our product candidates. We recognize expenses for these activities based on a variety of factors, including actual and estimated labor hours, clinical site initiation activities, patient enrollment rates, estimates of external costs and other activity-based factors. We believe that this method best approximates the efforts expended on a clinical trial with the expenses we record. We adjust our rate of clinical expense recognition if actual results differ from our estimates. If our estimates are incorrect, clinical trial expenses recorded in any particular period could vary.

Stock-based Compensation

Our share-based employee compensation plans are described in Note 13 of the Notes to our Financial Statements. Effective January 1, 2006, we adopted the provisions of SFAS 123(R), “Share-Based Payment.” SFAS 123(R), which requires that companies recognize compensation expense associated with stock option grants and other equity instruments to employees in the financial statements. SFAS 123(R) applies to all grants after the effective date and to the unvested portion of stock options outstanding as of the effective date. We adopted SFAS 123(R) using the modified-prospective method and use the Black-Scholes valuation model for valuing share-based payments. We will continue to account for transactions in which services are received in exchange for equity instruments based on the fair value of such services received from non-employees, in accordance with SFAS 123(R), Emerging Issues

Task Force Issue No. 96-18 ("EITF 96-18"), Accounting for Equity Instruments that are Issued to other than Employees for Acquiring, or in Conjunction with Selling Goods or Services and EITF 00-18, Accounting Recognition for Certain Transactions involving Equity Instruments Granted to Other Than Employees, as amended.

Our Statement of Operations as of and for the years ended December 31, 2008, 2007 and 2006 reflects the impact of SFAS 123(R). In accordance with the modified prospective transition method, our results of operations for prior periods have not been restated to reflect the impact of SFAS 123(R). Prior to January 1, 2006, we accounted for share-based compensation under the recognition and measurement provisions of Accounting Principles Board No. 25, Accounting for Stock Issued to Employees ("APB 25"), and related interpretations for all awards granted to employees. Under APB 25, when the exercise price of options granted to employees under these plans equals or exceeds the market price of the common stock on the date of grant, no compensation expense is recorded. When the exercise price of options granted to employees under these plans is less than the market price of the common stock on the date of grant, compensation expense is recognized over the vesting period.

Non-employee share-based compensation charges generally are amortized over the vesting period on a straight-line basis. In certain circumstances, option grants to non-employees are immediately vested and have no future performance or service requirements by the non-employee and the total share-based compensation charge is recorded in the period of the measurement date.

The fair value of each CytRx and RXi common stock option grant is estimated using the Black-Scholes option pricing model, which uses certain assumptions related to risk-free interest rates, expected volatility, expected life of the common stock options and future dividends. Compensation expense is recorded based upon the value derived from the Black-Scholes option pricing model, based on an expected forfeiture rate that is adjusted for actual experience. If our Black-Scholes option pricing model assumptions or our actual or estimated forfeiture rate are different in the future, that could materially affect compensation expense recorded in future periods.

Impairment of Long-Lived Assets

We review long-lived assets, including finite lived intangible assets, for impairment on an annual basis, as of December 31, or on an interim basis if an event occurs that might reduce the fair value of such assets below their carrying values. An impairment loss would be recognized based on the difference between the carrying value of the asset and its estimated fair value, which would be determined based on either discounted future cash flows or other appropriate fair value methods. If our estimates used in the determination of either discounted future cash flows or other appropriate fair value methods are not accurate as compared to actual future results we may be required to record an impairment charge.

Earnings Per Share

Basic and diluted loss per common share are computed based on the weighted average number of common shares outstanding. Common share equivalents (which consist of options and warrants) are excluded from the computation of diluted loss per share since the effect would be antidilutive. Common share equivalents which could potentially dilute basic earnings per share in the future, and which were excluded from the computation of diluted loss per share, totaled approximately 15.2 million shares, 17.1 million shares and 30.2 million shares at December 31, 2008, 2007 and 2006, respectively. In connection with our adjustment to the exercise terms of certain outstanding warrants to purchase common stock on March 11, 2008 and March 2, 2006, we recorded deemed dividends of $757,000 and $488,000, respectively. These deemed dividends are reflected as an adjustment to net loss for the first quarter of 2008 and the first quarter of 2006 to arrive at net loss applicable to common stockholders on the consolidated statement of operations and for purposes of calculating basic and diluted earnings per shares.

Quarterly Financial Data

The following table sets forth unaudited consolidated statements of operations data for each quarter during our most recent two fiscal years. This quarterly information has been derived from our unaudited consolidated financial statements and, in the opinion of management, includes all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the information for the periods covered. The quarterly financial data should be read in conjunction with our consolidated financial

statements and related notes. The operating results for any quarter are not necessarily indicative of the operating results for any future period.

	Quarters Ended March 31	June 30	September 30	December 31
	(In thousands, except per share data)			
2008				
Total revenues	$ 2,181	$ 1,740	$ 917	$ 1,428
Net loss	(5,374)	(5,826)	(12,316)	(3,530)
Deemed dividend for anti-dilution adjustments made to outstanding common stock warrants	(757)	—	—	—
Net loss applicable to common stockholders	$ (6,131)	$ (5,826)	$ (12,316)	$ (3,530)
Basic and diluted loss per share applicable to common stock	$ (0.07)	$ (0.06)	$ (0.14)	$ (0.04)
2007				
Total revenues	$ 1,563	$ 2,371	$ 2,046	$ 1,479
Net loss	(4,546)	(6,285)	(4,597)	(6,462)
Deemed dividend for anti-dilution adjustments made to outstanding common stock warrants	—	—	—	—
Net loss applicable to common stockholders	$ (4,546)	$ (6,285)	$ (4,597)	$ (6,462)
Basic and diluted loss per share applicable to common stock	$ (0.06)	$ (0.07)	$ (0.05)	$ (0.07)

Quarterly and yearly loss per share amounts are computed independently of each other. Therefore, the sum of the per share amounts for the quarters may not equal the per share amounts for the year. In 2006, we adopted SFAS 123(R), and in 2008 and 2007 we incurred $2.1 and $2.72 million, respectively, in employee non-cash compensation expenses.

In connection with our adjustment to the exercise terms of certain outstanding warrants to purchase common stock on March 11, 2008, we recorded deemed dividends of $757,000. These deemed dividends are reflected as an adjustment to net loss for the first quarter of 2008 to arrive at net loss applicable to common stockholders on the consolidated statement of operations and for purposes of calculating basic and diluted earnings per shares.

Fourth Quarter Adjustment

During the fourth quarter of 2007, the Company recorded adjustments for: (i) additional compensation expense of $236,000 related to previously granted non-employee stock options, (ii) additional compensation expense of $350,000 related to stock options previously granted to Directors and (iii) additional general and administrative expense of $192,000 related to legal fees rendered during the third quarter. Management concluded the effect of these adjustments was not material to any previously reported quarterly period.

Liquidity and Capital Resources

General

At December 31, 2008, we had cash, cash equivalents and short-term investments of $25.0 million, compared to $60.4 million at December 31, 2007. Our working capital totaled $20.9 million and our total assets were $28.3 million at

December 31, 2008, compared to $47.4 million and $64.1 million, respectively, at December 31, 2007.

We have relied primarily upon selling equity securities and upon proceeds received upon the exercise of options and warrants and, to a much lesser extent, upon payments from our strategic partners and licensees, to generate funds needed to finance our business and operations. We believe that our current resources will be sufficient to support our currently planned level of operations through the first quarter of 2010. This estimate is based, in part, upon our currently projected expenditures for 2009 of approximately $22 million, including approximately $7.1 million for our clinical program for tamibarotene, approximately $3.4 million for our clinical program for INNO-206, approximately $0.6 million for our clinical program for INNO-406, approximately $0.5 million for our animal toxicology studies and related activities for arimoclomol, approximately $1.8 million for operating our clinical programs, approximately $2.7 million for research activities at our laboratory in San Diego, California, and approximately $5.9 million for other general and administrative expenses. These projected expenditures are based upon numerous assumptions and subject to many uncertainties, and our actual expenditures may be significantly different from these projections. We have no significant revenue, and we expect to have no significant revenue and to continue to incur significant losses over the next several years. Our net losses may increase from current levels primarily due to expenses related to our ongoing and planned clinical trials, research and development programs, possible technology acquisitions, and other general corporate activities. We anticipate, therefore, that our operating results will fluctuate for the foreseeable future and period-to-period comparisons should not be relied upon as predictive of the results in future periods.

Discussion of Operating, Investing and Financing Activities

Net loss for the year ended December 31, 2008 was $27.0 million, and cash used for operating activities for that period was $19.4 million. The net loss for the year reflects $6.2 million of non-cash revenue recognized under the 2006 agreement with ALSCRT, a non-cash expense of $8.0 million related to the acquisition of Innovive's in-process research and development, a non-cash equity loss in our non-consolidated RXi subsidiary of $3.9 million and $2.1 million for stock option and warrant expense.

Net loss for the year ended December 31, 2007 was $21.9 million, and cash used for operating activities for that period was $22.4 million. The net loss for the year reflects $7.2 million of non-cash revenue recognized under the 2006 agreement with ALSCRT and $3.5 million for stock option and warrant expense.

Net loss for the year ended December 31, 2006 was $16.8 million, and cash provided from operating activities for that period was $9.4 million. The cash provided from operating activities includes net proceeds of $24.3 million received from ALSCRT reflected in August 2006 in connection with the sale of a one-percent royalty interest in our worldwide sales of arimoclomol for ALS. Reflected in the net loss of $16.8 million is $1.8 million of revenue recognized in 2006 in connection with that sale. The remaining $22.5 million of the net proceeds from that sale were recorded as deferred revenues. Other non-cash items included in our net loss necessary to reconcile cash provided from operating activities include $1.7 million in stock option expense related to options granted to employees and consultants, of which $1.2 million of expenses for employee options recorded under SFAS 123(R), which we adopted in 2006, and accordingly no corresponding amount was recorded in earlier periods.

For the year ended December 31, 2008, $7.0 million was used in investing activities. The 2008 year included $10.0 million of RXi funds resulting from converting short-term investments to cash equivalents. However, RXi's cash of $10.4 million (inclusive of this $10.0 million) is not available to us due to the deconsolidation. The total cash outlay to acquire Innovive totaled $5.7 million, which related primarily to the payment of Innovive's accounts payable. The other $0.9 million was used for the purchase of equipment and furnishings, primarily associated with equipping the San Diego laboratory.

For the year ended December 31, 2007, $11.0 million was used in investing activities. Of this amount, $9.8 million was used by RXi for the purchase of short-term investments. The other $1.3 million was used for the purchase of equipment and furnishings, primarily associated with equipping our San Diego laboratory. We intend to assess periodically the costs and potential commercial value of our new-drug discovery activities. Depending on these assessments, we may determine to modify, out-source, partner or suspend these activities. For the year ended December 31, 2006, only a small amount of cash was used in investing activities. Other investing activities consisted primarily of the purchase of small amounts of computers and laboratory equipment.

Cash provided by financing activities for the year ended December 31, 2008 was $1.0 million. During 2008, we received $1.0 million from the exercise of stock options and warrants.

Cash provided by financing activities for the year ended December 31, 2007 was $53.5 million compared to $12.8 million and $19.8 million in the years ended December 31, 2006 and 2005, respectively. During 2007, we raised $34.2 million in a private placement of our common stock and an additional $18.8 million from the exercise of previously outstanding stock options and warrants. During 2006, we raised $12.4 million through a private placement of our common stock and an additional $0.4 million from the exercise of stock options and warrants. During the year ended December 31, 2005, we raised $19.6 million through a private placement of common stock.

We believe that we have adequate working capital to allow us to operate at our currently planned levels through the first quarter of 2010. We may require additional capital in order to fund the completion of our clinical programs, and

the other ongoing research and development related to our molecular chaperone amplification drug candidates. We may incur substantial additional expense and our clinical programs may be delayed if the FDA requires us to generate additional pre-clinical or clinical data in connection with the clinical trials, or the FDA requires us to revise significantly our planned protocols for our planned clinical trials.

At December 31, 2008, our equity investment in RXi of 6,268,881 common stock had an approximate fair value of $36.0 million, based on the closing price of RXi common stock (NASDAQ: “RXII”) on that date. Sale of a portion or all of this investment would generate additional cash. We also intend to pursue other sources of capital, although we do not currently have commitments from any third parties to provide us with capital. Our ability to obtain future financings through joint ventures, product licensing arrangements, equity financings, gifts, and grants or otherwise is subject to market conditions and out ability to identify parties that are willing and

able to enter into such arrangements on terms that are satisfactory to us. Depending upon the outcome of our fundraising efforts, the accompanying financial information may not necessarily be indicative of future operating results or future financial condition.

We expect to incur significant losses for the foreseeable future and there can be no assurance that we will become profitable. Even if we become profitable, we may not be able to sustain that profitability.

Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements that have a material current effect or that are reasonably likely to have a material future effect on our financial condition, changes in financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources.

Contractual Obligations

We sometimes acquire assets still in development and enter into research and development arrangements with third parties that often require milestone and royalty payments to the third party contingent upon the occurrence of certain future events linked to the success of the asset in development. Milestone payments may be required, contingent upon the successful achievement of an important point in the development life-cycle of the pharmaceutical product (e.g., approval of the product for marketing by a regulatory agency). If required by the arrangement, we may have to make royalty payments based upon a percentage of the sales of the pharmaceutical product in the event that regulatory approval for marketing is obtained. Because of the contingent nature of these payments, they are not included in the table of contractual obligations.

These arrangements may be material individually, and in the unlikely event that milestones for multiple products covered by these arrangements were reached in the same period, the aggregate charge to expense could be material to the results of operations in any one period. In addition, these arrangements often give us the discretion to unilaterally terminate development of the product, which would allow us to avoid making the contingent payments; however, we are unlikely to cease development if the compound successfully achieves clinical testing objectives. We also note that, from a business perspective, we view these payments as positive because they signify that the product is successfully moving through development and is now generating or is more likely to generate cash flows from sales of products.

CytRx's current contractual obligations that will require future cash payments are as follows:

	Operating Leases (1)	Non-Cancelable Employment Agreements (2)	Subtotal	Research and Development (3)	Total
2009	$ 521	$ 1,610	$ 2,131	$ 1,758	$ 3,889
2010	376	—	376	49	425
2011	253	—	253	49	302
2012	124	—	124	149	273
2013 and thereafter	—	—	—	532	532
Total	$ 1,274	$ 1,610	$ 2,884	$ 2,537	$ 5,421

(1) Operating leases are primarily facility lease related obligations, as well as equipment and software lease obligations with third party vendors.

(2) Employment agreements include management contracts, which have been revised from time to time, provide for minimum salary levels, adjusted annually at the discretion of the Company's Compensation Committee, as well as for minimum bonuses that are payable.

(3) Research and development obligations relate primarily to clinical trials. Most of these purchase obligations are cancelable.

Net Operating Loss Carryforwards

At December 31, 2008, we had United States federal and state net operating loss carryforwards of $91.4 million and $56.9 million, respectively, available to offset against future taxable income, which expire in 2011 through 2028. As a result of a change in-control that occurred in our shareholder base in July 2002, approximately $47.5 million in federal net operating loss carryforwards

became limited in their availability to $0.3 million annually. Management currently believes that the remaining $43.9 million in federal net operating loss carryforwards, and the $56.3 million in state net operating loss carryforwards, are unrestricted. However, we are reviewing our recent equity transactions to determine if they may have resulted in any further restrictions on our net operating loss carryforwards. Additionally, due to the change-in-control, approximately $6.3 million of research and development tax credits will not be available for utilization and were written off. As of December 31, 2008, we also had research and development and alternative minimum tax credits for federal and state purposes of approximately $3.9 million and $3.1 million, respectively, available for offset against future income taxes, which expire in 2023 through 2028. Based on an assessment of all available evidence including, but not limited to, our limited operating history in our core business and lack of profitability, uncertainties of the commercial viability of our technology, the impact of government regulation and healthcare reform initiatives, and other risks normally associated with biotechnology companies, we have concluded that it is more likely than not that these net operating loss carryforwards and credits will not be realized and, as a result, a 100% deferred income tax valuation allowance has been recorded against these assets.

Results of Operations

We recorded net losses of $27.0 million, $21.9 million and $16.8 million during the years ended December 31, 2008, 2007 and 2006, respectively.

During fiscal 2008, we recognized $6.2 million in service revenues relating to our $24.3 million sale to the ALSCRT of a one-percent royalty interest in the worldwide sales of arimoclomol in August 2006. This compares to $7.2 million and $1.9 million in service revenues in the years ended December 31, 2007 and 2006, respectively. During 2008, 2007 and 2006, we earned an immaterial amount of license fees and grant revenue. All future licensing fees under our current licensing agreements are dependent upon successful development milestones being achieved by the licensor. During fiscal 2009, we are not anticipating the receipt of any significant service or licensing fees, although we estimate that we will recognize an additional $1.8 million in service revenues from that arimoclomol royalty transaction. We will continue to recognize the balance of the deferred revenue recorded from the royalty transaction with the ALS Charitable Remainder Trust based on actual research and development costs incurred over the development period of our arimoclomol research.

Research and Development

	Years Ended December 31,		
	2008	2007	2006
	(In thousands)		
Research and development expense	$ 9,913	$ 14,454	$ 8,858
Non-cash research and development expense	(224)	3,778	674
Employee stock option expense	777	592	249
	$ 10,466	$ 18,824	$ 9,781

Research expenses are expenses incurred by us in the discovery of new information that will assist us in the creation and the development of new drugs or treatments. Development expenses are expenses incurred by us in our efforts to commercialize the findings generated through our research efforts.

Research and development expenses incurred during 2008, 2007 and 2006 relate to our various development programs. In 2008, only the months of January and February included RXi-related expenses (totaling approximately $0.6 million), which accounts for the significant decrease in research and development expenses, and non-cash research and development expenses. In the 2008 year, our development costs associated with our Phase II clinical program for arimoclomol in ALS were $3.5 million, the costs of our program for arimoclomol in stroke recovery and

related studies were $0.7 million, the costs of our program for iroxanadine for diabetic complications were $1.4 million, the costs of operating our development programs were $0.9 million, and the cost of operations in our research laboratory were $2.1 million. In September, 2008, CytRx acquired clinical-stage oncology product candidates including tamibarotene from Innovive Pharmaceuticals, Inc. and our development costs associated with the Innovive compounds were $1.5 million. None of our research and development costs have ever been capitalized.

