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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2008

OR

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

For the transition period from to

Commission file number: 001-32979

THRESHOLD PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**94-3409596**
(State or other jurisdiction of incorporation or organization)	**(IRS employer Identification number)**
1300 Seaport Boulevard, Suite 500, Redwood City, CA	**94063**
(Address of principal executive office)	**(Zip Code)**

(650) 474-8200
(Registrant's telephone number, including area code)

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

Title of Each Class	**Name of Each Exchange On Which Registered**
Common Stock $0.001 Par Value	**The NASDAQ Stock Market LLC**

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

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒
Indicate by check mark whether the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Yes ☐ No ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, 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 ☐	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 12b-2 of the Exchange Act). Yes ☐ No ☒

The aggregate market value of the voting stock held by non-affiliates of the registrant based upon the closing price of the Common Stock on the NASDAQ Capital Market on June 30, 2008 was $7,840,900. Shares of Common Stock held by each executive officer and director and by each person or group who owns 5% or more of the outstanding Common Stock at June 30, 2008 have been excluded. Exclusion of such shares should not be construed to indicate that any such person possesses the power, direct or indirect, to direct or cause the direction of the management or policies of the registrant or that such person is controlled by or under common control with the registrant.

On February 28, 2009 there were 15,221,550 shares of the registrant's common stock outstanding.

Documents incorporated by reference: Portions of the Proxy Statement for Registrant's Annual Meeting of Stockholders to be held May 22, 2009, or the Proxy Statement, are incorporated herein by reference into Part III.

Threshold Pharmaceuticals, Inc.
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PART I

This annual report on Form 10-K, including the sections entitled "Business," "Risk Factors," and "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). We may, in some cases, use words such as "project," "believe," "anticipate," "plan," "expect," "estimate," "intend," "should," "would," "could," "potentially," "will," or "may," or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. Forward-looking statements may include statements about:

- our ability to commence, and the timing of, clinical trials for TH-302, and any additional compounds we develop;
- the completion and success of any clinical trials that we commence;
- our ability to license rights to glufosfamide or 2DG to third parties or obtain external funding to continue development of these products;
- the timing of results of our clinical trials;
- our receipt of regulatory approvals;
- our ability to establish and maintain intellectual property rights in our product candidates;
- whether any product candidates that we are able to commercialize are safer or more effective than other marketed products, treatments or therapies;
- our research and development activities, including development of new product candidates, and projected expenditures;
- our ability to complete preclinical and clinical testing successfully for new product candidates that we may develop or license;
- our ability to have manufactured sufficient supplies of active pharmaceutical ingredient, or API, and drug product for clinical testing and commercialization;
- our ability to obtain licenses to any necessary third party intellectual property;
- our ability to retain and hire necessary employees and appropriately staff our development programs;
- our cash needs; and
- our financial performance.

There are a number of important factors that could cause actual results to differ materially from the results anticipated by these forward-looking statements. These important factors include those that we discuss in this annual report on Form 10-K under the caption "Risk Factors." You should read these factors and the other cautionary statements made in this annual report on Form 10-K as being applicable to all related forward-looking statements wherever they appear in this annual report on Form 10-K. If one or more of these factors materialize, or if any underlying assumptions prove incorrect, our actual results, performance or achievements may vary materially from any future results, performance or achievements expressed or implied by these forward-looking statements. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law. Unless the context requires otherwise, in this annual report on Form 10-K the terms "Threshold," "Threshold Pharmaceuticals," "we," "us" and "our" refer to Threshold Pharmaceuticals, Inc. Threshold Pharmaceuticals, Inc., our logo and Metabolic Targeting are our trademarks. Other trademarks, trade names and service marks used in this annual report on Form 10-K are the property of their respective owners.

ITEM 1. BUSINESS

We are a biotechnology company focused on the discovery and development of drugs targeting the microenvironment of solid tumors as novel treatments for patients living with cancer. The microenvironment of solid tumors is characterized by, among other things, hypoxia or lack of oxygen, disordered blood vessel growth, and the upregulation of glucose transport. This hypoxic environment is known to be resistant to standard chemotherapy and radiation. It is thought to be responsible for the poor prognosis of many solid tumors and treating the hypoxic environment is currently believed to be a significant unmet medical need. Our product candidates are designed to selectively target the hypoxic microenvironment of tumors either by selective toxin activation in the case of our hypoxia activated prodrug (HAP) program, including TH-302, or potentially utilizing the consequences of increased uptake of glucose in cancer cells relative to most normal cells. Our product candidates glufosfamide and 2-deoxyglucose ("2DG") share certain structural characteristics with glucose but act instead as chemotherapeutic toxins when taken up by a cell.