As compensation to scientific advisory board ("SAB") members and consultants, and in connection with the acquisition of technology, we and RXi sometimes issue shares of common stock, stock options and warrants to purchase shares of common stock. For financial statement purposes, we value these shares of common stock, stock options, and warrants at the fair value of the common stock, stock options or warrants granted, or the services received, whichever is more reliably measurable. We recorded a recovery of $0.2 million resulting from the application of marked to market accounting of the value of the non-employee option grants in 2008, and charges of $3.8 million and $0.7 million in this regard during 2007 and 2006, respectively. Included in the

research and development charges for 2007 were $2.3 million of expense related to RXi's issuance of 462,112 shares of common stock to UMMS for certain license agreement rights and a new invention disclosure agreement and $1.0 million for non-qualifying stock options to SAB members of RXi. In 2008, we recorded $0.8 million of employee stock option expense as compared to $0.6 million in 2007 and $0.2 million in 2006.

We also incurred an expenditure of $8.0 million in 2008 related to the acquisition of Innovive's in-process research and development, which has been reflected as a separate line item on our Consolidated Statements of Operations.

In 2008, we expect our research and development expenses to increase as a result of our clinical programs with tamibarotene and INNO-206.

General and administrative expenses

	Years Ended December 31,		
	2008	2007	2006
		(In thousands)	
General and administrative expenses	$ 9,134	$ 12,666	$ 8,622
Stock, stock option and warrant expenses to non-employees and consultants	189	2	60
Employee stock option expense	1,610	2,154	975
	$ 10,933	$ 14,822	$ 9,657

General and administrative expenses include all administrative salaries and general corporate expenses, including legal expenses associated with the prosecution of our intellectual property. Our general and administrative expenses, excluding common stock, stock options and warrants issued, and excluding depreciation expense, were $9.1 million in 2008, $12.7 million in 2007 and $8.6 million in 2006. General and administrative expenses in 2007 included $4.6 million of RXi-related expenses, whereas, in 2008, the RXi-related expenses for January and February totaled $1.3 million. The general and administrative expenses in 2008, excluding RXi-related expenses, increased by $100,000 as compared to 2007. This increase is a net result of an increase in legal and professional fees of approximately $320,000, primarily due to costs associated with the acquisition of Innovive, offset by a reduction of $300,000 in legal and accounting fees as compared to 2007, primarily due to the costs associated with the spin-off of RXi in 2007.

From time to time, we issue shares of our common stock or warrants or options to purchase shares of our common stock to consultants and other service providers in exchange for services. For financial statement purposes, we value these shares of common stock, stock options, and warrants at the fair value of the common stock, stock options or warrants granted, or the services received, whichever we can measure more reliably.

Since our adoption of SFAS 123(R) in 2006, we recorded employee stock option expense of $1.6 million in fiscal 2008, $2.2 million in fiscal 2007 and $1.0 million in 2006. The increase in 2007 over both 2008 and 2006 primarily related to stock options granted by RXi to recruit and retain directors, officers and additional employees.

Depreciation and amortization

Depreciation and amortization expenses were $625,000, $272,000 and $228,000 in 2008, 2007 and 2006, respectively. The depreciation expense reflects the depreciation of our fixed assets and the amortization expenses related to our molecular library.

Other Income

In March 2008, we recognized a non-cash gain of $227,000 on the bonus paid to certain employees and directors in RXi shares. In June 2007, we recognized $1.5 million of income arising from a fee received pursuant to a change-in-control provision included in the purchase agreement for our 1998 sale of its animal pharmaceutical unit.

Interest income

Interest income was $1.2 million in 2008, $2.7 million in 2007 and $1.0 million in 2006. The variances between years are attributable primarily to the amount of funds available for investment each year and, to a lesser extent, changes in prevailing market rates.

Minority interest in losses of subsidiary

We offset $88,000 of minority interest in losses of RXi against our net loss for the months of January and February 2008. For the remainder of the year, RXi's gain and losses were accounted for under the equity method, because we owned less than 50% of RXi following our March 11, 2008 distribution to our stockholders of RXi shares. We offset $449,000 of minority interest in losses of RXi against our net loss for the year ended December 31, 2007.

Recent Accounting Pronouncements

In September 2006, the FASB issued Statement of Financial Accounting Standards ("SFAS") No. 157, Fair Value Measurements ("SFAS No. 157"). SFAS No. 157 defines fair value, establishes a framework for measuring fair value in accordance with generally accepted accounting principles, and expands disclosures about fair value measurements. SFAS No. 157 does not expand the use of fair value in any new circumstances. In February 2008, the FASB issued Staff Position No. FAS 157-1, which amended SFAS No. 157 to exclude SFAS No. 13, Accounting for Leases, and other accounting pronouncements that address fair value measurements for purposes of lease classification or measurement under Statement 13. However, this scope exception does not apply to assets acquired and liabilities assumed in a business combination. Also in February 2008, the FASB issued Staff Position No. FAS 157-2, which delayed the effective date of SFAS No. 157 for non-financial assets and liabilities, except those items recognized at fair value on an annual or more frequently recurring basis to fiscal years beginning after November 15, 2008 and interim periods within those fiscal years. In October, 2008 the FASB issued Staff Position No. FAS 157-3 which clarified the application of SFAS No. 157 in a market that is not active. We adopted SFAS No. 157 with no material impact on our consolidated financial statements.

In February 2007, the FASB issued SFAS No. 159, Fair Value Option for Financial Assets and Financial Liabilities ("SFAS No. 159"). SFAS No. 159 permits entities to choose to measure many financial assets and financial liabilities at fair value. Unrealized gains and losses on items for which the fair value option has been elected are reported in earnings. SFAS No. 159 is effective for fiscal years beginning after November 15, 2007. The adoption of SFAS No. 159 will not have a significant impact on our consolidated financial statements.

In June 2007, the FASB ratified the consensus on Emerging Issues Task Force ("EITF") Issue No. 06-11, Accounting for Income Tax Benefits of Dividends on Share-Based Payment Awards ("EITF 06-11"). EITF 06-11 requires companies to recognize the income tax benefit realized from dividends or dividend equivalents that are charged to retained earnings and paid to employees for non-vested equity-classified employee share-based payment awards as an increase to additional paid-in capital. EITF 06-11 is effective for fiscal years beginning after September 15, 2007. The adoption did not have a significant impact on our consolidated financial statements.

In June 2007, the FASB ratified the consensus reached on EITF Issue No. 07-3, Accounting for Nonrefundable Advance Payments for Goods or Services Received for Use in Future Research and Development Activities ("EITF 07-3"), which requires that nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities be deferred and amortized over the period that the goods are delivered or the related services are performed, subject to an assessment of recoverability. EITF 07-3 will be effective for fiscal years beginning after December 15, 2007. The adoption of EITF 07-3 did not have an impact on our consolidated financial statements.

In December 2007, the FASB issued SFAS No. 160, Noncontrolling Interests in Consolidated Financial Statements ("SFAS No. 160") and a revision to SFAS No. 141, Business Combinations ("SFAS No. 141R"). SFAS No. 160 modifies the accounting for noncontrolling interest in a subsidiary and the deconsolidation of a subsidiary. SFAS No. 141R establishes the measurements in a business combination of the identifiable assets acquired, the liabilities assumed and any noncontrolling interest in the acquiree. Both of these related statements are effective for fiscal years beginning

after December 15, 2008. We have not yet determined the impact that the recent adoption of these two statements may have on our consolidated financial statements.

In December 2007, the SEC issued Staff Accounting Bulletin 110 (“SAB 110”), which expresses the views of the Staff regarding use of a “simplified” method, as discussed in SAB 107, in developing an estimate of expected term of “plain vanilla” share options in accordance with Statement of Financial Accounting Standards No. 123. SAB 110 will allow, under certain circumstances, the use of the simplified method beyond December 31, 2007 when a Company is unable to rely on the historical exercise data. The adoption of SAB 110 did not have a material impact on our financial statements.

In March 2008, the FASB issued Statement of Financial Accounting Standards No. 161, Disclosures about Derivative Instruments and Hedging Activities (“SFAS No. 161”). The new standard amends Statement of Financial Accounting Standards No.

133, Accounting for Derivative Instruments and Hedging Activities ("SFAS 133"), and seeks to enhance disclosure about how and why a company uses derivatives; how derivative instruments are accounted for under SFAS 133 (and the interpretations of that standard); and how derivatives affect a company's financial position, financial performance and cash flows. SFAS 161 will be effective for financial statements issued for fiscal years and interim periods beginning after November 15, 2008. Early application of the standard is encouraged, as well as comparative disclosures for earlier periods at initial adoption. The Company does not believe adoption of this standard will have a material effect on its financial statements.

In April 2008, the FASB issued Staff Position No. FAS 142-3, Determination of the Useful Life of Intangible Assets, which amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, "Goodwill and Other Intangible Assets." The Position will be effective for fiscal years beginning after December 15, 2008 and will only apply prospectively to intangible assets acquired after the effective date. Early adoption is not permitted. The Company does not believe adoption of this standard will have a material effect on its financial statements.

In May 2008, the FASB issued Staff Position No. Accounting Principles Board 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement) ("FSP No. APB 14-1"). FSP No. APB 14-1 requires that the liability and equity components of convertible debt instruments that may be settled in cash upon conversion (including partial cash settlement) be separately accounted for in a manner that reflects an issuer's nonconvertible debt borrowing rate. FSP No. APB 14-1 will be effective for us as of January 1, 2009. The Company does not believe adoption of this principle will have a material effect on its financial statements.

In May 2008, the FASB issued Statement of Financial Accounting Standards No. 162, The Hierarchy of Generally Accepted Accounting Principles, ("SFAS 162"), which imposes the GAAP hierarchy on the reporting entities, not their auditors, based on the long-standing mandate that the entity's management, not their auditors, is responsible for selecting and applying the appropriate GAAP to their financial statements. The auditors' responsibility is to comply with GAAS as a basis for issuing their audit opinion. In issuing SFAS 162, the FASB does not expect a change in current practice and The Company does not believe adoption of this standard will have any impact on its financial statements.

In August 2008, the U.S. Securities and Exchange Commission, or SEC, announced that it will issue for comment a proposed roadmap regarding the potential use by U.S. issuers of financial statements prepared in accordance with International Financial Reporting Standards, or IFRS. IFRS is a comprehensive series of accounting standards published by the International Accounting Standards Board, or IASB. Under the proposed roadmap, the Company could be required in fiscal year 2014 to prepare financial statements in accordance with IFRS and the SEC will make a determination in 2011 regarding mandatory adoption of IFRS. The Company is currently assessing the impact that this potential change would have on our consolidated financial statements and will continue to monitor the development of the potential implementation of IFRS.

Off-Balance Sheet Arrangements

We have not entered into off-balance sheet financing arrangements, other than operating leases.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Our exposure to market risk is limited primarily to interest income sensitivity, which is affected by changes in the general level of U.S. interest rates, particularly because a significant portion of our investments are in short-term debt securities issued by the U.S. government and institutional money market funds. The primary objective of our investment activities is to preserve principal. Due to the nature of our short-term investments, we believe that we are

not subject to any material market risk exposure. We do not have any derivative financial instruments or foreign currency instruments. If interest rates had varied by 10% in the year ended December 31, 2008, it would not have had a material effect on our results of operations or cash flows for that period.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our consolidated financial statements and supplemental schedule and notes thereto as of December 31, 2008 and 2007, and for each of the three years in the period then ended December 31, 2008, 2007 and 2006, together with the independent registered public accounting firms' reports thereon, are set forth on pages F-1 to F-25 of this Annual Report.

Item 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that the information disclosed in the reports we file with the Securities and Exchange Commission under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, performed an evaluation of the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Securities Exchange Act Rule 13a-15(e)) as of the end of the period covered by this Annual Report. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2008 to provide reasonable assurance that information required to be disclosed by us in reports that we file or submit under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms.

There was no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2008 that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the consolidated financial statements and related disclosures in accordance with generally accepted accounting principles. Our 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 of our company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of the consolidated financial statements and related disclosures in accordance with generally accepted accounting principles and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on our consolidated financial statements and related disclosures.

Because of 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 policies and procedures may deteriorate.

We 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 ("COSO") in Internal Control-Integrated Framework.

Based upon management's assessment using the criteria contained in COSO, our management has concluded that, as of December 31, 2008, our internal control over financial reporting was effective.

We continuously seek to improve and strengthen our control processes to ensure that all of our controls and procedures are adequate and effective. Any failure to implement and maintain improvements in the controls over our financial reporting could cause us to fail to meet our reporting obligations under the Securities and Exchange Commission's rules and regulations. Any failure to improve our internal controls to address the weaknesses we have identified could also cause investors to lose confidence in our reported financial information, which could have a negative impact on the trading price of our common stock.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The following table sets forth information concerning our directors and executive officers:

Name	Age	Class of Director(1)	Position
Max Link, Ph.D.	68	III	Director, Chairman of the Board(2)(3)(4)
Steven A. Kriegsman	67	II	Director, Chief Executive Officer, President
Marvin R. Selter	81	II	Director, Vice Chairman of the Board(2)(3)(4)
Louis Ignarro, Ph.D.	67	I	Director
Joseph Rubinfeld, Ph.D.	76	I	Director
Richard L. Wennekamp	66	II	Director(2)(3)(4)
John Y. Caloz	57	—	Chief Financial Officer, Treasurer
Jack R. Barber, Ph.D.	53	—	Chief Scientific Officer
Shi Chung Ng, Ph.D.	54	—	Senior Vice President — Research and Development
Scott Wieland	49	—	Senior Vice President — Drug Development
Benjamin S. Levin	33	—	General Counsel, Vice President — Legal Affairs and Corporate Secretary

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(1) Our Class III director serves until the 2009 annual meeting of stockholders, our Class I directors serve until the 2010 annual meeting of stockholders, and our Class II directors serve until the 2011 annual meeting of stockholders.

(2) Members of our Audit Committee. Mr. Selter is the Chairman of the Committee.

(3) Members of our Nominating and Corporate Governance Committee. Mr. Wennekamp is Chairman of the Committee.

(4) Members of our Compensation Committee. Mr. Wennekamp is Chairman of the committee.

Max Link, Ph.D has been a director since 1996. Dr. Link has been retired from business since 2003. From March 2002 until its acquisition by Zimmer Holdings, Dr. Link served as Chairman and CEO of Centerpulse, Ltd. From May 1993 to June 1994, Dr. Link served as the Chief Executive Officer of Corange Ltd. (the holding company for Boehringer Mannheim Therapeutics, Boehringer Mannheim Diagnostics and DePuy International). From 1992 to 1993, Dr. Link was Chairman of Sandoz Pharma, Ltd. From 1987 to 1992, Dr. Link was the Chief Executive Officer of Sandoz Pharma and a member of the Executive Board of Sandoz, Ltd., Basel. Prior to 1987, Dr. Link served in various capacities with the U.S. operations of Sandoz, including President and Chief Executive Officer. Dr. Link also serves as a director of Alexion Pharmaceuticals, Inc., Celsion Corporation and Discovery Laboratories, Inc.

Steven A. Kriegsman has been a director and our President and Chief Executive Officer since July 2002. He also serves as a director of our 45% owned affiliate, RXi Pharmaceuticals Corporation. He also serves as a director of Hythiam Corporation. He previously served as Director and Chairman of Global Genomics from June 2000. Mr. Kriegsman is an inactive Chairman and Founder of Kriegsman Capital Group LLC, a financial advisory firm specializing in the development of alternative sources of equity capital for emerging growth companies in the healthcare industry. He has advised such companies as SuperGen Inc., Closure Medical Corporation, Novoste Corporation, Miravant Medical Technologies, and Maxim Pharmaceuticals. Mr. Kriegsman has a BS degree with

honors from New York University in Accounting and completed the Executive Program in Mergers and Acquisitions at New York University, The Management Institute. Mr. Kriegsman was formerly a Certified Public Accountant with KPMG in New York City. He serves as a Director and is the former Chairman of the Audit Committee of Bradley Pharmaceuticals, Inc. In February 2006, Mr. Kriegsman received the Corporate Philanthropist of the Year Award from the Greater Los Angeles Chapter of the ALS Association and in October 2006, he received the Lou Gehrig Memorial Corporate Award from the Muscular Dystrophy Association. Mr. Kriegsman has been active in various charitable organizations including the Biotechnology Industry Organization, the ALS Association, the Los Angeles Venture Association, the Southern California Biomedical Council, and the Palisades-Malibu YMCA.

Marvin R. Selter has been a director since October 2003. He has been President and Chief Executive Officer of CMS, Inc. since he founded that firm in 1968. CMS, Inc. is a national management consulting firm. In 1972, Mr. Selter originated the concept of employee leasing. He served as a member of the Business Tax Advisory Committee—City of Los Angeles, Small Business Board—State of California and the Small Business Advisory Commission—State of California. Mr. Selter also serves on the Valley Economic Development Center as past Chairman and Audit Committee Chairman, the Board of Valley Industry and Commerce Association as

past Chairman, the Advisory Board of the San Fernando Economic Alliance and the California State University—Northridge as Past Chairman of the Economic Research Center and President of the Olive View UCLA Medical Center Foundation. He has served, and continues to serve, as a member of boards of directors of various hospitals, universities, private medical companies and other organizations. Mr. Selter attended Rutgers—The State University, majoring in Accounting and Business Administration. He was an LPA having served as Controller, Financial Vice President and Treasurer at distribution, manufacturing and service firms. He has lectured extensively on finance, corporate structure and budgeting for the American Management Association and other professional teaching associations.

Louis Ignarro, Ph.D. has been a director since July 2002. He previously served as a director of Global Genomics since November 20, 2000. Dr. Ignarro serves as the Jerome J. Belzer, M.D. Distinguished Professor of Pharmacology in the Department of Molecular and Medical Pharmacology at the UCLA School of Medicine. Dr. Ignarro has been at the UCLA School of Medicine since 1985 as a professor, acting chairman and assistant dean. Dr. Ignarro received the Nobel Prize for Medicine in 1998. Dr. Ignarro received a B.S. in pharmacy from Columbia University and his Ph.D. in Pharmacology from the University of Minnesota.