Our focus is on product candidates for the treatment of patients with cancer. We have three product candidates for which we have exclusive worldwide marketing rights:

- TH-302, which we discovered, is our lead product candidate for the potential treatment of patients with cancer. It is a novel drug candidate that is activated under the severe hypoxic conditions of most solid tumors. In May 2007, we announced the filing of an investigational new drug application ("IND") with the United State Food and Drug Administration ("FDA") for TH-302, and in July 2007, we initiated a Phase 1 clinical trial evaluating the safety of TH-302 in patients with advanced solid tumors. In October 2008, we reported interim results for this clinical trial. In the first quarter of 2009 we expanded enrollment to explore activity in specific indications and expect to provide top-line results in the second quarter of 2009. In August 2008, we initiated a multi-armed Phase 1/2 clinical trial of TH-302 which includes three separate treatment arms with each arm combining TH-302 with a different chemotherapeutic agent for the treatment of patients with solid tumors. In September 2008, we also initiated a Phase 1/2 clinical trial of TH-302 in combination with doxorubicin in patients with advanced soft tissue sarcoma. We expect to provide interim results for the two trials in the second quarter of 2009 and we expect to complete enrollment in the fourth quarter of 2009.
- Glufosfamide is for the potential treatment of patients with cancer. In February 2007, we announced that our Phase 3 clinical trial did not reach its primary endpoint of a statistically significant survival benefit for patients with metastatic pancreatic cancer that relapsed following chemotherapy with gemcitabine. In May 2008, we completed the Phase 3 study and we are conducting no further clinical trials at this time. We plan to partner or seek external funding for the future development of glufosfamide.
- 2DG is our product candidate for the potential treatment of patients with cancer and has been evaluated in a Phase 1 clinical trial alone and in combination with docetaxel as a combination therapy. This clinical trial began in the first quarter of 2004 and we completed enrollment in the first half of 2008. We presented top-line results for this clinical trial in August 2008. We are not currently planning or conducting any additional clinical trials of 2DG. We plan to partner or seek external funding for the future development of 2DG.

We are working to discover additional hypoxia activated prodrugs that will selectively target cancer cells.

Our Strategy

Our goal is to create a leading biotechnology company that develops and commercializes drugs based on targeting the tumor microenvironment. We focus on inactive prodrugs of known chemotherapeutic agents that undergo relatively selective activation in the tumor microenvironment and potentially allow for an improved safety and efficacy profile for the drug. Key elements of our strategy are to:

- *Develop TH-302 successfully.* We have an ongoing Phase 1 clinical trial to determine the maximum tolerated dose (MTD), dose limiting toxicities, safety, pharmacokinetics and preliminary efficacy of TH-302 in advanced solid tumors. We expanded enrollment in this study to investigate TH-302 as a

single agent in specific indications in which activity has been documented. We have ongoing Phase 1/2 clinical trials to determine the maximum tolerated dose, dose limiting toxicities, safety, pharmacokinetics and preliminary efficacy of TH-302 in combination with currently approved chemotherapies. Data from this collection of clinical trials may support our initial randomized controlled trial of TH-302.

- *Develop glufosfamide through a partnership or external funding.* We are performing translational research to improve our knowledge of glufosfamide's mechanism of action and continue to analyze our clinical data to better understand the reasons why certain indications such as pancreatic cancer and soft tissue sarcoma provide stronger efficacy signals than other clinical indications and why specific subgroups of patients within those indications appear to benefit from glufosfamide more than other subgroups. If successful, we may design further clinical trials to exploit the mechanism of action and partner the future development of glufosfamide or seek external funding for the same.
- *Develop 2DG and seek a partner or external funding for further development.* We have completed a Phase 1 clinical trial with 2DG to evaluate the safety, pharmacokinetics and maximum tolerated dose in patients with solid tumors. Data from the trial established the safety of 2DG and suggests that in combination with docetaxel, 2DG may provide antitumor activity in patients with non small cell lung carcinoma and head and neck cancers. Given our focus on prodrug therapeutics, we plan to seek a partner or external funding for continued development of this drug candidate.
- *Continue to broaden our pipeline by discovering and developing new compounds.* We are actively pursuing research programs to discover and develop novel therapies that address major currently unmet medical needs. We will continue to develop drug candidates from our hypoxia activated prodrug platform. We also plan to continue to evaluate additional in-licensing opportunities that build on our expertise and complement our current pipeline.
- *Build on our expertise in targeting the tumor microenvironment.* We intend to continue our focused approach in research and clinical development. We believe our expertise in this area gives us an advantage in the identification of new product candidates, therapeutic indications and technologies. We will also leverage the expertise of our scientific and clinical advisors and continue to enter into collaborations with other experts in the field.