Joseph Rubinfeld, Ph.D. has been a director since July 2002, and has served as our Chief Scientific Advisor since December 2008 pursuant to a consulting agreement with Dr. Rubinfeld described in the "Certain Relationships and Related Transactions" section of the Annual Report. He co-founded SuperGen, Inc. in 1991 and has served as its Chief Executive Officer and President and as a director since its inception until December 31, 2003. He resigned as Chairman Emeritus of SuperGen, Inc. on February 8, 2005. Dr. Rubinfeld was also Chief Scientific Officer of SuperGen from 1991 until September 1997. Dr. Rubinfeld was one of the four initial founders of Amgen, Inc. in 1980 and served as a Vice President and its Chief of Operations until 1983. From 1987 until 1990, Dr. Rubinfeld was a Senior Director at Cetus Corporation and from 1968 to 1980, Dr. Rubinfeld was employed at Bristol-Myers Company, International Division in a variety of positions. Dr. Rubinfeld received a B.S. degree in chemistry from C.C.N.Y. and an M.A. and Ph.D. in chemistry from Columbia University.

Richard L. Wennekamp has been a director since October 2003. He retired from Community Bank in June 2008 where he was the Senior Vice President-Credit Administration since October 2002. From September 1998 to July 2002, Mr. Wennekamp was an executive officer of Bank of America Corporation, holding various positions, including Managing Director-Credit Product Executive for the last four years of his 22-year term with the bank. From 1977 through 1980, Mr. Wennekamp was a Special Assistant to former President of the U.S., Gerald R. Ford, and the Executive Director of the Ford Transition Office. Prior thereto, he served as Staff Assistant to the President of the U.S. for one year, and as the Special Assistant to the Assistant Secretary of Commerce of the U.S.

John Y. Caloz joined CytRx as our Chief Accounting Officer in October, 2007. In January of 2009 Mr. Caloz was named Chief Financial Officer. He has a history of providing senior financial leadership in the life sciences sector, as Chief Financial Officer of Occulogix, Inc, a NASDAQ listed, a medical therapy company. Prior to that, Mr. Caloz served as Chief Financial Officer of IRIS International Inc., a Chatsworth, CA based medical device manufacturer. He served as Chief Financial Officer of San Francisco-based Synarc, Inc., a medial imaging company, and from 1993 to 1999 he was Senior Vice President, Finance and Chief Financial Officer of Phoenix International Life Sciences Inc. of Montreal, Canada, which was acquired by MDS Inc. in 1999. Mr. Caloz was a partner at Rooney, Greig, Whitrod, Filion & Associates of Saint Laurent, Quebec, Canada, a firm of Chartered Accountants specializing in research and development and high tech companies, from 1983 to 1993. Mr. Caloz, a Chartered Accountant, holds a degree in Accounting from York University, Toronto, Canada,

Jack R. Barber, Ph.D. has been our Senior Vice President - Drug Development since July 2004, and was named Chief Scientific Officer in February 2007. He previously served as Chief Technical Officer and Vice President of Research and Development at Immusol, a biopharmaceutical company based in San Diego, California, since 1994. Prior to that,

Dr. Barber spent seven years in various management positions at Viagene, most recently serving as Associate Director of Oncology. Dr. Barber received both his B.S. and Ph.D. in Biochemistry from the University of California, Los Angeles. He also carried out his post-doctoral fellowship at the Salk Institute for Biological Studies in La Jolla, California.

Shi Chung Ng, Ph.D. joined CytRx as our Senior Vice President, Research and Development in April 2008. Previously, he served as Vice President of Molecular Oncology at Ligand Pharmaceuticals, directing the cancer discovery efforts as well as genomics biomarker studies for Targretin. Prior to that, he served as Vice President of Drug Discovery Biology and Preclinical Development of ArQule, Inc., leading novel cell cycle checkpoint activation drug discovery and development efforts for ARQ-197. From 1993-2004, Dr. Ng co-led efforts in the discovery and development of multiple oncology drug candidates at Abbott, including a Bcl-2 inhibitor, farnesyl transferase inhibitors, and novel anti-mitotics as a founding member of Abbott oncology, a Senior Group Leader and a Volwiler Associate Fellow. Prior to his tenure at Abbott, Dr. Ng worked at Pfizer, Bristol-Myers Squibb and Harvard Medical School. He was adjunct Assistant Professor at the Chicago Medical School, and adjunct Faculty Member at Northwestern University. He had

also served as a visiting Professor at Rutgers University, a visiting Research Staff Member at Princeton University, and an Instructor in Medicine at Harvard Medical School. Dr. Ng received a Ph.D. in Biochemistry from Purdue University, and a Postdoctoral Fellowship from Howard Hughes Medical Institute and Harvard Medical School. Dr. Ng has published over 200 papers, abstracts and patent applications and he was the recipient of multiple scholarships and awards.

Scott Wieland, Ph.D, joined CytRx in 2005 as the Vice President – Clinical and Regulatory Affairs and was promoted to the position of Senior Vice President – Drug Development in December 2008. Prior to that, he served in senior level positions in the areas of Drug Development, Clinical and Regulatory Affairs at various biotech firms. He spent five years at NeoTherapeutics, Inc. serving as the Director of Product Development and was later promoted to Vice President of Product Development. From 1990 to 1997, he served as Director of Regulatory Affairs at CoCensys, Inc. Dr. Wieland has a Ph.D. in Biopsychology and an M.A. in Psychology from the University of Arizona. He has an MBA from Webster University. Dr. Wieland received his B.S. in Physiological Psychology from the University of California, Santa Barbara.

Benjamin S. Levin has been our General Counsel, Vice President — Legal Affairs and Corporate Secretary since July 2004. From November 1999 to June 2004, Mr. Levin was an associate in the transactions department of the Los Angeles office of O'Melveny & Myers LLP. Mr. Levin received his S.B. in Economics from the Massachusetts Institute of Technology, and a J.D. from Stanford Law School.

Audit Committee

Our board of directors has a standing Audit Committee currently composed of Messrs. Selter, Link, and Wennekamp. Dr. Rubinfeld served on our Audit Committee until October 30, 2008. Our board of directors has determined that Mr. Selter, one of the independent directors serving on our Audit Committee, is an "audit committee financial expert" as defined by the SEC's rules. Our board of directors has determined that Messrs. Link, Selter and Wennekamp are "independent" under the current independence standards of both The NASDAQ Capital Market and the SEC.

Section 16(a) Beneficial Ownership Reporting Compliance

Our executive officers and directors and any person who owns more than 10% of our outstanding shares of common stock are required under Section 16(a) of the Securities Exchange Act to file with the SEC initial reports of ownership and reports of changes in ownership of our common stock and to furnish us with copies of those reports. Based solely on our review of copies of reports we have received and written representations from certain reporting persons, we believe that our directors and executive officers and greater than 10% shareholders for 2007 complied with all applicable Section 16(a) filing requirements.

Code of Ethics

We have adopted a Code of Ethics applicable to all employees, including our principal executive officer, principal financial officer, and principal accounting officer or controller, a copy of which is available on our website at www.cytrx.com. We will furnish, without charge, a copy of our Code of Ethics upon request. Such requests should be directed to Attention: Corporate Secretary, 11726 San Vicente Boulevard, Suite 650, Los Angeles, California, or by telephone at 310-826-5648.

Item 11. EXECUTIVE COMPENSATION

Compensation Discussion and Analysis

Overview of Executive Compensation Program

The Compensation Committee of our board of directors has responsibility for establishing, implementing and monitoring our executive compensation program philosophy and practices. The Compensation Committee seeks to ensure that the total compensation paid to our named executive officers is fair, reasonable and competitive. Generally, the types of compensation and benefits provided to the named executive officers are similar to those provided to our other officers.

Throughout this Annual Report, the individuals included in the Summary Compensation Table on page 53 are referred to as the “named executive officers.”

Compensation Philosophy and Objectives

The components of our executive compensation consist of salary, annual cash bonuses awarded based on the Compensation Committee's subjective assessment of each individual executive's job performance, including evaluations of, during the past year, stock option grants to provide executives with longer-term incentives, and occasional special compensation awards (either cash, stock or stock options) to reward extraordinary efforts or results.

The Compensation Committee believes that an effective executive compensation program should provide base annual compensation that is reasonable in relation to individual executive's job responsibilities and reward the achievement of both annual and long-term strategic goals of our company. The Compensation Committee uses annual and other periodic cash bonuses to reward an officer's achievement of specific goals, including goals related to the development of the product's drug candidates and management of working capital, and employee stock options as a retention tool and as a means to align the executive's long-term interests with those of our stockholders, with the ultimate objective of affording our executives an appropriate incentive to improve stockholder value. The Compensation Committee evaluates both performance and compensation to maintain our company's ability to attract and retain excellent employees in key positions and to assure that compensation provided to key employees remains competitive relative to the compensation paid to similarly situated executives of comparable companies. To that end, the Compensation Committee believes executive compensation packages provided by us to our named executive officers should include both cash compensation and stock options.

Because of the size of our company, the small number of executive officers in our company, and our company's financial priorities, the Compensation Committee has not implemented any pension benefits, deferred compensation plans, or other similar plans for our named executive officers.

As a biopharmaceutical company engaged in developing potential products that, to date, have not generated significant revenues and are not expected to generate significant revenues or profits for several years, the Compensation Committee also takes the company's financial and working capital condition into account in its compensation decisions. Accordingly, the Compensation Committee recently has weighted bonuses more heavily with stock options rather than cash. The Compensation Committee may periodically reassess the proper weighting of equity and cash compensation in light of the company's working capital situation from time to time.

Role of Executive Officers in Compensation Decisions

The Compensation Committee makes all compensation decisions for the named executive officers and approves recommendations made by our President and Chief Executive Officer regarding equity awards to our other officers. Decisions regarding the non-equity compensation of our other officers are made by our President and Chief Executive Officer.

The Compensation Committee and the President and Chief Executive Officer annually review the performance of each named executive officer (other than the President and Chief Executive Officer, whose performance is reviewed only by the Compensation Committee). The conclusions reached and recommendations based on these reviews, including with respect to salary adjustments and annual award amounts, are presented to the Compensation Committee. The Compensation Committee can exercise its discretion in modifying or declining any recommended adjustments or awards to executives.

Setting Executive Compensation

Based on the foregoing objectives, the Compensation Committee has structured the company's annual cash and incentive-based cash and non-cash executive compensation to seek to motivate our named executives to achieve the

company's business goals, including goals related to the development of the our drug candidates and management of working capital, to reward the executives for achieving such goals, and to retain the executives. In doing so, the Compensation Committee historically has not employed outside compensation consultants. However, during 2008, the Compensation Committee obtained two third-party industry compensation surveys and used them in its compensation deliberations regarding cash and equity compensation for our executive officers. The Compensation Committee utilized this data to set compensation for our executive officers at levels targeted at or around the third quartile of compensation amounts provided to executives at comparable companies considering each individual's individual experience level related to their position with us. There is no pre-established policy or target for the allocation between either cash and non-cash incentive compensation.

2008 Executive Compensation Components

For 2008, the principal components of compensation for the named executive officers were:

- base salary;
- annual and special bonuses; and
- equity incentive compensation.

Base Salary

The Company provides named executive officers and other employees with base salary to compensate them for services rendered during the year. Base salary ranges for the named executive officers are determined for each named executive officer based on his position and responsibility.

During its review of base salaries for executives, the Compensation Committee primarily considers:

- the negotiated terms of each executive's employment agreement, if any;
- an internal review of the executive's compensation, both individually and relative to other named executive officers;
- each executive's individual performance; and
- base salaries paid by comparable companies.

Salary levels are typically considered annually as part of the company's performance review process, as well as upon a change in job responsibility. Merit-based increases to salaries are based on the company's available resources and the Compensation Committee's assessment of the individual's performance. Both assessments are based upon written evaluations of such criteria as job knowledge, communication, problem solving, initiative, goal-setting, and expense management. As a result of the Company's working capital position at the end of 2008, the Compensation Committee and the company's named executive officers agreed that base salaries would remain unchanged in 2009, except in circumstances where named executive officers assumed new positions with the company. As described in the "Employment Agreements and Potential Payment Upon Termination or Change in Control" section of this Annual Report, we have entered into new employment agreements with each of the named executive officers (other than Mr. Kriegsman) that continue their 2008 base salaries in effect until the expiration of their employment agreements on December 31, 2009.

Annual and Special Bonuses

The Compensation Committee has not established an incentive compensation program with fixed performance targets. Because we do not generate significant revenues and have not commercially released any products, the Compensation Committee bases its discretionary compensation awards on the achievement of product development targets and milestones, efforts related to extraordinary transactions, effective fund-raising efforts, and effective management of personnel and capital resources, among other criteria. During 2008, the Compensation Committee granted Mr. Kriegsman an annual cash bonus of $150,000, the minimum bonus guaranteed to Mr. Kriegsman under his employment agreement, and granted cash bonuses to the other named executive officers ranging from $38,250 to $55,000, each in conjunction with the end of their employment contract years, principally based on their efforts in helping us advance the development of our products, complete the partial spin-off of RXi, and acquire Innovive and

achieve other corporate goals.

On March 11, 2008, the record date for our recent distribution of RXi shares to our stockholders, we awarded approximately 27,700 shares of RXi to our directors, officers and other employees, including the named executive officers, in connection with our separation from RXi to compensate those directors, officers and other employees for services performed in connection with the separation. Each of our directors, officers and other employees who held stock options to purchase our common stock received that number of RXi shares that such individual would have received in the separation, assuming such individual had, on the record date for the separation, exercised, in full, on a "net-exercise" basis, all such stock options to the extent then exercisable.

Equity Incentive Compensation

As indicated above, the Compensation Committee also aims to encourage the company's executive officers to focus on long-term company performance by allocating to them stock options that vest over a period of several years. In 2008, the Compensation Committee granted to Mr. Kriegsman nonqualified options to purchase 450,000 shares of our common stock at a price of $1.21 per share and 300,000 shares of our common stock at a price of $0.37 per share, which equaled the closing market price on the respective dates of grant. The option vests monthly over three years, provided that Mr. Kriegsman continues in our employ through such monthly vesting periods. In addition, in connection with the annual review of our other named executive officers, the Compensation Committee also granted stock options to those named executive officers. All of these other stock options had an exercise price equal to the closing market price on the date of grant, and also vest monthly over three years, provided that such executives remain in our employ through such monthly vesting periods.

Retirement Plans, Perquisites and Other Personal Benefits

We have adopted a tax-qualified employee savings and retirement plan, the 401(k) Plan, for eligible U.S. employees, including our named executive officers. Eligible employees may elect to defer a percentage of their eligible compensation in the 401(k) Plan, subject to the statutorily prescribed annual limit. We may make matching contributions on behalf of all participants in the 401(k) Plan in an amount determined by our board of directors. We did not make any matching contribution to the 401(k) Plan for 2008. Matching and profit-sharing contributions, if any, are subject to a vesting schedule; all other contributions are at all times fully vested. We intend the 401(k) Plan, and the accompanying trust, to qualify under Sections 401(k) and 501 of the Internal Revenue Code so that contributions by employees to the 401(k) Plan, and income earned (if any) on plan contributions, are not taxable to employees until withdrawn from the 401(k) Plan, and so that we will be able to deduct our contributions, if any, when made. The trustee under the 401(k) Plan, at the direction of each participant, may invest the assets of the 401(k) Plan in any of a number of investment options.

We do not provide any of our executive officers with any other perquisites or personal benefits, other than benefits to Mr. Kriegsman provided for in his employment agreement. As required by his employment agreement, during 2008 we paid insurance premiums with respect to a life insurance policy for Mr. Kriegsman which had a face value of approximately $1.4 million as of December 31, 2008 and under which Mr. Kriegsman's designee is the beneficiary.

Employment Agreements and Severance Arrangements

We have entered into written employment agreements with each of our named executive officers. The main purpose of these agreements is to protect the company from business risks such as competition for the executives' service, loss of confidentiality or trade secrets, and solicitation of our other employees, and to define our right to terminate the employment relationship. The employment agreements also protect the executive from termination without "cause" (as defined) and, in Mr. Kriegsman's case, entitles him to resign for "good reason" (as defined). Each employment agreement was individually negotiated, so there are some minor variations in the terms among executive officers. Generally speaking, however, the employment agreements provide for termination and severance benefits that the Compensation Committee believes are consistent with industry practices for similarly situated executives. The Compensation Committee believes that the termination and severance benefits help the company retain the named executive officers by providing them with a competitive employment arrangement and protection against unknowns such as termination without "cause" that go along with the position.

In the event of termination without "cause," the named executive officers will be entitled to a lump-sum payment equal to six months of base salary (24 months in the case of Mr. Kriegsman). Mr. Kriegsman's employment agreement also provides for our continuation of Mr. Kriegsman's life insurance and medical benefits during his 24-month severance

period. If Mr. Kriegsman's employment is terminated by us without "cause," or by Mr. Kriegsman for "good reason," within two years following a change of control of CytRx, he also would be entitled under his employment agreement to receive a "gross-up" payment equal to the sum of any excise tax on his termination benefits (including any accelerated vesting of his options under our Plans as described below) plus any penalties and interest.

Change of Control Arrangements

The company's 2000 Long-Term Incentive Plan and 2008 Stock Incentive Plan provide generally that, upon a change of control of CytRx, all unvested stock options and awards under the Plans held by plan participants, including the named executive officers, will become immediately vested and exercisable immediately prior to the effective date of the transaction. The Compensation Committee

believes that such “single trigger” change of control policy is consistent with the objective of aligning the interests of the named executive officer’s and of the company’s stockholders by allowing the executives to participate equally with stockholders in the event of a change of control transaction.

The foregoing severance and change of control arrangements, including the quantification of the payment and benefits provided under these arrangements, are described in more detail elsewhere in this Annual Report under the heading “Executive Compensation – Potential Payments Upon Termination or Change of Control.”

Ownership Guidelines

The Compensation Committee has no requirement that each named executive officer maintain a minimum ownership interest in our company.

Our long-term incentive compensation consists solely of periodic grants of stock options to our named executive officers. The stock option program:

- links the creation of stockholder value with executive compensation;
- provides increased equity ownership by executives;
- functions as a retention tool, because of the vesting features included in all options granted by the Compensation Committee; and
- maintains competitive levels of total compensation.