Our Product Development Programs

The following table summarizes the status of our current and ongoing product development programs:

Product Candidate	Indication	Development Status	Expected Milestones
TH-302	Various solid tumors	• Phase 1 monotherapy	• Top line results in Q2 2009 and complete enrollment in Q4 2009.
	Various solid tumors	• Phase 1/2 combination therapy	• Interim results in Q2 2009, and complete enrollment in Q4 2009.
	Various solid tumors	• Phase 2 randomized controlled combination therapy	• Initiate trial in Q4 2009.
Glufosfamide	Pancreatic cancer		
	2nd line monotherapy and 1st line combination with gemcitabine	• Completed studies in 2008.	• No further development without partner or external funding in this indication
	Soft tissue sarcoma	• Completed study in 2008.	• No further development without partner or external funding in this indication
2DG	Various solid tumors	• Phase 1 data complete.	• No further development without partner or external funding in this indication

Market Opportunities

Current Therapies for Cancer

Many different approaches are used in treating cancer, including surgery, radiation and drugs or a combination of these approaches. Drugs used to treat cancer include chemotherapeutics, hormones and immune-based therapies. Traditionally, strategies for designing cancer therapies have focused on killing cancer cells that exhibit rapid division and growth, and most conventional cancer drugs have been evaluated and optimized using cellular and animal models that reflect rapid cell growth.

However, most solid tumors are actually composed of both rapidly and slowly dividing cells. Conventional cancer treatments are not designed to target the slowly dividing cells found in portions of solid tumors and therefore typically do not succeed in killing all cancerous cells. As a tumor grows, its vasculature is disordered and chaotic, leaving portions of the tumor with regions where the oxygen concentration is significantly lower than in healthy tissues. This condition is called Tumor Hypoxia. Solid tumors have significant hypoxic regions, and because these regions have limited access to the blood supply and oxygen, the cells in them divide slowly, making them resistant to traditional chemotherapy and radiation treatment, which target rapidly dividing cells. Similarly, chemotherapeutic agents delivered in the blood supply are less able to penetrate into hypoxic regions because they are more distant from the blood supply. Moreover, many scientists now believe that hypoxia can lead to genetic mutations, which can give rise to drug resistance and enhanced metastatic potential. Thus, therapeutics that target hypoxic zones could provide significant additional anti-tumor activity and clinical benefit over current chemotherapeutic and radiation therapies.

Another disadvantage of current cancer therapies that target rapidly dividing cells is their toxic side effects. Because rapidly dividing cells are also found in many healthy tissues, particularly the gastrointestinal tract, bone marrow and hair follicles, nearly all conventional chemotherapy drugs cause severe side effects, such as diarrhea and reduction in blood cell production, which may lead to bleeding, infection and anemia, as well as other side effects, such as hair loss. Likewise, radiation generally cannot be administered without causing significant damage to healthy tissue surrounding a tumor. Since TH-302 and glufosfamide are inactive prodrugs, it is believed that they should not produce the typical adverse side effects associated with chemotherapy observed in otherwise normal healthy tissues. Since our prodrugs are designed to undergo tumor selective activation, we anticipate that they should have a favorable safety profile and produce less toxicity to normal tissues at the doses that are effective in treating tumors than is the case with traditional therapies.

Melanoma

The American Cancer Society estimates that 62,480 people were diagnosed with melanoma in the United States in 2008, and approximately 8,420 people died from the disease.

Prostate Cancer

The American Cancer Society estimates that 186,320 people were diagnosed with prostate cancer in the United States in 2008, and approximately 28,660 people died from the disease.