We normally grant stock options to new executive officers when they join our company based upon their position with us and their relevant prior experience. The options granted by the Compensation Committee generally vest monthly over the first three years of the ten-year option term. Vesting and exercise rights cease upon termination of employment (or, in the case of exercise rights, 90 days thereafter), except in the case of death (subject to a one-year limitation), disability or retirement. Prior to the exercise of an option, the holder has no rights as a stockholder with respect to the shares subject to such option, including voting rights and the right to receive dividends or dividend equivalents. In addition to the initial option grants, our Compensation Committee may grant additional options to retain our executives and reward, or provide incentive for, the achievement of corporate goals and strong individual performance. Our board of directors has granted our President and Chief Executive Officer discretion to grant up to 100,000 options to employees upon joining our company, and to make grants an additional “discretionary pool” of up to 100,000 options during each annual employee review cycle. Options are granted based on a combination of individual contributions to our company and on general corporate achievements, which may include the attainment of product development milestones (such as commencement and completion of clinical trials) and attaining other annual corporate goals and objectives. On an annual basis, the Compensation Committee assesses the appropriate individual and corporate goals for our executives and provides additional option grants based upon the achievement by the new executives of both individual and corporate goals. We expect that we will continue to provide new employees with initial option grants in the future to provide long-term compensation incentives and will continue to rely on performance-based and retention grants to provide additional incentives for current employees. Additionally, in the future, the Compensation Committee may consider awarding additional or alternative forms of equity incentives, such as grants of bonus stock, restricted stock and restricted stock units.

It is our policy to award stock options at an exercise price equal to The NASDAQ Capital Market’s closing price of our common stock on the date of the grant. In certain limited circumstances, the Compensation Committee may grant options to an executive at an exercise price in excess of the closing price of the common stock on the grant date. The

Compensation Committee has never granted options with an exercise price that is less than the closing price of our common stock on the grant date, nor has it granted options which are priced on a date other than the grant date. For purposes of determining the exercise price of stock options, the grant date is deemed to be the first day of employment for newly hired employees, or the date on which the Compensation Committee or the Chief Executive Officer, as applicable, approves the stock option grant to existing employees.

We have no program, practice or plan to grant stock options to our executive officers, including new executive officers, in coordination with the release of material nonpublic information. We also have not timed the release of material nonpublic information for the purpose of affecting the value of stock options or other compensation to our executive officers, and we have no plan to do so.

We have no policy regarding the adjustment or recovery of stock option awards in connection with the restatement of our financial statements, as our stock option awards have not been tied to the achievement of specific financial goals.

Tax and Accounting Implications

Deductibility of Executive Compensation

As part of its role, the Compensation Committee reviews and considers the deductibility of executive compensation under Section 162(m) of the Internal Revenue Code, which provides that corporations may not deduct compensation of more than $1,000,000 that is paid to certain individuals. We believe that compensation paid to our executive officers generally is fully deductible for federal income tax purposes.

Accounting for Share-Based Compensation

Beginning on January 1, 2006, we began accounting for share-based compensation in accordance with the requirements of FASB Statement 123(R), Share-Based Payment. This accounting treatment has not significantly affected our compensation decisions. The Compensation Committee takes into consideration the tax consequences of compensation to the named executive officers, but tax considerations are not a significant part of the company's compensation policy.

Benchmarking

The Compensation Committee does not attempt to establish or measure executive compensation against any benchmarks.

Compensation Committee Interlocks and Insider Participation in Compensation Decisions

There are no "interlocks," as defined by the SEC, with respect to any member of the Compensation Committee. Joseph Rubinfeld, Ph.D., Marvin R. Selter and Richard L. Wennekamp all served as members of the Compensation Committee during 2008. Dr. Rubinfeld resigned as a member of the Committee in October 2008. He was replaced by Max Link, Ph.D.

Compensation Committee Report

The Compensation Committee has reviewed and discussed with management the "Compensation Discussion and Analysis" required by Item 402(b) of Regulation S-K and, based on such review and discussions, has recommended to our board of directors that the foregoing "Compensation Discussion and Analysis" be included in this Annual Report.

Richard L. Wennekamp, Chairman Marvin R. Selter Dr. Max Link

Summary Compensation Table

The following table presents summary information concerning all compensation paid or accrued by us for services rendered in all capacities during 2008, 2007 and 2006 by Steven A. Kriegsman and Mitchell K. Fogelman, who are the only individuals who served as our principal executive and financial officers during the year ended December 31, 2008, and our three other most highly compensated executive officers who were serving as executive officers as of December 31, 2008:

Summary Compensation Table

Name and Position	Year	Salary ($)	Bonus ($) (1)	Option Awards ($) (2)	All Other Compensation ($)(5)	Total ($)
Steven A. Kriegsman						
President and Chief						
Executive Officer	2008	551,000	150,000	105,328	10,000	816,328
	2007	524,767	300,000	295,534	—	1,120,301
	2006	417,175	800,000	340,426	—	1,557,601
Mitchell K. Fogelman						
Chief Financial						
Officer and Treasurer						
(3)	2008	285,576	55,000	24,531	—	365,107
	2007	76,763	100,000	35,665	—	212,428
Jack R. Barber, Ph.D.						
Chief Scientific						
Officer	2008	364,375	55,000	24,603	—	443,978
	2007	327,074	125,000	168,876	—	620,950
	2006	261,750	218,750	90,544	—	571,044
Benjamin S. Levin						
General Counsel,						
General Counsel,						
Vice President —	2008	276,000	55,000	24,603	—	355,603
LegalAffairs and						
Secretary	2007	250,000	100,000	84,438	—	434,438
	2006	208,170	219,750	120,550	—	548,470
Shi Chung Ng, Ph.D.						
Senior Vice President –						
Research and	2008	275,000	41,250	—	—	316,250
Development (4)	2007	167,628	—	—	—	167,628

(1) Bonuses to the named executive officers reported above relating to 2008 were paid in December 2008. Bonuses to the named executive officers reported above relating to 2007 were paid in April 2008. Bonuses to the named executive officers reported above relating to 2006 were paid in both June 2006, in connection with the contractual year end for those officers, and also in April 2007, following our decision to determine and award bonuses in connection with each fiscal year end. For purposes of this table, the entire amount of the bonus paid as attributed to 2006 has been presented as a 2006 amount.

(2) The values shown in this column represent the dollar amount recognized for financial statement reporting purposes with respect to the 2006, 2007 and 2008 fiscal years for the fair value of stock options granted in 2006, 2007 and 2008 and prior fiscal years in accordance with SFAS 123(R). Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. The amount recognized for these awards was calculated using the Black Scholes option-pricing model, and reflect grants from our 2000 Long-Term Incentive Plan, which is described in Note 13 of the Notes to Consolidated Financial Statements.

(3) Mr. Fogelman served as our Chief Financial Officer and Treasurer from September 11, 2007 through December 31, 2008, when he resigned. On January 1, 2009, John Caloz was appointed to these positions.

(4) Dr. Ng was hired on April 1, 2007.

(5) This amount represents life insurance premiums.

2008 Grants of Plan-Based Awards

In 2008, we granted stock options to our named executive officers under our 2000 Long-Term Incentive Plan as follows:

2008 Grants of Plan-Based Awards

Name	Grant Date	All Other Option Awards (# of CytRx Shares)	Exercise Price of Option Awards ($/Share)	Grant Date Fair Value of Option Awards ($)
Steven A. Kriegsman	4/07/2008	450,000	$ 1.21	$ 425,700
President and Chief Executive Officer	11/21/2008	300,000	0.37	92,100
Mitchell K. Fogelman (1)	4/07/2008	100,000	$ 1.21	$ 94,600
Chief Financial Officer and Treasurer	11/21/2008	100,000	0.37	30,700
Jack R. Barber, Ph.D.	4/07/2008	100,000	$ 1.21	$ 94,600
Chief Scientific Officer	11/21/2008	100,000	0.37	30,700
Benjamin S. Levin	4/07/2008	100,000	$ 1.21	$ 94,600
General Counsel, Vice President — Legal Affairs and Secretary	11/21/2008	100,000	0.37	30,700
Shi Chung Ng, Ph.D.	11/21/2008	50,000	$ 0.37	$ 15,350
Senior Vice President – Research and Development				

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(1) Mr. Fogelman resigned from the company on December 31, 2008.

2000 Long-Term Incentive Plan

The purpose of our 2000 Long-Term Incentive Plan is to promote our success and enhance our value by linking the personal interests of our employees, officers, consultants and directors to those of our stockholders, and by providing our employees, officers, consultants and directors with an incentive for outstanding performance. The Plan was originally adopted by our board of directors on August 24, 2000 and by our stockholders on June 7, 2001, with certain amendments to the Plan having been subsequently approved by our board of directors and stockholders.

The Plan authorizes the granting of awards to our employees, officers, consultants and directors and to employees, officers, consultants and directors of our subsidiaries. The following awards are available under the Plan:

- options to purchase shares of common stock, which may be incentive stock options or non-qualified stock options;
- stock appreciation rights;
- restricted stock;
- performance units;

- dividend equivalents; and
- other stock-based awards.

The aggregate number of shares of our common stock reserved and available for awards under the Plan is 10,000,000 shares. As of March 11, 2009, there were 7.1 million shares previously issued or subject to outstanding Plan awards and approximately 0.7 million shares were available for issuance pursuant to future awards under the Plan. The maximum number of shares of common stock with respect to one or more options and stock appreciation rights that we may grant during any one calendar year under the Plan to any one participant is 1,000,000; except that in connection with his or her initial employment with the company or an affiliate, a participant may be granted options for up to an additional 1,000,000 shares. The maximum fair market value of any awards that any

one participant may receive during any one calendar year under the Plan is $1,000,000, not including the value of options and stock appreciation rights (less any consideration paid by the participant for such award).

Administration

The Plan is administered by the Compensation Committee of our board of directors. The Compensation Committee has the power, authority and discretion to:

- designate participants;
- determine the types of awards to grant to each participant and the number, terms and conditions of any award;
- establish, adopt or revise any rules and regulations as it may deem necessary or advisable to administer the Plan; and
- make all other decisions and determinations that may be required under, or as the Compensation Committee deems necessary or advisable to administer, the Plan.

Awards

The following is summary description of financial instruments that may be granted to participants by the Compensation Committee of our board of directors. The Compensation Committee to date has only granted stock options to participants in the Plan.

Stock Options. The Compensation Committee is authorized to grant both incentive stock options and non-qualified stock options. The terms of any incentive stock option must meet the requirements of Section 422 of the Internal Revenue Code. The exercise price of an option may not be less than the fair market value of the underlying stock on the date of grant, and no option may have a term of more than 10 years from the grant date.

Stock Appreciation Rights. The Compensation Committee may grant stock appreciation rights to participants. Upon the exercise of a stock appreciation right, the participant has the right to receive the excess, if any, of (1) the fair market value of one share of common stock on the date of exercise, over (2) the grant price of the stock appreciation right as determined by the Compensation Committee, which will not be less than the fair market value of one share of common stock on the date of grant.

Restricted Stock. The Compensation Committee may make awards of restricted stock, which will be subject to such restrictions on transferability and other restrictions as the Compensation Committee may impose (including limitations on the right to vote restricted stock or the right to receive dividends, if any, on the restricted stock).

Performance Units. The Compensation Committee may grant performance units on such terms and conditions as may be selected by the Compensation Committee. The Compensation Committee will have the complete discretion to determine the number of performance units granted to each participant and to set performance goals and other terms or conditions to payment of the performance units which, depending on the extent to which they are met, will determine the number and value of performance units that will be paid to the participant.

Dividend Equivalents. The Compensation Committee is authorized to grant dividend equivalents to participants subject to such terms and conditions as may be selected by the Compensation Committee. Dividend equivalents entitle the participant to receive payments equal to dividends with respect to all or a portion of the number of shares of common stock subject to an option or other award, as determined by the Compensation Committee. The

Compensation Committee may provide that dividend equivalents be paid or distributed when accrued or be deemed to have been reinvested in additional shares of common stock, or otherwise reinvested.

Other Stock-Based Awards. The Compensation Committee may grant other awards that are payable in, valued in whole or in part by reference to, or otherwise based on or related to shares of common stock, as deemed by the Compensation Committee to be consistent with the purposes of the Plan. These stock-based awards may include shares of common stock awarded as a bonus and not subject to any restrictions or conditions, convertible or exchangeable debt securities, other rights convertible or exchangeable into shares of common stock, and awards valued by reference to book value of shares of common stock or the value of securities of or the performance of our subsidiaries. The Compensation Committee will determine the terms and conditions of any such awards.

Performance Goals. The Compensation Committee in its discretion may determine awards based on:

- the achievement by CytRx or a parent or subsidiary of a specific financial target;
- CytRx's stock price;
- the achievement by an individual or a business unit of CytRx or a subsidiary of a specific financial target;
- the achievement of specific goals with respect to (i) product development milestones, (ii) corporate financings, (iii) merger and acquisition activities, (iv) licensing transactions, (v) development of strategic partnerships or alliances, or (vi) acquisition or development of new technologies; and
- any combination of the goals set forth above.

The Compensation Committee has the right for any reason to reduce (but not increase) any award, even if a specific goal has been achieved. If an award is made on the basis of the achievement of a goal, the Compensation Committee must have established the goal before the beginning of the period for which the performance goal relates (or a later date as may be permitted under Internal Revenue Code Section 162(m)). Any payment of an award for achieving a goal will be conditioned on the written certification of the Compensation Committee in each case that the goals and any other material conditions were satisfied.

Limitations on Transfer; Beneficiaries. Awards under the Plan may not be transferred or assigned by Plan participants other than by will or the laws of descent and distribution and, in the case of an incentive stock option, pursuant to a qualified domestic relations order, provided that the Compensation Committee may (but need not) permit other transfers where the Compensation Committee concludes that such transferability (1) does not result in accelerated taxation, (2) does not cause any option intended to be an incentive stock option to fail to qualify as such, and (3) is otherwise appropriate and desirable, taking into account any factors deemed relevant, including any state or federal tax or securities laws or regulations applicable to transferable awards. A Plan participant may, in the manner determined by the Compensation Committee, designate a beneficiary to exercise the participant's rights and to receive any distribution with respect to any award upon the participant's death.

Acceleration Upon Certain Events. In the event of a "Change in Control" of CytRx, which is a term defined in the Plan, all outstanding options and other awards in the nature of rights that may be exercised will become fully vested and exercisable and all restrictions on all outstanding awards will lapse. The Compensation Committee may, however, in its sole discretion declare all outstanding options, stock appreciation rights and other awards in the nature of rights that may be exercised to become fully vested and exercisable, and all restrictions on all outstanding awards to lapse, in each case as of such date as the Compensation Committee may, in its sole discretion, declare. The Compensation Committee may discriminate among participants or among awards in exercising such discretion.

Termination and Amendment

Our board of directors or the Compensation Committee may, at any time and from time to time, terminate or amend the Plan without stockholder approval; provided, however, that our board or the Compensation Committee may condition any amendment on the approval of our stockholders if such approval is necessary or deemed advisable with respect to tax, securities or other applicable laws, policies or regulations. No termination or amendment of the Plan may adversely affect any award previously granted without the written consent of the participants affected. The Compensation Committee may amend any outstanding award without the approval of the participants affected, except that no such amendment may diminish the value of an award determined as if it has been exercised, vested, cashed in or otherwise settled on the date of such amendment, and, except as otherwise permitted in the Plan, the exercise price

of any option may not be reduced and the original term of any option may not be extended.

Other Plans

We also have two other plans, the 1994 Stock Option Plan and the 1998 Long Term Incentive Plan, which include 9,167 and 27,500 shares subject to outstanding stock options. As the terms of the plans provide that no options may be issued after 10 years, no options are available under either the 1994 Plan or the 1998 Plan.

On November 21, 2008, our board of directors adopted the 2008 Stock Incentive Plan, which will be submitted for approval by our stockholders at the 2009 Annual Meeting of stockholders. In the meantime, we may make awards under the 2008 Plan, the effectiveness of which are conditioned upon obtaining such stockholder approval. There are 350,000 shares subject to outstanding options awarded under the Plan, and 9,650,000 shares available for future awards.

Holdings of Previously Awarded Equity

Equity awards held as of December 31, 2008 by each of our named executive officers were issued under our 2000 Long-Term Incentive Plan. The following table sets forth outstanding equity awards held by our named executive officers as of December 31, 2008:

2008 Outstanding Equity Awards at Fiscal Year-End

	Option Awards				
	Number of Securitiesa Underlying Unexercised Options (#)			Option Exercise Price	Option Expiration
Name	Exercisable		Unexercisable	($)	Date
Steven A. Kriegsman	8,333	(1)	291,667	0.37	11/21/18
President and Chief Executive Officer	100,000	(1)	350,000	1.21	4/07/18
	194,444	(1)	155,556	4.51	4/18/17
	166,667	(1)	33,333	1.38	6/16/16
	300,000	(1)	—	0.79	5/17/15
	250,000	(2)	—	2.47	6/19/13
	750,000	(2)	—	2.47	6/20/13
Mitchell K. Fogelman (3)	2,778	(1)	97,222	0.37	11/21/18
Chief Financial Officer and Treasurer	22,222	(1)	77,778	1.21	4/07/18
	62,500	(1)	87,500	3.40	9/11/17
Jack R. Barber, Ph.D.	2,778	(1)	97,222	0.37	11/21/18
Chief Scientific Officer	22,222	(1)	77,778	1.21	4/07/18
	111,111	(1)	88,889	4.51	4/18/17
	83,333	(1)	16,667	1.38	6/16/16
	150,000	(1)	20,846	0.79	5/17/15
	100,000	(2)	—	1.13	7/06/14
Benjamin S. Levin	2,778	(1)	97,222	0.37	11/21/18
General Counsel, Vice President — Legal Affairs	22,222	(1)	77,778	1.21	4/07/18
and Secretary	55,556	(1)	44,444	4.51	4/18/17
	75,000	(1)	15,000	1.38	6/16/16
	150,000	(1)	—	0.79	5/17/15
	160,000	(2)	—	1.39	7/15/14
Shi Chung Ng, Ph.D.	—	(2)	50,000	0.37	11/21/18
Senior Vice President – Research and		(2)		4.13	
Development	50,000		100,000		4/30/17

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(1) These options vest in 36 equal monthly installments, subject to the option holder's remaining in our continuous employ through such dates.

(2) These options vest in three annual installments, subject to the option holder's remaining in our continuous employ through such dates.

(3) Mr. Fogelman resigned from the company on December 31, 2008.

Option Exercises and Stock Vested

There were no exercises of stock options by any of our named executive officers during 2008.

Employment Agreements and Potential Payment upon Termination or Change in Control

Employment Agreement with Steven A. Kriegsman

Mr. Kriegsman is employed as our Chief Executive Officer and President pursuant to an employment agreement that was amended as of May 2007 to continue through December 31, 2009. The employment agreement will automatically renew in December 2009 for an additional one-year period, unless either Mr. Kriegsman or we elect not to renew it.

Under his employment agreement as amended, Mr. Kriegsman is entitled to receive an annual base salary of $550,000. Our board of directors (or its Compensation Committee) will review the base salary annually and may increase (but not decrease) it in its sole discretion. In addition to his annual salary, Mr. Kriegsman is eligible to receive an annual bonus as determined by our board of directors (or its Compensation Committee) in its sole discretion, but not to be less than $150,000. Pursuant to his employment agreement with us, we have agreed that he shall serve on a full-time basis as our Chief Executive Officer and President and that he may continue to serve as Chairman of the Kriegsman Group only so long as necessary to complete certain current assignments.

Mr. Kriegsman is eligible to receive grants of options to purchase shares of our common stock. The number and terms of those options, including the vesting schedule, will be determined by our board of directors (or its Compensation Committee) in its sole discretion.

Under Mr. Kriegsman’s employment agreement, we have agreed that, if he is made a party, or threatened to be made a party, to a suit or proceeding by reason of his service to us, we will indemnify and hold him harmless from all costs and expenses to the fullest extent permitted or authorized by our certificate of incorporation or bylaws, or any resolution of our board of directors, to the extent not inconsistent with Delaware law. We also have agreed to advance to Mr. Kriegsman such costs and expenses upon his request if he undertakes to repay such advances if it ultimately is determined that he is not entitled to indemnification with respect to the same. These employment agreement provisions are not exclusive of any other rights to indemnification to which Mr. Kriegsman may be entitled and are in addition to any rights he may have under any policy of insurance maintained by us.

In the event we terminate Mr. Kriegsman’s employment without “cause” (as defined), or if Mr. Kriegsman terminates his employment with “good reason” (as defined), (i) we have agreed to pay Mr. Kriegsman a lump-sum equal to his salary and prorated minimum annual bonus through to his date of termination, plus his salary and minimum annual bonus for a period of two years after his termination date, or until the expiration of the amended and restated employment agreement, whichever is later, (ii) he will be entitled to immediate vesting of all stock options or other awards based on our equity securities, and (iii) he will also be entitled to continuation of his life insurance premium payments and continued participation in any of our health plans through to the later of the expiration of the amended and restated employment agreement or 24 months following his termination date. Mr. Kriegsman will have no obligation in such events to seek new employment or offset the severance payments to him by any compensation received from any subsequent reemployment by another employer.

Under Mr. Kriegsman’s employment agreement, he and his affiliated company, The Kriegsman Group, are to provide us during the term of his employment with the first opportunity to conduct or take action with respect to any acquisition opportunity or any other potential transaction identified by them within the biotech, pharmaceutical or health care industries and that is within the scope of the business plan adopted by our board of directors. Mr.

Kriegsman's employment agreement also contains confidentiality provisions relating to our trade secrets and any other proprietary or confidential information, which provisions shall remain in effect for five years after the expiration of the employment agreement with respect to proprietary or confidential information and for so long as our trade secrets remain trade secrets.

Potential Payment upon Termination or Change in Control for Steven A. Kriegsman

Mr. Kriegsman's employment agreement contains no provision for payment to him in the event of a change in control of CytRx. If, however, a change in control (as defined in our 2000 Long-Term Incentive Plan) occurs during the term of the employment agreement, and if, during the term and within two years after the date on which the change in control occurs, Mr. Kriegsman's

employment is terminated by us without cause or by him for good reason (each as defined in his employment agreement), then, in addition to the severance benefits described above, to the extent that any payment or distribution of any type by us to or for the benefit of Mr. Kriegsman resulting from the termination of his employment is or will be subject to the excise tax imposed under Section 4999 of the Internal Revenue Code of 1986, as amended, we have agreed to pay Mr. Kriegsman, prior to the time the excise tax is payable with respect to any such payment (through withholding or otherwise), an additional amount that, after the imposition of all income, employment, excise and other taxes, penalties and interest thereon, is equal to the sum of (i) the excise tax on such payments plus (ii) any penalty and interest assessments associated with such excise tax.

Employment Agreement with John Y. Caloz

John Y. Caloz is employed as our Chief Financial Officer and Treasurer pursuant to an employment agreement dated as of January 1, 2009 that expires on December 31, 2009. Mr. Caloz is entitled under his employment agreement to receive an annual base salary of $275,000 and is eligible to receive an annual bonus as determined by our board of directors (or our Compensation Committee) in its sole discretion.

In the event we terminate Mr. Caloz's employment without cause (as defined), we have agreed to pay him a lump-sum equal to his accrued but unpaid salary and vacation, plus an amount equal to six months' salary under his employment agreement.

Employment Agreement with Jack R. Barber, Ph.D.

Jack R. Barber, Ph.D. is employed as our Chief Scientific Officer pursuant to an employment agreement dated as of January 1, 2009 that expires on December 31, 2009. Dr. Barber is paid an annual base salary of $360,000 and is eligible to receive an annual bonus as determined by our board of directors (or our Compensation Committee) in its sole discretion.

In the event we terminate Dr. Barber's employment without "cause" (as defined), we have agreed to pay him a lump-sum equal to his accrued but unpaid salary and vacation, plus an amount equal to six months' base salary.

Employment Agreement with Shi Chung Ng, Ph.D.

Shi Chung Ng, Ph.D. is employed as our Senior Vice President — Research and Development pursuant to an employment agreement dated as of January 1, 2009 that expires on December 31, 2009. Dr. Ng is paid an annual base salary of $275,000 and is eligible to receive an annual bonus as determined by our board of directors (or our Compensation Committee) in its sole discretion.

In the event we terminate Dr. Ng's employment without "cause" (as defined), we have agreed to pay him a lump-sum equal to his accrued but unpaid salary and vacation, plus an amount equal to six months' base salary.

Employment Agreement with Scott Wieland, Ph.D.

Scott Wieland is employed as our Senior Vice President — Drug Development pursuant to an employment agreement dated as of January 1, 2009 that expires on December 31, 2009. Dr. Wieland is paid an annual base salary of $275,000 and is eligible to receive an annual bonus as determined by our board of directors (or our Compensation Committee) in its sole discretion.

In the event we terminate Dr. Wieland's employment without "cause" (as defined), we have agreed to pay him a lump-sum equal to his accrued but unpaid salary and vacation, plus an amount equal to six months' base salary.

Employment Agreement with Benjamin S. Levin

Benjamin S. Levin is employed as our Vice President — Legal Affairs, General Counsel and Secretary pursuant to an employment agreement dated as of January 1, 2009 that expires on December 31, 2009. Mr. Levin is paid an annual base salary of $275,000 and is eligible to receive an annual bonus as determined by our board of directors (or our Compensation Committee) in its sole discretion.

In the event we terminate Mr. Levin's employment without "cause" (as defined), we have agreed to pay him a lump-sum equal to his accrued but unpaid salary and vacation, plus an amount equal to six months' base salary.

Quantification of Termination Payments and Benefits

The table below reflects the amount of compensation to each of our named executive officers in the event of termination of such executive's employment without "cause" or his resignation for "good reason," termination following a change in control and termination upon the executive's death of permanent disability. The named executive officers are not entitled to any payments other than accrued compensation and benefits in the event of their voluntary resignation. The amounts shown in the table below assume that such termination was effective as of December 31, 2008, and thus includes amounts earned through such time, and are estimates only of the amounts that would be payable to the executives. The actual amounts to be paid will be determined upon the occurrence of the events indicated.

Termination Payments and Benefits

Name	Benefit	Termination w/o Cause or for Good Reason Before Change in Control ($)	Termination w/o Cause or for Good Reason After Change in Control ($)	Death ($)	Disability ($)	Change in Control ($)
Steven A. Kriegsman	Severance Payment(4)	1,000,000	1,000,000	1,000,000	1,000,000	—
President and Chief Executive Officer	Stock Options (1)	—	—	—	—	—
	Health Insurance (2)	80,609	80,609	—	80,609	80,609
	Life Insurance	10,000	10,000	—	10,000	—
	Bonus	300,000	300,000	300,000	300,000	—
	Tax Gross Up (3)	—	—	—	—	—
Jack R. Barber, Ph.D.	Severance Payment(4)	180,000	180,000	—	—	—
Chief Scientific Officer	Stock Options (1)	—	—	—	—	—
Benjamin S. Levin	Severance Payment	137,500	137,500	—	—	—
General Counsel, Vice President — Legal Affairs and Secretary	Stock Options (1)	—	—	—	—	—
Shi Chung Ng, Ph.D.(4)	Severance Payment(4)	137,500	137,500	—	—	—
Senior Vice President – Drug Development	Stock Options (1)	—	—	—	—	—

(1) Represents the aggregate value of stock options that vest and become exercisable immediately upon each of the triggering events listed as if such events took place on December 31, 2008, determined by the aggregate difference between the stock price as of December 31, 2008 and the exercise prices of the underlying options. The value is $0, since the stock price at December 31, 2008 was below the exercise price of all underlying options.

(2) Represents the cost as of December 31, 2008 for the family health benefits provided to Mr. Kriegsman for a period of two years.

(3) Mr. Kriegsman's employment agreement provides that if a change in control (as defined in our 2000 Long-Term Incentive Plan) occurs during the term of the employment agreement, and if, during the term and within two years after the date on which the change in control occurs, Mr. Kriegsman's employment is terminated by us without "cause" or by him for "good reason" (each as defined in his employment agreement), then, to the extent that any payment or distribution of any type by us to or for the benefit of Mr. Kriegsman resulting from the termination of his employment is or will be subject to the excise tax imposed under Section 4999 of the Internal Revenue Code of 1986, as amended, we will pay Mr. Kriegsman, prior to the time the excise tax is payable with respect to any such payment (through withholding or otherwise), an additional amount that, after the imposition of all income, employment, excise and other taxes, penalties and interest thereon, is equal to the sum of (i) the excise tax on such payments plus (ii) any penalty and interest assessments associated with such excise tax. Based on Mr. Kriegsman's past compensation and the estimated payment that would result from a termination of his employment following a change in control, we have estimated that a gross-up payment would not be required. "Good reason" as defined in Mr. Kriegsman's employment agreement includes any change in Mr. Kriegsman's duties or title that are inconsistent with his position as Chief Executive Officer.

(4) Severance payments are prescribed by our employment agreements with the named executive officers and represent a factor of their annual base compensation ranging from six months to two years.

(5) Mr. Fogelman, our Chief Financial Officer during the year, resigned from the Company on December 31, 2008 and was not paid any termination payments or benefits.

Compensation of Directors

The following table sets forth the compensation paid to our directors other than our Chief Executive Officer for 2008:

Director Compensation Table

Name (1)	Fees Earned or Paid in Cash ($)(2)	Option Awards ($) (3)	Total ($)
Max Link, Ph.D. Chairman	118,000	11,225	129,225
Marvin R. Selter Vice Chairman	106,500	11,225	117,725
Louis Ignarro, Ph.D. Director	40,500	11,225	51,725
Joseph Rubinfeld, Ph.D. Director	74,000	11,225	85,225
Richard L. Wennekamp Director	83,500	11,225	94,725

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(1) Steven A. Kriegsman does not receive additional compensation for his role as a Director. For information relating to Mr. Kriegsman's compensation as President and Chief Executive Officer, see the Summary Compensation Table above.

(2) The amounts in this column represent cash payments made to Non-Employee Directors for attendance at meetings during the year.

(3) In July 2008, we granted stock options to purchase 25,000 shares of our common stock at an exercise price equal to the current market value of our common stock to each non-employee director, which had a grant date fair value of $11,225 calculated in accordance with SFAS 123(R). Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. The amount recognized for these awards was calculated using the Black Scholes option-pricing model, and reflect grants from our 2000 Long-Term Incentive Plan, which is described in Note 12 of the Notes to Consolidated Financial Statements.

We use a combination of cash and stock-based compensation to attract and retain qualified candidates to serve on our board of directors. Directors who also are employees of our company currently receive no compensation for their service as directors or as members of board committees. In setting director compensation, we consider the significant amount of time that directors dedicate to the fulfillment of their director responsibilities, as well as the competency and skills required of members of our board. The directors' current compensation schedule has been in place since May 2007. The directors' annual compensation year begins with the annual election of directors at the annual meeting of stockholders. The annual retainer year period has been in place for directors since 2003. Periodically, our board of directors reviews our director compensation policies and, from time to time, makes changes to such policies based on various criteria the board deems relevant.

Our non-employee directors receive a quarterly retainer of $6,000 (plus an additional $12,500 for the Chairman of the Board, $5,000 for the Chairman of the Audit Committee, and $1,500 for the Chairmen of the Nomination and Governance Committee and the Compensation Committee), a fee of $3,000 for each board meeting attended ($750 for board actions taken by unanimous written consent), $2,000 for each meeting of the Audit Committee attended, and $1,000 for each other committee meeting attended. Non-employee directors who serve as the chairman of a board committee receive an additional $2,000 for each meeting of the Nomination and Governance Committee or the Compensation Committee attended and an additional $2,500 for each meeting attended of the audit committee. In July 2008, we granted stock options to purchase 25,000 shares of our common stock at an exercise price equal to the current market value of our common stock to each non-employee director. The options were vested, in full, upon grant.

Joseph Rubinfeld, Ph.D. Consulting Agreement

On December 2, 2008, we entered into a written consulting agreement with Joseph Rubinfeld, Ph.D., under which Dr. Rubinfeld agrees to serve as our Chief Scientific Advisor. In exchange, we granted to Dr. Rubinfeld under our 2008 Stock Incentive Plan a ten

year stock option to purchase up to 350,000 shares of our common stock at an exercise price of $0.35 per share, which equaled the market price of our common stock as of the grant date. The stock option vested immediately upon grant as to 50,000 of the option shares and will vest as to the remaining option shares in installments of 100,000 shares each on the first three anniversaries of the grant date, subject in each case to Dr. Rubinfeld remaining in our service through such dates. We also agree in the consulting agreement to pay Dr. Rubinfeld a monthly fee of $1,000. The consulting agreement is terminable at any time by either party upon notice to the other party.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Based solely upon information made available to us, the following table sets forth information with respect to the beneficial ownership of our common stock as of March 11, 2009 by (1) each person who is known by us to beneficially own more than five percent of our common stock; (2) each of our directors; (3) the named executive officers listed in the Summary Compensation Table under Item 11; and (4) all of our executive officers and directors as a group. Beneficial ownership is determined in accordance with the SEC rules. Shares of common stock subject to any warrants or options that are presently exercisable, or exercisable within 60 days of March 11, 2009 (which are indicated by footnote) are deemed outstanding for the purpose of computing the percentage ownership of the person holding the warrants or options, but are not treated as outstanding for the purpose of computing the percentage ownership of any other person. The percentage ownership reflected in the table is based on 93,981,548 shares of our common stock outstanding as of March 11, 2009. Except as otherwise indicated, the holders listed below have sole voting and investment power with respect to all shares of common stock shown, subject to applicable community property laws. An asterisk represents beneficial ownership of less than 1%.

Name of Beneficial Owner	Shares of Common Stock Number	Percent
Louis Ignarro, Ph.D.(1)	568,916	*
Steven A. Kriegsman(2)	5,947,497	6.2%
Max Link, Ph.D.(3)	189,519	*
Joseph Rubinfeld, Ph.D.(4)	127,000	*
Marvin R. Selter(5)	472,451	*
Richard L. Wennekamp(6)	120,000	*
Jack R. Barber, Ph.D.(7)	561,112	*
Shi Chung Ng, Ph.D.(8)	106,953	*
Benjamin S. Levin(9)	511,676	*
All executive officers and directors as a group (eleven persons)(10)	8,677,902	8.8%

(1) Includes 477,000 shares subject to options or warrants.

(2) Includes 1,926,397 shares subject to options or warrants. Mr. Kriegsman’s address is c/o CytRx Corporation, 11726 San Vicente Boulevard, Suite 650, Los Angeles, CA 90049.

(3) Includes 134,543 shares subject to options or warrants.

(4) Includes 127,000 shares subject to options or warrants.

(5)

The shares shown are owned, of record, by the Selter Family Trust or Selter IRA Rollover. Includes 115,000 shares subject to options or warrants owned by Mr. Selter.

(6) Includes 115,000 shares subject to options or warrants.

(7) Includes 561,112 shares subject to options or warrants.

(8) Includes 106,935 shares subject to options or warrants.

(9) Includes 511,676 shares subject to options or warrants.

(10) Includes 4,147,459 shares subject to options or warrants.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Director Independence

Our board of directors has determined that Messrs. Link, Selter, Ignarro and Wennekamp are "independent" under the current independence standards of both The NASDAQ Capital Market and the SEC, and have no material relationships with us (either directly or as a partner, shareholder or officer of any entity) which could be inconsistent with a finding of their independence as members of our board of directors or as the members of our Audit Committee. In making these determinations, our board of directors has broadly considered all relevant facts and circumstances, recognizing that material relationships can include commercial, banking, consulting, legal, accounting, and familial relationships, among others.

Transactions with Related Persons

General

Our Audit Committee is responsible for reviewing and approving, as appropriate, all transactions with related persons, in accordance with its Charter and NASDAQ Marketplace Rules.

Transactions between us and one or more related persons may present risks or conflicts of interest or the appearance of conflicts of interest. Our Code of Ethics requires all employees, officers and directors to avoid activities or relationships that conflict, or may be perceived to conflict, with our interests or adversely affect our reputation. It is understood, however, that certain relationships or transactions may arise that would be deemed acceptable and appropriate so long as there is full disclosure of the interest of the related parties in the transaction and review and approval by disinterested directors to ensure there is a legitimate business reason for the transaction and that the transaction is fair to us and our stockholders.

As a result, the procedures followed by the Audit Committee to evaluate transactions with related persons require:

- that all related person transactions, all material terms of the transactions, and all the material facts as to the related person's direct or indirect interest in, or relationship to, the related person transaction must be communicated to the Audit Committee; and

- that all related person transactions, and any material amendment or modification to any related person transaction, be reviewed and approved or ratified by the Audit Committee, as required by NASDAQ Marketplace Rules.

Our Audit Committee will evaluate related person transactions based on:

- information provided by members of our board of directors in connection with the required annual evaluation of director independence;

- pertinent responses to the Directors' and Officers' Questionnaires submitted periodically by our officers and directors and provided to the Audit Committee by our management;

- background information on nominees for director provided by the Nominating and Corporate Governance Committee of our board of directors; and

- any other relevant information provided by any of our directors or officers.

In connection with its review and approval or ratification, if appropriate, of any related person transaction, our Audit Committee is to consider whether the transaction will compromise standards included in our Code of Ethics. In the case of any related person transaction involving an outside director or nominee for director, the Audit Committee also is to consider whether the transaction will compromise the director's status as an independent director as prescribed in the NASDAQ Marketplace Rules.