Lung Cancer

The American Cancer Society estimates that 215,020 people were diagnosed with lung cancer in the United States in 2008, and approximately 161,840 people died from the disease.

Pancreatic Cancer

The American Cancer Society estimates that 37,680 patients were diagnosed with pancreatic cancer in the United States in 2008, and approximately 34,290 patients died from the disease. Only 15-20% of newly diagnosed patients are eligible for surgery, which is typically followed by radiation and chemotherapy. Patients with inoperable pancreatic cancer are treated with radiation and chemotherapy, or in the case of advanced disease, chemotherapy alone as the advantages of radiation are reduced. Gemcitabine is the standard of care for the first-line therapy of advanced metastatic pancreatic cancer. Tarceva was recently approved as a combination therapy with gemcitabine for the first line treatment of pancreatic cancer. Eli Lilly reported worldwide sales of Gemzar (gemcitabine) for all indications to be over $1.7 billion in 2008.

Soft Tissue Sarcoma

The American Cancer Society estimates that 10,390 people were diagnosed with soft tissue sarcoma in the United States in 2008, and approximately 3,680 people died from the disease. Soft tissue sarcoma is a rare and diverse form of cancer originating in various soft tissues such as fat, muscle, nerve, vascular tissue and other connective tissues. Soft tissue sarcoma patients are treated with surgery whenever possible with or without radiation and chemotherapy. Radiation and chemotherapy alone or in combination are also used for advance or recurrent disease or used when surgery is not possible.

TH-302

Our primary lead product candidate for cancer is TH-302, a novel prodrug candidate we discovered. Preclinically, it is preferentially activated under severe hypoxic conditions and has demonstrated potent anticancer activity in multiple preclinical cancer models. TH-302 combines a 2-nitroimidazole oxygen-sensing trigger with a masked DNA crosslinker. Upon activation in oxygen deficient zones, TH-302 is converted

selectively to the drug's active form, dibromo isophosphoramide mustard, a potent alkylator. TH-302 targets levels of severe hypoxia that are found in tumors but are rare in normal tissues—this is how selective targeting of the tumor occurs. After conversion to the active form of the drug, the hypoxic cells are exposed to high concentrations of released cytotoxic agent, which can also diffuse into the adjacent regions of the tumor. We believe that TH-302 will be less likely to produce the systemic toxicity caused by most cytotoxic chemotherapies, while targeting the hypoxic regions of tumors known to be more difficult to treat with standard therapies.

In addition to all of the standard toxicity and pharmacokinetic studies that are required to enable an investigational new drug (IND) application, numerous*in vitro* and *in vivo* efficacy studies with TH-302 have been conducted. A summary of the pre-clinical efficacy studies with TH-302 follows. Approximately 8 different human tumor-derived cell lines, representing 7 different tumor types, have been evaluated for their sensitivity to TH-302 and all were shown to have enhanced sensitivity to TH-302 under hypoxic conditions compared to higher oxygen concentrations. No cell lines that were investigated were resistant to TH-302 under hypoxic conditions. In addition, we have also evaluated TH-302 in ectopic xenograft models of cancer, in which human tumor cells are implanted beneath the skin of mice and permitted to grow as tumors. More than 20 of these studies were conducted using 5 different tumor types and multiple drug combinations. In all of these models, the combination of TH-302 with either chemotherapeutic agents or radiation consistently added efficacy above that seen with the single agent chemotherapeutic. We conducted animal studies of TH-302 in orthotopic mouse models of human cancer, in which human cancer cells are implanted into the corresponding mouse tissue and tumors are allowed to develop before treatment, to assess the efficacy of TH-302 in treating a variety of cancer types. In these models, TH-302 demonstrated promising efficacy when used in combination with standard chemotherapeutic agents. In an orthotopic mouse model of human pancreatic cancer, in which mice were treated with either gemcitabine or gemcitabine in combination with TH-302, complete responses were observed in 1 out of 8 animals treated with TH-302 in combination with gemcitabine. In comparison, no complete responses were seen following single-agent gemcitabine. In a similar mouse model of human prostate cancer, complete responses were observed in 4 out of 8 animals treated with TH-302 in combination with taxol. In comparison, no complete responses were reported with single-agent taxol. TH-302 was also tested in combination with docetaxel therapy in a metastatic mouse model of human hormone refractory prostate cancer. The combination of TH-302 with docetaxel resulted in 8 out of 10 complete responses. In comparison, 3 out of 10 complete responses were reported with single-agent docetaxel. Most recently, TH-302 has been evaluated in a metastatic mouse model of human lung cancer, alone and in combination with docetaxel. These preclinical results, which reflect our overall experience with cell-based animal models, indicate that combination therapies with TH-302 may be efficacious in the treatment of human solid tumorsclinical studies of different tumor types. There can be no assurance, however, that these animal studies will accurately predict the results of human clinical trials.