Recent Transactions

In 2008, we entered into several written consulting agreements with TS Biopharma, an oncology clinical consulting company owned by Steven Rubinfeld, M.D. Dr. Rubinfeld is the son of Joseph Rubinfeld, Ph.D., one of our directors. Joseph Rubinfeld has no financial interest in the consulting arrangement. Under the consulting arrangement, we agreed to pay TS Biopharma on an hourly basis for consulting services related to the evaluation of our oncology compounds and the design and administration of our clinical oncology program. The consulting arrangement is terminable by either party at any time upon notice to the other party.

During 2008, we paid approximately $273,000 in total consulting fees to TS Biopharma. We cannot predict the future compensation to be paid by us to TS Biopharma, since it will depend on the hours spent in consulting with us.

Exemption Clause

Item 404(a)(7)(a) of Securities and Exchange Commission Regulation S-K states that: Disclosure need not be provided if the transaction is one where the rates or charges involved in the transaction are determined by competitive bid, or the transaction involves rendering of services as a common or contract carrier, or public utility, at rates or charges fixed in conformity with law or governmental authority.

Applicable Definitions

For purposes of our Audit Committee's review:

- "related person" has the meaning given to such term in Item 404(a) of Securities and Exchange Commission Regulation S-K ("Item 404(a)"); and

- "related person transaction" means any transaction for which disclosure is required under the terms of Item 404(a) involving the Company and any related persons.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

BDO Seidman, LLP, or BDO, serves as our independent registered public accounting firm and audited our financial statements for the years ended December 31, 2008, 2007 and 2006.

Audit Fees

The fees for 2008 and 2007 billed to us by BDO for professional services rendered for the audit of our annual consolidated financial statements and internal controls over financial reporting were $350,311 and $656,000, respectively.

Audit-Related Fees

BDO rendered $152,262 of assurance and other related services in 2008, which included services relating to our shelf registration with the SEC and the Innovive acquisition, and $804,000 of audit-related services in 2007.

Tax Fees

The aggregate fees billed by BDO for professional services for tax compliance, tax advice and tax planning were $39,000, $43,000 and $25,000 for 2008, 2007 and 2006, respectively.

All Other Fees

No other services were rendered by BDO for 2008 or 2007.

Pre-Approval Policies and Procedures

It is the policy of our Audit Committee that all services to be provided by our independent registered public accounting firm, including audit services and permitted audit-related and non-audit services, must be pre-approved by our Audit Committee. Our Audit Committee pre-approved all services, audit and non-audit, provided to us by BDO for 2008 and 2007.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this 10-K:

(1) Financial Statements

Our consolidated financial statements and the related report of the independent registered public accounting firm thereon are set forth on pages F-1 to F-25 of this Annual Report. These consolidated financial statements are as follows:

Consolidated Balance Sheets as of December 31, 2008 and 2007

Consolidated Statements of Operations for the Years Ended December 31, 2008, 2007 and 2006

Consolidated Statements of Stockholders' Equity for the Years Ended December 31, 2008, 2007 and 2006

Consolidated Statements of Cash Flows for the Years Ended December 31, 2008, 2007 and 2006

Notes to Consolidated Financial Statements

Reports of Independent Registered Public Accounting Firms

(2) Financial Statement Schedules

The following financial statement schedule is set forth on page F-25 of this Annual Report.

Schedule II — Valuation and Qualifying Accounts for the years ended December 31, 2008, 2007 and 2006

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

(b) Exhibits

See Exhibit Index on page 67 of this Annual Report, which is incorporated herein by reference.

CytRx Corporation
Form 10-K Exhibit Index

Exhibit Number	Description	Footnote
3.1	Amended and Restated Certificate of Incorporation, as amended	(a)
3.2	Restated By-Laws, as amended	(a)
4.1	Shareholder Protection Rights Agreement dated April 16, 1997 between CytRx Corporation and American Stock Transfer &Trust Company as Rights Agent	(b)
4.2	Amendment No. 1 to Shareholder Protection Rights Agreement	(e)
4.3	Amendment No. 2 to Shareholder Protection Rights Agreement	(r)
4.4	Warrant issued on May 10, 2004 to MBN Consulting, LLC	(i)
4.5	Form of Common Stock Purchase Warrant between CytRx Corporation and each of the investors in the October 4, 2004 private placement	(j)
4.6	Form of Common Stock Purchase Warrant between CytRx Corporation and each of the investors in the January 2005 private placement	(k)
4.7	Form of Common Stock Purchase Warrant between CytRx Corporation and each of the investors in the March 2006 private placement	(p)
10.1*	1994 Stock Option Plan, as amended and restated	(c)
10.2*	1998 Long-Term Incentive Plan	(d)
10.3*	2000 Long-Term Incentive Plan	(e)
10.4*	Amendment No. 1 to 2000 Long-Term Incentive Plan	(g)
10.5*	Amendment No. 2 to 2000 Long-Term Incentive Plan	(g)
10.6*	Amendment No. 3 to 2000 Long-Term Incentive Plan	(h)
10.7*	Amendment No. 4 to 2000 Long-Term Incentive Plan	(h)
10.8*	2008 Stock Incentive Plan	
10.9†	License Agreement dated December 7, 2001 by and between CytRx Corporation and Vical Incorporated	(f)
10.10†	Agreement between CytRx Corporation and Dr. Robert Hunter regarding SynthRx, Inc dated October 20, 2003	(h)

10.11	Office Lease between The Kriegsman Group and Douglas Emmett, dated April 13, 2000	(h)
10.12	Assignment to CytRx Corporation effective July 1, 2003 of Office Lease between The Kriegsman Group and Douglas Emmett, dated April 13, 2000	(h)
10.13	Asset Sale and Purchase Agreement dated October 4, 2004, by and among CytRx Corporation, Biorex Research & Development, RT and BRX Research and Development Company Ltd	(j)
10.14	Sublease dated March 14, 2005 between Innovive Pharmaceuticals, Inc. and Friedman, Billings, Ramsey Group, Inc.	(l)
10.15*	Amended and Restated Employment Agreement dated May 17, 2005 between CytRx Corporation and Steven A. Kriegsman	(m)
10.16	First Amendment to Office Lease dated October 14, 2005, by and between CytRx Corporation and Douglas Emmett 1993, LLC	(n)
10.17†	License Agreement dated December 28, 2005 between Innovive Pharmaceuticals, Inc. and Nippon Shinyaku Co., Ltd.	(l)
10.18†	License Agreement dated April 17, 2006 between Innovive Pharmaceuticals, Inc. and KTB Tumorforschungs GmbH	(o)
10.19	Royalty Agreement dated August 28, 2006 between CytRx Corporation and Kenneth Council, as Trustee of the ALS Charitable Remainder Trust	(q)
10.20†	License Agreement dated December 6, 2006 between Innovive Pharmaceuticals, Inc. and TMRC Co., Ltd.	(s)
10.21	Contribution Agreement, dated as of January 8, 2007, between CytRx Corporation and RXi Pharmaceuticals Corporation	(t)
10.22	Voting agreement, dated as of January 10, 2007, between CytRx Corporation and the University of Massachusetts	(t)
10.23	Stockholders agreement, dated February 23, 2007, among CytRx Corporation, RXi Pharmaceuticals Corporation, Craig C. Mello, Ph.D., Tariq Rana, Ph.D., Gregory J. Hannon, Ph.D., and Michael P. Czech, Ph.D	(t)
10.24	Form of Purchase Agreement, dated as of April 17, 2007, by and between CytRx Corporation and each of the selling stockholders named therein	(u)
10.25	Contribution Agreement, dated as of April 30, 2007, between CytRx Corporation and RXi Pharmaceuticals Corporation	(t)
10.26	Lease dated July 20, 2007, between CytRx Corporation and BMR-3030 Bunker Hill Street LLC	(v)
10.27	Agreement and Plan of Merger, dated as of June 6, 2008, among CytRx Corporation, CytRx Merger Subsidiary, Inc., Innovive Pharmaceuticals, Inc., and Steven Kelly	(w)

10.28	Loan and Security Agreement, dated as of June 6, 2008, between CytRx Corporation and Innovive Pharmaceuticals, Inc.	(w)
10.29	Second Amendment to Office Lease dated June 30, 2008, by and between CytRx Corporation and Douglas Emmett 1993, LLC	
10.30	Amendment to Contribution Agreement, dated July 28, 2008, between CytRx Corporation and RXi Pharmaceuticals Corporation	(x)
10.31	Amendment to Stockholders Agreement, dated July 28, 2008, among CytRx Corporation, RXi Pharmaceuticals Corporation, and Michael P. Czech, PhD., Gregory J. Hannon, Ph.D., Craig C. Mello, PhD., and Tariq M. Rana, Ph.D.	(x)
10.32	Sub-Sublease dated December 4, 2008, by and between CytRx Oncology Corporation and Red Pine Advisors LLC	
10.33*	Employment Agreement dated January 1, 2009, between CytRx Corporation and Jack R. Barber	
10.34*	Employment Agreement dated January 1, 2009, between CytRx Corporation and Shi Chung Ng	
10.35*	Employment Agreement dated January 1, 2009, between CytRx Corporation and Benjamin S. Levin	
10.36*	Employment Agreement dated January 1, 2009, between CytRx Corporation and Scott Wieland	
10.37*	Employment Agreement dated January 1, 2009, between CytRx Corporation and John Y. Caloz	
10.38	Investment Banking Agreement, dated January 29, 2009, by and between CytRx Corporation and Legend Securities, Inc.	
23.1	Consent of BDO Seidman, LLP	
31.1	Certification of Chief Executive Officer Pursuant to 15 U.S.C. Section 7241, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	
31.2	Certification of Chief Financial Officer Pursuant to 15 U.S.C. Section 7241, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	

* Indicates a management contract or compensatory plan or arrangement.

† Confidential treatment has been requested or granted for certain portions which have been blanked out in the copy of the exhibit filed with the Securities and Exchange Commission. The omitted information has been filed separately with the Securities and Exchange Commission.

(a)	Incorporated by reference to the Registrant's Form 10-K filed on April 1, 2008
(b)	Incorporated by reference to the Registrant's 8-K filed on April 17, 1997
(c)	Incorporated by reference to the Registrant's 10-Q filed on August 14, 1997
(d)	Incorporated by reference to the Registrant's Proxy Statement filed on April 30, 1998
(e)	Incorporated by reference to the Registrant's Form 10-K filed on March 27, 2001
(f)	Incorporated by reference to the Registrant's Form 8-K filed on December 21, 2001
(g)	Incorporated by reference to the Registrant's Proxy Statement filed June 11, 2002
(h)	Incorporated by reference to the Registrant's 10-K filed on May 14, 2004
(i)	Incorporated by reference to the Registrant's 10-Q filed on August 16, 2004
(j)	Incorporated by reference to the Registrant's 8-K filed on October 5, 2004
(k)	Incorporated by reference to the Registrant's 8-K filed on January 21, 2005
(l)	Incorporated by reference to the Innovive Pharmaceuticals Form 10 filed on April 20, 2006
(m)	Incorporated by reference to the Registrant's 10-Q filed on August 15, 2005
(n)	Incorporated by reference to the Registrant's 8-K filed on October 20, 2005
(o)	Incorporated by reference to the Innovive Pharmaceuticals 10-Q filed on November 14, 2006

(p) Incorporated by reference to the Registrant's 8-K filed on March 3, 2006

(q) Incorporated by reference to the Registrant's 10-Q filed on November 13, 2006

(r) Incorporated by reference to the Registrant's 10-K filed on April 2, 2007

(s) Incorporated by reference to the Innovive Pharmaceuticals 10-K filed on March 21, 2007

(t) Incorporated by reference to the Registrant's 10-Q filed on May 10, 2007

(u) Incorporated by reference to the Registrant's 8-K filed on April 18, 2007

(v) Incorporated by reference to the Registrant's 10-Q filed on August 9, 2007

(w) Incorporated by reference to the Registrant's 8-K filed on June 9, 2008

(x) Incorporated by reference to the Registrant's 10-Q filed on August 11, 2008

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.

Date: March 11, 2009

CYTRX CORPORATION

By: /s/ STEVEN A. KRIEGSMAN
Steven A. Kriegsman
President and Chief Executive Officer

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AND FINANCIAL STATEMENT SCHEDULE

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CYTRX CORPORATION

CONSOLIDATED BALANCE SHEETS

	December 31, 2008	2007
ASSETS		
Current assets:		
Cash and cash equivalents	$ 25,041,772	$ 50,498,261
Short-term investments, at amortized cost	—	9,951,548
Accounts receivable	127,280	101,217
Income taxes recoverable	215,623	—
Prepaid expenses and other current assets	486,609	930,596
Total current assets	25,871,284	61,481,622
Equipment and furnishings, net	1,835,052	1,573,290
Molecular library, net	103,882	193,946
Goodwill	183,780	183,780
Other assets	330,032	713,398
Total assets	$ 28,324,030	$ 64,146,036
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 668,422	$ 1,946,215
Accrued expenses and other current liabilities	2,556,904	3,700,866
Deferred revenue, current portion	1,817,600	8,399,167
Total current liabilities	5,042,926	14,046,248
Deferred revenue, non-current portion	7,582,797	7,167,381
Total liabilities	12,625,723	21,213,629
Minority interest	—	2,708,368
Commitment and contingencies		
Stockholders' equity:		
Preferred Stock, $.01 par value, 5,000,000 shares authorized, including 15,000 shares of Series A Junior Participating Preferred Stock; no shares issued and outstanding	—	—
Common stock, $.001 par value, 175,000,000 shares authorized; 93,978,448 and 90,397,867 shares issued and outstanding at December 31, 2008 and 2007, respectively	93,978	90,398
Additional paid-in capital	210,007,468	203,905,691
Treasury stock, at cost (633,816 shares held, at December 31, 2008 and 2007, respectively)	(2,279,238)	(2,279,238)
Accumulated deficit	(192,123,901)	(161,492,812)
Total stockholders' equity	15,698,307	40,224,039
Total liabilities and stockholders' equity	$ 28,324,030	$ 64,146,036

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

CYTRX CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

	Years Ended December 31,		
	2008	2007	2006
Revenue:			
Service revenue	$ 6,166,150	$ 7,241,920	$ 1,858,772
Licensing revenue	100,000	101,000	101,000
Grant revenue	—	116,118	105,930
	6,266,150	7,459,038	2,065,702
Expenses:			
Research and development	10,465,591	18,823,802	9,781,007
General and administrative	10,932,522	14,822,142	9,657,257
In-process research and development	8,012,154	—	—
Depreciation and amortization	624,980	272,229	227,704
	30,035,247	33,918,173	19,665,968
Loss before other income	(23,769,097)	(26,459,135)	(17,600,266)
Other income:			
Interest and dividend income	1,203,629	2,663,542	996,647
Other income (expense), net	219,489	1,496,979	(3,205)
Equity in loss of affiliate – RXi Pharmaceuticals	(3,915,514)	—	—
Minority interest in loss of subsidiary	88,375	448,671	—
Net loss before provision for income taxes	(26,173,118)	(21,849,943)	(16,606,824)
Provision for income taxes	(873,003)	(40,000)	(145,000)
Net loss	(27,046,121)	(21,889,943)	(16,751,824)
Deemed dividend for anti-dilution adjustments made to outstanding common stock warrants	(756,954)	—	(488,429)
Net loss applicable to common stockholders	$ (27,803,075)	$ (21,889,943)	$ (17,240,253)
Basic and diluted loss per share	$ (0.30)	$ (0.26)	$ (0.25)
Basic and diluted weighted average shares outstanding	91,383,934	84,006,728	68,105,626

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

CYTRX CORPORATION

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Common Stock		Additional Paid-In	Accumulated	Treasury	
	Shares Issued	Amount	Capital	Deficit	Stock	Total
Balance at December 31, 2005	59,283,960	$ 59,284	$ 131,790,932	$ (122,362,616)	$ (2,279,238)	$ 7,208,362
Common stock and warrants issued in connection with private placements	10,650,795	10,651	12,393,709	—	—	12,404,360
Issuance of stock options/warrants for services and licenses	149,928	150	1,930,098	—	—	1,930,248
Options and warrants exercised	703,903	704	358,489	—	—	359,193
Deemed dividend	—	—	488,429	(488,429)	—	—
Net loss	—	—	—	(16,751,824)	—	(16,751,824)
Balance at December 31, 2006	70,788,586	70,789	146,961,657	(139,602,869)	(2,279,238)	5,150,339
Common stock and warrants issued in connection with private placements	8,615,000	8,615	34,239,442	—	—	34,248,057
Issuance of stock options/warrants for services and licenses	—	—	2,402,035	—	—	2,402,035
Options and warrants exercised	10,994,281	10,994	18,778,180	—	—	18,789,174
Issuance of stock options by subsidiary	—	—	1,524,377	—	—	1,524,377
Net loss	—	—	—	(21,889,943)	—	(21,889,943)
Balance at December 31, 2007	90,397,867	$ 90,398	$ 203,905,691	$ (161,492,812)	$ (2,279,238)	$ 40,224,039
Issuance of stock options/warrants for services and licenses	—	—	2,029,209	—	—	2,029,209
Options and warrants exercised	1,006,402	1,006	975,782	—	—	976,788
Common stock issued in connection with the acquisition of Innovive	2,574,179	2,574	2,339,832	—	—	2,342,406
Deemed dividend for anti-dilution adjustment	—	—	756,954	(756,954)	—	—
	—	—	—	(2,828,014)	—	(2,828,014)

Dividend of RXi stock						
Net loss	—	—	—	(27,046,121)	—	(27,046,121)
Balance at December 31, 2008	93,978,448	$ 93,978	$ 210,007,468	$ (192,123,901)	$ (2,279,238)	$ 15,698,307

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

CYTRX CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Years Ended December 31,		
	2008	2007	2006
Cash flows from operating activities:			
Net loss	$ (27,046,121)	$ (21,889,943)	$ (16,751,824)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	624,980	272,229	227,704
Retirement of fixed assets	262	—	—
Non-cash earned on short-term investments	(48,452)	(172,055)	—
Loss on retirement of equipment	—	—	2,864
Minority interest in loss of subsidiary	(88,374)	(448,671)	—
Equity in loss of unconsolidated subsidiary	3,915,514	—	—
Non-cash gain on transfer of RXi common stock	(226,579)	—	—
Non-cash expense on the acquisition of Innovive's in-process research and development	8,012,154	—	—
Stock option and warrant expense	2,103,752	3,511,541	1,284,032
Common stock issued for services	244,860	3,089,639	262,500
Non-cash stock compensation related to research and development	—	—	411,530
Changes in assets and liabilities:			
Accounts receivable	238,131	4,713	66,930
Income taxes recoverable	(215,623)	—	—
Prepaid expenses and other current assets	478,965	(1,214,836)	100,295
Accounts payable	(1,181,116)	757,086	139,530
Deferred revenue	(6,166,151)	(7,241,919)	22,533,467
Accrued expenses and other current liabilities	(56,146)	978,388	1,082,557
Total adjustments	7,636,177	(463,885)	26,111,409
Net cash provided by (used in) operating activities	(19,409,944)	(22,353,828)	9,359,585
Cash flows from investing activities:			
Proceeds (purchase) from sale of short-term investments	10,000,000	(9,779,493)	—
Deconsolidation of subsidiary	(10,359,278)	—	—
Cash outlay in the acquisition of Innovive, relating to its accounts payable	(5,669,749)	—	—
Purchases of equipment and furnishings	(994,326)	(1,269,313)	(41,133)
Net cash used in investing activities	(7,023,353)	(11,048,806)	(41,133)
Cash flows from financing activities:			
Net proceeds from exercise of stock options and warrants	976,808	18,789,173	359,191
Net proceeds from issuances of common stock	—	34,248,058	12,404,360
Capital contributions from minority interest	—	482,271	—
Net cash provided by financing activities	976,808	53,519,502	12,763,551
Net increase (decrease) in cash and cash equivalents	(25,456,489)	20,116,868	22,082,003
Cash and cash equivalents at beginning of year	50,498,261	30,381,393	8,299,390
Cash and cash equivalents at end of year	$ 25,041,772	$ 50,498,261	$ 30,381,393

Supplemental disclosure of cash flow information:			
Cash received during the years for interest received	$ 1,203,629	$ 2,491,487	$ 996,647
Cash paid during the years for income taxes	$ 1,093,764	$ 183,461	$ —
Supplemental disclosures of non-cash investing activities:			
Fair market value of options and warrants provided for goods and services	$ —	$ —	$ 705,794
Acquisition of property and equipment through accrued liabilities	$ 130,955	$ 233,974	$ —

The accompanying notes are an integral part of these consolidated financial statements. See supplemental information on the following page.