We commenced a Phase 1 clinical trial of TH-302 in July 2007. This is a dose-escalation clinical trial to determine the maximum tolerated dose ("MTD"), dose limiting toxicity, safety, pharmacokinetics and preliminary efficacy of weekly dosing of TH-302. In January 2009 the clinical trial enrollment was expanded to investigate the activity of TH-302 at the MTD in patients with advanced/metastatic melanoma, small cell lung cancer or non-small cell lung cancer and to establish the MTD utilizing a once every three week dosing regimen. The clinical trial is intended to enroll up to 90 patients with advanced solid tumors. Up to six patients per dose level participate in the dose escalation phases of the trial. A MTD of 575 mg/m2 has been established for the weekly regimen. Expansion at the MTD is ongoing with 36 additional patients to be enrolled at the MTD level. We expect to present data from the clinical trial in the second quarter of 2009. While the duration of the Phase 1 clinical trial depends on the number of dose cohorts required to achieve the maximum tolerated dose and the timing and frequency of dose limiting toxicity, we expect to complete enrollment by fourth quarter of 2009.

We initiated a multi-armed Phase 1/2 clinical trial and a separate Phase 1/2 trial to explore the efficacy of TH-302 in combination with chemotherapy in third quarter of 2008. The multi-armed clinical trial incorporates three different treatment arms with each arm combining another agent, gemcitabine, docetaxel or pemetrexed, with TH-302. The separate Phase 1/2 trial combined doxorubicin with TH-302. Separate dosing regimens were

established for each of the treatment combinations. These combination arms may allow further development in hormone refractory prostatic carcinoma, metastatic pancreatic cancer, non-small cell lung cancer and soft tissue sarcoma. These indications have been highlighted in view of the high degree of hypoxia exhibited by these cancers and the therapeutic effect of TH-302 on these cancers in orthotopic xenograft and other preclinical models. The Phase 1 portion of these combination trials will also support the use of combinations in other indications where gemcitabine, docetaxel and pemetrexed are the standard of care. While the duration of the clinical trials depends on the number of dose cohorts required to achieve the maximum tolerated dose and the timing and frequency of dose limiting toxicity, we expect to complete enrollment by fourth quarter of 2009.

In addition, if the single agent TH-302 tumor response data are supportive and/or the combination TH-302 tumor response data are supportive, we plan to initiate a randomized controlled trial of TH-302 as a single agent or in combination with chemotherapy in the fourth quarter of 2009.

Glufosfamide

Another product candidate for cancer, glufosfamide, is a small molecule prodrug for the treatment of pancreatic and a variety of other cancers. Glufosfamide combines the active part of an approved alkylator, isophosphoramide, a member of a widely used class of chemotherapy drugs, with a glucose molecule to mask the activity of isophosphoramide. Because of its glucose component and a tumor cell's increased need for glucose, glufosfamide may be preferentially transported into tumors compared to most normal tissues. Most cancers and isolated cancer cell lines over-express the family of glucose transporters due to the increased energy requirement needed to feed uncontrolled proliferation of cancer cells. While the functional role of many of the glucose transporters is not well established, it has been shown that malignant tumors express more glucose transporters and are assumed to undergo enhanced glucose metabolism. Furthermore the linkage between glucose and the alkylator is thought to be cleaved by endogenous enzymes to release the active drug. It is possible that the activities of these enzymes are greater in tumor cells in general, or in specific types of tumor cells in particular, than in normal cells of the body, leading to an enhanced cleavage of the glufosfamide prodrug to the active cytotoxin and glucose in the tumor cells. With glucose as the major side product, glufosfamide has fewer side effects than other drugs in its class, which are known to cause hemorrhagic cystitis, a serious condition characterized by severe bladder bleeding, unless another protective drug is co-administered.