Supplemental schedule of non-cash investing and financing activities:

CytRx purchased all of the common stock of Innovive Pharmaceuticals, Inc. in a transaction that for accounting purposes is considered an asset acquisition. See Note 17 below. The fair value of Innovive's assets and liabilities at September 19, 2008, in millions of dollars, are presented below:

In-process research and development	$	8.0
Leasehold interests		0.1
Prepaid expenses		0.3
Accounts payable		(6.1)
Net assets acquired through issuance of common stock	$	2.3

As a result of the March 6, 2008 distribution by CytRx Corporation (the "Company") to its stockholders of approximately 36% of the outstanding shares of RXi Pharmaceuticals Corporation, the Company deconsolidated that previously majority-owned subsidiary. As part of the transaction, the Company deconsolidated $3.7 million of total assets and $4.6 million of total liabilities.

In connection with applicable antidilution adjustments to the price of certain outstanding warrants in March 2008, the Company recorded a deemed dividend of approximately $756,954 in the current year. The deemed dividend was recorded as a charge to accumulated deficit and a corresponding credit to additional paid-in capital. The Company recorded a deemed dividend of $488,429 under the same circumstances in March 2006.

During 2007, the Company allocated $289,254 of additional paid in capital arising from subsidiary common stock options issued to minority interest.

CYTRX CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Nature of Business

CytRx Corporation ("CytRx" or the "Company") is a biopharmaceutical research and development company engaged in the development of high-value human therapeutics. CytRx's drug development pipeline includes two product candidates in clinical development for cancer indications, including registration studies of tamibarotene for the treatment of acute promyelocytic leukemia, or APL. In addition to its core oncology programs, the Company is developing treatments for neurodegenerative and other disorders based upon its small-molecule molecular chaperone amplification technology. CytRx is also engaged in new-drug discovery research at its laboratory facility in San Diego, California, utilizing its master chaperone regulator assay, or MaCRA, technology. Apart from its drug development programs and new-drug discovery research activities, CytRx maintains a 45% equity interest in RXi Pharmaceuticals Corporation, or RXi (NASDAQ: RXII).

On September 19, 2008, CytRx completed its merger acquisition of Innovive Pharmaceuticals, Inc., or Innovive, and its clinical-stage oncology product candidates, including tamibarotene. As a result of the merger, Innovive became a wholly owned subsidiary of CytRx. On December 30, 2008, CytRx merged the former Innovive subsidiary into CytRx. Prior to its acquisition of Innovive, CytRx was focused on developing human therapeutics based primarily upon its small-molecule molecular chaperone amplification technology, including arimoclomol for ALS and iroxanadine for diabetic foot ulcers and other potential indications. After acquiring Innovive, CytRx redirected its efforts to developing Innovive's former lead oncology product candidates, tamibarotene for APL and INNO-206 for small cell lung cancer, SCLC, and other solid tumor cancers, which the Company believes hold greater near-term revenue potential. CytRx's current business strategy is to seek one or more strategic partnerships for the further development of arimoclomol and iroxanadine.

At December 31, 2008, the Company had cash, cash equivalents and short-term investments of $25.0 million. Management believes that CytRx's current resources will be sufficient to support its currently planned level of operations through the first quarter of 2010. This estimate is based, in part, upon the Company's currently projected expenditures for 2009 of approximately $22 million, including approximately $7.1 million for its clinical program for tamibarotene, approximately $3.4 million for its clinical program for INNO-206, approximately $0.6 million for its clinical program for INNO-406, approximately $0.5 million for its animal toxicology studies and related activities for arimoclomol, approximately $1.8 million for operating our clinical programs, approximately $2.7 million for research activities at its laboratory in San Diego, California, and approximately $5.9 million for other general and administrative expenses. Projected expenditures are based upon numerous assumptions and subject to many uncertainties, and the Company's actual expenditures may be significantly different from these projections. The Company will be required to obtain additional funding in order to execute its long-term business plans, although it does not currently have commitments from any third parties to provide it with capital. The Company cannot assure that additional funding will be available on favorable terms, or at all. If the Company fails to obtain additional funding when needed, it may not be able to execute its business plans and its business may suffer, which would have a material adverse effect on its financial position, results of operations and cash flows. For example, the Company intends to assess periodically the costs and potential commercial value of our new-drug discovery activities. Depending on these assessments, the Company may determine to modify, out-source, partner or suspend these activities.

2. Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation — Through February 2008, the Company owned a majority of the outstanding shares of common stock of RXi, which was founded in April 2006 by the Company and four researchers in the field of RNAi, including Dr. Craig Mello, recipient of the 2006 Nobel Prize for Medicine for his co-discovery of RNAi. RNAi is a naturally occurring mechanism for the regulation of gene expression that has the potential to selectively inhibit the activity of any human gene. RXi is focused solely on developing and commercializing therapeutic products based upon RNAi technologies for the treatment of human diseases, including neurodegenerative diseases, cancer, type 2 diabetes and obesity. While RXi was majority-owned, the Company's consolidated financial statements reflected 100% of the assets and liabilities and results of operations of RXi, with the interests of the minority shareholders of RXi recorded as "minority interests." In March 2008, the Company distributed to its stockholders approximately 36% of RXi's outstanding shares, which reduced CytRx's ownership to less than 50% of RXi. As a result of the reduced ownership, CytRx began to account for its investment in RXi using the equity method, under which CytRx records only its pro-rata share of the financial results of RXi as "equity in loss of unconsolidated subsidiary" on the consolidated statements of operations (see Note 9 below). Because only a portion of RXi's financial results for 2008 were recorded by CytRx under the equity method, the Company's results of operations for the year ended December 31, 2008 are not directly comparable to results of

operations for the same period in 2007. The future results of operations of the Company also will not be directly comparable to corresponding periods in prior years during which our financial statements reflected the consolidation of RXi.

Revenue Recognition — Revenue consists of license fees from strategic alliances with pharmaceutical companies as well as service and grant revenues. Service revenue consists of contract research and laboratory consulting. Grant revenue consist of government and private grants.

Monies received for license fees are deferred and recognized ratably over the performance period in accordance with Staff Accounting Bulletin ("SAB") No. 104, Revenue Recognition. Milestone payments will be recognized upon achievement of the milestone as long as the milestone is deemed substantive and we have no other performance obligations related to the milestone and collectability is reasonably assured, which is generally upon receipt, or recognized upon termination of the agreement and all related obligations. Deferred revenue represents amounts received prior to revenue recognition.

Revenue from contract research and consulting fees are recognized over the respective contract periods as the services are performed, provided there is persuasive evidence or an arrangement, the fee is fixed or determinable and collection of the related receivable is reasonably assured. In the case of government grants, once all conditions of the grant are met and no contingencies remain outstanding, the revenue is recognized as grant fee revenue and an earned but unbilled revenue receivable is recorded.

In August 2006, we received approximately $24.3 million in proceeds from the privately-funded ALS Charitable Remainder Trust ("ALSCRT") in exchange for the commitment to continue research and development of arimoclomol and other potential treatments for ALS and a one percent royalty in the worldwide sales of arimoclomol. Under the arrangement, we retain the rights to any products or intellectual property funded by the arrangement and the proceeds of the transaction are non-refundable. The ALSCRT has no obligation to provide any further funding to us. We have concluded that due to the research and development components of the transaction, it is properly accounted for under Statement of Financial Accounting Standards No. 68, Research and Development Arrangements. Accordingly, we have recorded the value received under the arrangement as deferred service revenue and will recognize service revenue using the proportional performance method of revenue recognition, meaning that service revenue is recognized on a dollar-for-dollar basis for each dollar of expense incurred for the research and development of arimoclomol and other potential ALS treatments. We believe that this method best approximates the efforts expended related to the services provided. We adjust our estimates of expense incurred for this research and development on a quarterly basis.

The amount of "deferred revenue, current portion" is the amount of deferred revenue that is expected to be recognized in the next twelve months and is subject to fluctuation based upon management's estimates. Management's estimates include an evaluation of what pre-clinical and clinical trials are necessary, the timing of when trials will be performed and the estimated clinical trial expenses. These estimates are subject to changes and could have a significant effect on the amount and timing of when the deferred revenues are recognized.

Other Income — In March 2008, the Company recognized a non-cash gain of $0.2 million on the transfer of some RXi common stock to certain employees. In June 2007, the Company recognized $1.5 million of income arising from a fee received pursuant to a change-in-control provision included in the purchase agreement for its 1998 sale of its animal pharmaceutical unit.

Cash Equivalents — The Company considers all highly liquid debt instruments with an original maturity of 90 days or less to be cash equivalents. Cash equivalents consist primarily of amounts invested in money market accounts.

Fair Value of Financial Instruments — The carrying amounts reported in the balance sheet for cash and cash equivalents approximate their fair values.

Short-term Investments — RXi has purchased zero coupon U.S Treasury Bills at a discount. These securities mature within the next twelve months. They are classified as held-to-maturity and under Statement of Financial Accounting Standards No. 115, Investments in Debt Securities, are measure at amortized cost since RXi has the intent and ability to hold these securities to maturity. The interest income has been amortized at the effective interest rate.

Equipment and Furnishings — Equipment and furnishings are stated at cost and depreciated using the straight-line method based on the estimated useful lives (generally three to five years for equipment and furniture) of the related assets. Whenever there is a triggering event that might suggest an impairment, management evaluates the realizability of recorded long-lived assets to determine whether their carrying values have been impaired. The Company records impairment losses on long-lived assets used in operations

when events and circumstances indicate that the assets might be impaired and the non-discounted cash flows estimated to be generated by those assets are less than the carrying amount of those assets. Any impairment loss is measured by comparing the fair value of the asset to its carrying amount.

Molecular Library—The Molecular library, a collection of chemical compounds that the Company believes may be developed into drug candidates, are stated at cost and depreciated over five years; the estimated useful life of the molecular library, which is less than the remaining life of the related patents. The molecular library is presently used as a tool in the Company's drug discovery program. On an annual basis, or whenever there is a triggering event that might suggest an impairment, management evaluates the realizability of the molecular library to determine whether its carrying value has been impaired. The Company records impairment losses on long-lived assets used in operations when events and circumstances indicate that the assets might be impaired and the non-discounted cash flows estimated to be generated by those assets are less than the carrying amount of those assets. Any impairment loss is measured by comparing the fair value of the asset to its carrying amount.

Fair Value Measurements—The Company adopted Financial Accounting Standards Board Statement of Financial Accounting Standards No. 157, Fair Value Measurements ("SFAS 157"), effective January 1, 2008. SFAS 157 does not require any new fair value measurements; instead it defines fair value, establishes a framework for measuring fair value in accordance with existing generally accepted accounting principles and expands disclosure about fair value measurements. The adoption of SFAS 157 for our financial assets and liabilities did not have an impact on our financial position or operating results. Beginning January 1, 2008, assets and liabilities recorded at fair value in consolidated balance sheets are categorized based upon the level of judgment associated with the inputs used to measure the fair value. Level inputs, as defined by SFAS 157, are as follows:

- Level 1 – quoted prices in active markets for identical assets or liabilities.

- Level 2 – other significant observable inputs for the assets or liabilities through corroboration with market data at the measurement date.

- Level 3 – significant unobservable inputs that reflect management's best estimate of what market participants would use to price the assets or liabilities at the measurement date.

The following table summarizes fair value measurements by level at December 31, 2008 for assets and liabilities measured
at fair value on a recurring basis (in thousands):

	Level I	Level II	Level III	Total
Cash and cash equivalents	$ 25,042	$ —$	—$	25,042

Impairment of Long-Lived Assets — The Company reviews long-lived assets, including finite lived intangible assets, for impairment on an annual basis, as of December 31, or on an interim basis if an event occurs that might reduce the fair value of such assets below their carrying values. An impairment loss would be recognized based on the difference between the carrying value of the asset and its estimated fair value, which would be determined based on either discounted future cash flows or other appropriate fair value methods.

Patents and Patent Application Costs — Although the Company believes that its patents and underlying technology have continuing value, the amount of future benefits to be derived from the patents is uncertain. Patent costs are therefore expensed as incurred.

Basic and Diluted Loss per Common Share — Basic and diluted loss per common share are computed based on the weighted average number of common shares outstanding. Common share equivalents (which consist of options and warrants) are excluded from the computation of diluted loss per share since the effect would be antidilutive. Common share equivalents which could potentially dilute basic earnings per share in the future, and which were excluded from the computation of diluted loss per share, totaled approximately 15.2 million shares, 17.1 million shares and 30.2 million shares at December 31, 2008, 2007 and 2006, respectively.

As a result of the March 6, 2008 distribution by CytRx to its stockholders of approximately 36% of the outstanding shares of RXi Pharmaceuticals Corporation, the Company recorded a deemed dividend of approximately $757,000. In connection with the Company's adjustment to the exercise terms of certain outstanding warrants to purchase common stock on March 2, 2006, the Company recorded a deemed dividend of $488,000. These deemed dividends are reflected as an adjustment to net loss for the first

quarter of 2008 and the first quarter of 2006 to arrive at net loss applicable to common stockholders on the consolidated statement of operations and for purposes of calculating basic and diluted earnings per shares.

Shares Reserved for Future Issuance — As of December 31, 2008, the Company has reserved approximately 0.7 million of its authorized but unissued shares of common stock for future issuance pursuant to its employee stock option plans issued to consultants and investors.

Stock-based Compensation — Prior to January 1, 2006, the Company accounted for its stock based compensation plans under the recognition and measurement provisions of Accounting Principles Board No. 25, Accounting for Stock Issued to Employees ("APB 25"), and related interpretations for all awards granted to employees. Under APB 25, when the exercise price of options granted to employees under these plans equals the market price of the common stock on the date of grant, no compensation expense is recorded. When the exercise price of options granted to employees under these plans is less than the market price of the common stock on the date of grant, compensation expense is recognized over the vesting period.

The Company's share-based employee compensation plans are described in Note 13. On January 1, 2006, the Company adopted SFAS 123(R), "Accounting for Stock-based Compensation (Revised 2004)" ("123(R)"), which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees, non-employee directors, and consultants, including employee stock options. SFAS 123(R) supersedes the Company's previous accounting under APB 25 and SFAS 123, for periods beginning in fiscal 2006. In March 2005, the Securities and Exchange Commission issued SAB 107 relating to SFAS 123(R). The Company has applied the provisions of SAB 107 in its adoption of SFAS 123(R).

The Company adopted SFAS 123(R) using the modified prospective transition method, which requires the application of the accounting standard as of January 1, 2006, the first day of the Company's fiscal year 2006. The Company's Statement of Operations as of and for the years ended December 31, 2006, 2007 and 2008 reflects the impact of SFAS 123(R). In accordance with the modified prospective transition method, the Company's Statements of Operations for prior periods have not been restated to reflect, and do not include, the impact of SFAS 123(R). Share-based compensation expense recognized under SFAS 123(R) for the years ended December 31, 2008, 2007 and 2006 was $2.1 million, $2.7 million and $1.2 million, respectively. As of December 31, 2008, there was $2.1 million of unrecognized compensation cost related to unvested employee stock options that is expected to be recognized as a component of the Company's operating expenses through 2010. Compensation costs will be adjusted for future changes in estimated forfeitures.

For stock options paid in consideration of services rendered by non-employees, the Company recognizes compensation expense in accordance with the requirements of SFAS No. 123(R) and EITF 96-18, as amended, and Emerging Issues Task Force Issue No. 96-18, "Accounting for Equity Instruments that are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services." Under SFAS No. 123(R), the compensation associated with stock options paid to non-employees is generally recognized in the period during which services are rendered by such non-employees. Since its adoption of SFAS 123(R), there been no change to its equity plans or modifications of its outstanding stock-based awards.

Deferred compensation for non-employee option grants that do not vest immediately upon grant are recorded as an expense over the vesting period of the underlying stock options. At the end of each financial reporting period prior to vesting, the value of these options, as calculated using the Black Scholes option pricing model, will be re-measured using the fair value of the Company's common stock and deferred compensation and the non-cash compensation recognized during the period will be adjusted accordingly. Since the fair market value of options granted to non-employees is subject to change in the future, the amount of the future compensation expense is subject to adjustment until the stock options are fully vested. The Company recognized ($403,000) and $1.5 million,

respectively, of stock based compensation expense related to non-employee stock options in 2008 and 2007.

Research and Development Expenses — Research and development expenses consist of costs incurred for direct and overhead-related research expenses and are expensed as incurred. Costs to acquire technologies, including licenses, that are utilized in research and development and that have no alternative future use are expensed when incurred. Technology developed for use in its products is expensed as incurred until technological feasibility has been established.