We believe that the potential unique mechanism of action of glufosfamide, its advantage of generating less toxic metabolites, and demonstrated activity in animal studies and human clinical trials make it well-positioned to potentially replace conventional alkylating agents. Based on activity seen in all clinical trials to date, we believe that glufosfamide may offer an improvement over conventional therapies for the treatment of pancreatic cancer and soft tissue sarcoma.

We had been developing glufosfamide as a single agent for the second-line treatment of metastatic pancreatic cancer, and in combination with gemcitabine for the first-line treatment of inoperable, locally advanced and/or metastatic pancreatic cancer.

In August 2006, we completed enrollment in a pivotal Phase 3 clinical trial of glufosfamide for the treatment of patients with metastatic pancreatic cancer who have failed treatment with gemcitabine. On February 26, 2007, we announced the results of our Phase 3 clinical trial in patients with metastatic pancreatic cancer who had relapsed after gemcitabine chemotherapy. While the overall survival in patients in the glufosfamide arm was 18% higher compared to those who received best supportive care alone, the result was not statistically significant. The primary efficacy comparison of overall survival was based on 261 deaths and did not reach statistical significance ($p=0.19$); the hazard ratio of glufosfamide to BSC was 0.85 (95% confidence interval of 0.66 to 1.08). The median survival of patients who were treated with glufosfamide was 105 days versus 84 days for the patients who received BSC. No new or unexpected safety signals were observed. Adverse events, including renal toxicity and hematologic toxicity, were similar to those observed in previous clinical trials of glufosfamide. The most common drug-related toxicities in the glufosfamide-treated patients were nausea and

vomiting. In 2008, we completed and closed the study. Glufosfamide for the treatment of second-line pancreatic cancer was granted Fast Track designation by the FDA in 2004, which provides for expedited regulatory review for new drugs that demonstrate the potential to address unmet medical needs for the treatment of serious or life-threatening conditions. In September 2006, we received orphan drug designation for glufosfamide from the FDA.

In September 2007, we announced the results from the Phase 2 clinical trial of glufosfamide in combination with gemcitabine for the treatment of advanced pancreatic cancer. Glufosfamide was generally well tolerated in combination with gemcitabine with no new unexpected adverse events. In the Phase 2 clinical trial, 29 patients were treated, of which 28 patients with pancreatic adenocarcinoma previously untreated with chemotherapy were evaluated for response. Overall, five patients achieved a confirmed partial response and one other patient achieved an unconfirmed partial response for a response rate of 21%. In addition, 11 of 28 (39%) patients had stable disease. The median progression-free survival was 3.7 months and median overall survival was 6.0 months. The 6-month and 12-month survival rates were 50% and 32%, respectively. The safety data in this Phase 2 glufosfamide and gemcitabine combination clinical trial suggest the incidence of treatment-related nephrotoxicity may be slightly higher than what was observed in previous experience with either of these agents used individually.

Soft tissue Sarcoma

In January 2008, we announced the preliminary results of a multi-center Phase 2 clinical trial of glufosfamide for the treatment of patients with soft tissue sarcoma who had failed one or two prior systemic treatments. Twenty-two patients with metastatic and/or advanced unresectable soft tissue sarcoma previously treated with one or two prior systemic therapies enrolled in the Phase 2, open-label, clinical trial at various sites in the United States. The primary efficacy endpoint of the clinical trial was the objective response rate. The secondary endpoints of the clinical trial included duration of response, progression-free survival, overall survival and various safety parameters. Tumor response was evaluated at baseline and every six weeks using the Response Evaluation Criteria In Solid Tumors (RECIST). Eight of 19 (42%) evaluable patients demonstrated clinical benefit with a RECIST assessment of stable disease or partial response. The most common severe adverse event was renal failure (five patients). Renal toxicity was higher than in other glufosfamide clinical trials.