Income Taxes — Income taxes are accounted for using an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the Company's financial statements or tax returns. A valuation allowance is established to reduce deferred tax assets if all, or some portion, of such assets will more than likely not be realized.

Concentrations of Credit Risk — Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash, cash equivalents and short-term investments. The Company maintains cash and cash equivalents in large well-capitalized financial institutions and the Company's investment policy disallows investment in any debt securities rated less than "investment-grade" by national ratings services. The Company has not experienced any losses on its deposits of cash or cash equivalent or its short-term investments.

Use of Estimates — The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Significant estimates include the accrual for research and development expenses, the basis for the classification of current deferred revenue, estimated income taxes and the estimate of expense arising from the common stock options granted to employees and non-employees. Actual results could materially differ from those estimates.

Reclassifications — Certain prior year balances have been reclassified to conform with the 2008 presentation, with no change in net loss for prior periods presented.

Other comprehensive income/(loss) — The Company follows the provisions of Statement of Financial Accounting Standards ("SFAS") No. 130, "Reporting Comprehensive Income," which requires separate representation of certain transactions, which are recorded directly as components of shareholders' equity. The Company has no components of other comprehensive income (loss) and accordingly comprehensive loss is the same as net loss reported.

3. Recent Accounting Pronouncements

In September 2006, the FASB issued Statement of Financial Accounting Standards ("SFAS") No. 157, Fair Value Measurements ("SFAS No. 157"). SFAS No. 157 defines fair value, establishes a framework for measuring fair value in accordance with generally accepted accounting principles, and expands disclosures about fair value measurements. SFAS No. 157 does not expand the use of fair value in any new circumstances. In February 2008, the FASB issued Staff Position No. FAS 157-1, which amended SFAS No. 157 to exclude SFAS No. 13, Accounting for Leases, and other accounting pronouncements that address fair value measurements for purposes of lease classification or measurement under Statement 13. However, this scope exception does not apply to assets acquired and liabilities assumed in a business combination. Also in February 2008, the FASB issued Staff Position No. FAS 157-2, which delayed the effective date of SFAS No. 157 for non-financial assets and liabilities, except those items recognized at fair value on an annual or more frequently recurring basis to fiscal years beginning after November 15, 2008 and interim periods within those fiscal years. In October 2008, the FASB issued Staff Position No. 157-3, to clarify the application of SFAS No. 157 when the market for a financial asset is inactive. The Company adopted SFAS No. 157 with no material impact on the Company's consolidated financial statements.

In February 2007, the FASB issued SFAS No. 159, Fair Value Option for Financial Assets and Financial Liabilities ("SFAS No. 159"). SFAS No. 159 permits entities to choose to measure many financial assets and financial liabilities at fair value. Unrealized gains and losses on items for which the fair value option has been elected are reported in earnings. SFAS No. 159 is effective for fiscal years beginning after November 15, 2007. The Company adopted SFAS No. 159 with no material impact on the Company's consolidated financial statements.

In June 2007, the FASB ratified the consensus on Emerging Issues Task Force ("EITF") Issue No. 06-11, Accounting for Income Tax Benefits of Dividends on Share-Based Payment Awards ("EITF 06-11"). EITF 06-11 requires companies to recognize the income tax benefit realized from dividends or dividend equivalents that are charged to retained earnings and paid to employees for non-vested equity-classified employee share-based payment awards as an increase to additional paid-in capital. EITF 06-11 is effective for fiscal years beginning after September 15, 2007. The Company adopted EITF 06-11 with no material impact on the Company's consolidated financial statements.

In June 2007, the FASB ratified the consensus reached on EITF Issue No. 07-3, Accounting for Nonrefundable Advance Payments for Goods or Services Received for Use in Future Research and Development Activities ("EITF 07-3"), which requires that nonrefundable advance payments for goods or services that will be used or rendered for future research and development activities be deferred and amortized over the period that the goods are delivered or the related services are performed, subject to an assessment of recoverability. EITF 07-3 is effective for fiscal years beginning after December 15, 2007. The Company adopted EITF 07-3 with no material impact on the Company's consolidated financial statements.

In December 2007, the FASB issued SFAS No. 160, Noncontrolling Interests in Consolidated Financial Statements ("SFAS No. 160") and a revision to SFAS No. 141, Business Combinations ("SFAS No. 141R"). SFAS No. 160 modifies the accounting for noncontrolling interest in a subsidiary and the deconsolidation of a subsidiary. SFAS No. 141R establishes the measurements in a business combination of the identifiable assets acquired, the liabilities assumed and any noncontrolling interest in the acquiree. Both of these related statements are effective for fiscal years beginning after December 15, 2008. The Company will adopt SFAS No. 160 and SFAS No. 141R with no expected material impact on its consolidated financial statements.

In December 2007, the SEC issued Staff Accounting Bulletin 110 ("SAB 110"), which expresses the views of the Staff regarding use of a "simplified" method, as discussed in SAB 107, in developing an estimate of expected term of "plain vanilla" share options in accordance with Statement of Financial Accounting Standards No. 123. SAB 110 will allow, under certain circumstances, the use of the simplified method beyond December 31, 2007 when an issuer is unable to rely on the historical exercise data. The Company adopted SAB 110 with no material impact on its financial statements.

In March 2008, the FASB issued Statement of Financial Accounting Standards No. 161, Disclosures about Derivative Instruments and Hedging Activities ("SFAS No. 161"). The new standard amends Statement of Financial Accounting Standards No. 133, Accounting for Derivative Instruments and Hedging Activities ("SFAS 133"), and seeks to enhance disclosure about how and why a company uses derivatives; how derivative instruments are accounted for under SFAS 133 (and the interpretations of that standard); and how derivatives affect a company's financial position, financial performance and cash flows. SFAS 161 will be effective for financial statements issued for fiscal years and interim periods beginning after November 15, 2008. Early application of the standard is encouraged, as well as comparative disclosures for earlier periods at initial adoption. The Company does not believe adoption of this standard will have a material effect on its financial statements.

In April 2008, the FASB issued Staff Position No. FAS 142-3, Determination of the Useful Life of Intangible Assets, which amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, "Goodwill and Other Intangible Assets." The Position will be effective for fiscal years beginning after December 15, 2008 and will only apply prospectively to intangible assets acquired after the effective date. Early adoption is not permitted. The Company does not believe adoption of this standard will have a material effect on its financial statements.

In May 2008, the FASB issued Staff Position No. Accounting Principles Board 14-1, Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement) ("FSP No. APB 14-1"). FSP No. APB 14-1 requires that the liability and equity components of convertible debt instruments that may be settled in cash upon conversion (including partial cash settlement) be separately accounted for in a manner that reflects an issuer's nonconvertible debt borrowing rate. FSP No. APB 14-1 will be effective for us as of January 1, 2009. The Company does not believe adoption of this principle will have a material effect on its financial statements.

In May 2008, the FASB issued Statement of Financial Accounting Standards No. 162, The Hierarchy of Generally Accepted Accounting Principles, ("SFAS 162"), which imposes the GAAP hierarchy on the reporting entities, not their auditors, based on the long-standing mandate that the entity's management, not their auditors, is responsible for selecting and applying the appropriate GAAP to their financial statements. The auditors' responsibility is to comply with GAAS as a basis for issuing their audit opinion. In issuing SFAS 162, the FASB does not expect a change in current practice and The Company does not believe adoption of this standard will have any impact on its financial statements.

4. Accounts Receivable

At December 31, 2008 and 2007, the Company had accounts receivable of $127,280 and $101,217, respectively, primarily related annual licensing fees due to the Company. Due to the certainty of the collectability of the accounts receivable, no allowance was recorded.

5. Other Assets

At December 31, 2008 and 2007, the Company had approximately $330,032 and $713,398, respectively, of non-current other assets, which consist primarily of security deposits on contracts for research and development, prepaid insurance and leases for its facilities.

6. Equipment, Furnishings and Molecular Library, net

Equipment, furnishings and molecular library, net, at December 31, 2008 and 2007 consist of the following (in thousands):

	2008	2007
Equipment and furnishings	$ 2,606	$ 1,965
Less — accumulated depreciation	(771)	(392)
Equipment and furnishings, net	1,835	1,573
Molecular library	$ 447	$ 447
Less — accumulated amortization	(343)	(253)
Molecular library, net	$ 104	$ 194

The molecular library was purchased in 2004 and placed in service by the Company in March 2005. The molecular library is being amortized over 60 months, which is less than the estimated effective life of the patents. The Company will incur related amortization of approximately $89,000 in 2009 and $16,000 in 2010.

Depreciation and amortization expense for the years ended December 31, 2008, 2007 and 2006 were $625,000, $272,000 and $228,000, respectively.

7. Accrued Expenses and Other Current Liabilities

Accrued expenses and other current liabilities at December 31, 2008 and 2007 are summarized below (in thousands).

	2008	2007
Professional fees	$ 531	$ 907
Research and development costs	1,662	873
Wages, bonuses and employee benefits	196	1,255
Income taxes	—	30
Other	168	636
Total	$ 2,557	$ 3,701

8. Commitments and Contingencies

The Company acquires assets still in development and enters into research and development arrangements with third parties that often require milestone and royalty payments to the third party contingent upon the occurrence of certain future events linked to the success of the asset in development. Milestone payments may be required, contingent upon the successful achievement of an important point in the development life-cycle of the pharmaceutical product (e.g., approval of the product for marketing by a regulatory agency). If required by the arrangement, CytRx may have to make royalty payments based upon a percentage of the sales of the pharmaceutical product in the event that regulatory approval for marketing is obtained. Because of the contingent nature of these payments, they are not included in the table of contractual obligations.

These arrangements may be material individually, and in the unlikely event that milestones for multiple products covered by these arrangements were reached in the same period, the aggregate charge to expense could be material to the results of operations in any one period. In addition, these arrangements often give CytRx the discretion to unilaterally terminate development of the product, which would allow CytRx to avoid making the contingent payments; however, CytRx is unlikely to cease development if the compound successfully achieves clinical testing

objectives.

CytRx's current contractual obligations that will require future cash payments are as follows:

	Operating Leases (1)	Non-Cancelable Employment Agreements (2)	Subtotal	Research and Development (3)	Total
2009	$ 521	$ 1,610	$ 2,131	$ 1,758	$ 3,889
2010	376	—	376	49	425
2011	253	—	253	49	302
2012	124	—	124	149	273
2013 and thereafter	—	—	—	532	532
Total	$ 1,274	$ 1,610	$ 2,884	$ 2,537	$ 5,421

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(1) Operating leases are primarily facility lease related obligations, as well as equipment and software lease obligations with third party vendors.

(2) Employment agreements include management contracts, which have been revised from time to time, provide for minimum salary levels, adjusted annually at the discretion of the Company's Compensation Committee, as well as for minimum bonuses that are payable.

(3) Research and development obligations relate primarily to clinical trials. Most of these purchase obligations are cancelable.

The Company applies the disclosure provisions of FASB Interpretation No. ("FIN") 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" ("FIN 45"), to its agreements that contain guarantee or indemnification clauses. The Company provides (i) indemnifications of varying scope and size to certain investors and other parties for certain losses suffered or incurred by the indemnified party in connection with various types of third-party claims; and (ii) indemnifications of varying scope and size to officers and directors against third party claims arising from the services they provide to us. These indemnifications and guarantees give rise only to the disclosure provisions of FIN 45. To date, the Company has not incurred material costs as a result of these obligations and does not expect to incur material costs in the future; further, the Company maintains insurance to cover certain losses arising from these indemnifications. Accordingly, the Company has not accrued any liabilities in its consolidated financial statements related to these indemnifications or guarantees.

9. Equity Transactions

On March 11, 2008, the Company paid a dividend to its stockholders of approximately 36% of the outstanding shares of RXi common stock. In connection with that dividend, the Company adjusted the price of warrants to purchase approximately 10.6 million shares that had been issued in prior equity financings in October 2004, January 2005 and March 2006. The adjustments were made as a result of anti-dilution provisions in those warrants that were triggered by the Company's distribution of a portion of its assets to its stockholders. The Company accounted for the anti-dilution adjustments as deemed dividends analogous with the guidance in Emerging Issues Task Force Issue ("EITF") No. 98-5, Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios, and EITF 00-27, Application of 98-5 to Certain Convertible Instruments, and recorded a charge of approximately $757,000 to accumulated deficit and a corresponding credit to additional paid-in capital.

On April 19, 2007, the Company completed a $37.0 million private equity financing in which we issued 8.6 million shares of its common stock at $4.30 per share. Net of investment banking commissions, legal, accounting and other

expenses related to the transaction, the Company received approximately $34.2 million of proceeds.

On March 2, 2006, the Company completed a $13.4 million private equity financing in which it issued 10,650,795 shares of its common stock and warrants to purchase an additional 5,325,397 shares of its common stock at an exercise price of $1.54 per share. Net of investment banking commissions which included 745,556 warrants to purchase CytRx common stock at $1.54 per share, legal, accounting and other expenses related to the transaction, the Company received approximately $12.4 million of proceeds.

In connection with the March 2006 financing, the Company adjusted the price and number of underlying shares of warrants to purchase approximately 2.8 million shares that had been issued in prior equity financings in May and September 2003. The adjustment was made as a result of anti-dilution provisions in those warrants that were triggered by the Company’s issuance of common stock in that financing at a price below the closing market price on the date of the transaction. The Company accounted for the anti-dilution

adjustments as deemed dividends analogous with the guidance in Emerging Issues Task Force Issues ("EITF") No. 98-5, Accounting for Convertible Securities with Beneficial Conversion Features or Contingently Adjustable Conversion Ratios, and EITF 00-27, Application of 98-5 to Certain Convertible Instruments, recorded an approximate $488,000 charge to retained earnings and a corresponding credit to additional paid-in capital.

In connection with the March 2006 private equity financing, the Company entered into a registration rights agreement with the purchasers of its stock and warrants, which provides among other things, for cash penalties in the event that the Company was unable to initially register, or maintain the effective registration of the securities. The Company initially evaluated the penalty provisions in light of EITF 00-19, Accounting for Derivative Financial Instruments Indexed To, and Potentially Settled In a Company's Own Stock, and determined that the maximum penalty does not exceed the difference between the fair value of a registered share of CytRx common stock and unregistered share of CytRx common stock on the date of the transaction. The Company then evaluated the provisions of FASB Staff Position No. EITF 00-19-2, Accounting for Registration Payment Arrangements, which specifies that the contingent obligation to make future payments or otherwise transfer consideration under a registration payment arrangement should be separately recognized and measured in accordance with FASB Statement No. 5, Accounting for Contingencies, pursuant to which a contingent obligation must be accrued only if it is more likely than not to occur. In management's estimation, the contingent payments related to the registration payment arrangement are not likely to occur, and thus no amount need be accrued. The Company has elected to reflect early adoption of FSP 00-19-2 in its 2006 financial statements, and the adoption did not have an effect on its financial statements.

10. Minority Interest in RXi

Through February 2008, the Company owned approximately 85% of the outstanding shares of common stock of RXi. While RXi was majority-owned, the Company's consolidated financial statements reflected 100% of the assets and liabilities and results of operations of RXi, with the interests of the minority shareholders of RXi recorded as "minority interests." The Company offset $88,375 of minority interest in losses of RXi against its net loss for the months of January and February 2008, and $448,671 of minority interest in losses of RXi against its net loss for year ended December 31, 2007.

On March 11, 2008, the Company distributed to its stockholders approximately 4.5 million shares of RXi common stock, or approximately 36% of RXi's outstanding shares, which reduced CytRx's ownership to less than 50% of RXi. As a result, CytRx began to account for its investment in RXi using the equity method, under which CytRx records only its pro-rata share of the financial results of RXi. Because only a portion of RXi's financial results for 2008 were recorded by CytRx under the equity method, the Company's results of operations for 2008 are not directly comparable to results of operations for 2007. The future results of operations of the Company also will not be directly comparable to corresponding periods in prior years during which our financial statements reflected the consolidation of RXi.

11. Equity Investment in RXi

Management determined that the distribution of RXi common stock to stockholders of CytRx in March 2008 represented a partial spin-off of RXi and accounted for the distribution of the RXi common shares at cost. As a result of its reduced ownership in RXi, CytRx began to account for its investment in RXi using the equity method, under which CytRx records only its pro-rata share of the financial results of RXi. The following table presents summarized financial information for RXi for the year ended December 31, 2008:

Income Statement Data (unaudited, in thousands)	Year Ended December 31, 2008
Sales	$ —
Gross profit	—

Loss from continuing operations	(14,553)
Net Loss	(14,373)

Balance Sheet Data (unaudited, in thousands)	December 31, 2008
Current assets	$ 9,929
Noncurrent assets	430
Current liabilities	1,387
Stockholders' equity	8,968

At December 31, 2008, the fair value of CytRx's 6,268,881 shares of RXi common stock was $36.0 million based on the closing price of RXi common stock (NASDAQ: RXII) on that date. As CytRx accounts for its investment in RXi using the equity method, this value it not reflected in the "Investment in affiliates – RXi Pharmaceuticals" on the CytRx balance sheet.

12. Stock Options and Warrants

CytRx Options

The Company has a 2000 Long-Term Incentive Plan under which an aggregate of 10,000,000 shares of common stock were originally reserved for issuance. As of December 31, 2008, there were approximately 7.1 million shares subject to outstanding stock options and approximately 0.7 million shares available for future grant under the plan. Options granted under this plan generally vest and become exercisable as to 33% of the option grants on each anniversary of the grant date until fully vested. The options will expire, unless previously exercised, not later than ten years from the grant date. The Company also has a 1994 Stock Option Plan and a 1998 Long Term Incentive Plan under which 9,167 shares and 27,500 shares, respectively, were subject to outstanding stock options. However, no options are available for future grant under either of these plans.

On November 21, 2008, the Company's board of directors adopted the 2008 Stock Incentive Plan, which will be submitted for approval by the Company's stockholders at the 2009 Annual Meeting of stockholders. In the meantime, the Company may make awards under the 2008 Plan, the effectiveness of which are conditioned upon obtaining such stockholder approval. At December 31, 2008, there were 350,000 shares subject to outstanding options awarded under the 2008 Plan and 9,650,000 shares available for future awards.

The fair value of the stock options at the date of grant was estimated using the Black-Scholes option-pricing model, based on the following assumptions:

	2008	2007	2006
Weighted average risk free interest rate	2.68%	4.41%	4.91%
Dividend yields	0%	0%	0%