2DG

2DG, our product candidate for the treatment of solid tumors, was investigated in a Phase 1 clinical trial. 2DG is an orally administered small molecule that employs Metabolic Targeting to treat solid tumors by directly inhibiting glycolysis. Because tumor cells in general, and those in hypoxic zones in particular, are dependent on glycolysis for survival, tumor cells are particularly sensitive to the effect of 2DG. This compound is a synthetic glucose analog that distributes selectively to tumor tissue because of metabolic changes related to increased glucose consumption. Because tumor cells exhibit increased levels of glucose transport proteins, these cells actively transport 2DG into the cells. Once inside the cell, 2DG interferes with cellular mechanisms for generating energy by competing with glucose for key enzymes in glycolysis. The *in vivo* efficacy of 2DG has been studied in mouse and rat models of certain cancers, including sarcomas, adenocarcinomas, leukemias, melanomas and bladder, colon and breast tumors. In particular, treatment with 2DG, alone and in combination with other chemotherapy resulted in increased lifespan or a reduction in tumor growth in many of these models. Animal studies suggest that 2DG and docetaxel may work together to kill cancer cells with greater efficacy than either drug alone, without increased risk of side-effects. We are developing 2DG based on its specificity for targeting tumor cells and extensive human safety data, as well as demonstrated animal efficacy that we and our collaborators at the University of Miami published in *Cancer Research* in January 2004.

We launched a Phase 1 clinical trial of 2DG in January 2004. This is a dose-escalation clinical trial to determine the safety, blood levels and maximum tolerated dose of daily oral doses of 2DG given alone or in combination with docetaxel. The clinical trial enrolled patients with previously treated refractory advanced solid tumors. The clinical trial evaluated the effect of 2DG alone and in combination with docetaxel on tumor growth,

and provided a preliminary assessment of efficacy, as assessed by computer tomography. Data from this clinical trial was initially reported at American Society of Clinical Oncology 2005 and has been periodically updated. The data suggest that 2DG is well tolerated. We completed enrollment in this clinical trial in the second quarter of 2008 and presented top line data in August 2008.

We intend to seek a partner or external funding to support any further development of 2DG. We would choose indications and appropriate combination therapies for our Phase 2 program based on our accumulated preclinical and clinical results.

Discovery Research

We have research programs focused on targeting the tumor microenvironment of solid tumors particularly the severely hypoxic compartments in solid tumors. Solid tumors possess chaotic and insufficient blood flow resulting in regions which are hypoxic or otherwise starved for oxygen. These extremely low oxygen conditions are not found in normal tissues and these hypoxic zones are found in virtually all solid tumors. The hypoxic zones of tumors are known to be resistant to standard chemotherapeutics and to radiation therapy. Tumor hypoxia correlates with poor prognosis in cancer patients and represents a significant unmet medical need. The general nature of hypoxia in solid tumors offers the possibility for cancer therapeutics which broadly are useful in many indications with an associated large market opportunity.

Our most advanced efforts targeting these regions are the design and development of novel cytotoxic prodrug compounds. A prodrug is an inactive compound that is converted in the human body by enzymatic processes that result in the formation of an active drug. The prodrug concept is well established in chemotherapy and, was initially only employed to modify the pharmacokinetic properties of compounds through non-specific activation processes. More recently has the concept been applied to the design of agents that are selectively activated in tumor tissues through specific activation processes.

Our prodrugs have two distinct parts, a toxic portion (the chemotherapeutic toxin) and an attached trigger molecule. To prevent general toxicity, the trigger molecule masks the toxin until the prodrug is activated by the low oxygen concentration in the hypoxic zones of solid tumors. Once activated, the toxin kills cells in its vicinity. We have designed prodrugs that are triggered only at the very low oxygen levels found in these hypoxic regions. Our experiments indicate that we can achieve a greater than 100-fold difference in cytotoxicity between cells in normal oxygen levels and hypoxic cells. Our lead investigational drug, TH-302, was our first product candidate from this program. TH-302 is highly selective and produces a conventional DNA cross-linking toxin upon activation. Hypoxia activated prodrugs of other toxin classes are being pursued. Lead compounds have demonstrated promising *in vitro* activity, and additional characterization, evaluation and optimization of these compounds is currently underway.

Our expertise includes broad capabilities in lead synthesis, assay development and *in vitro* and *in vivo* compound evaluation. Our medicinal chemistry expertise allows us to turn initially promising compounds generated by our chemists into drug candidates. We believe that our research focus combined with our medicinal chemistry expertise provide us with the capacity to identify, discover and develop novel therapies.

Manufacturing and Supply

The production of TH-302, glufosfamide and 2DG employs small molecule organic chemistry procedures that are standard for the pharmaceutical industry. We currently rely on contract manufacturers for the manufacture of active pharmaceutical ingredient, or API, and final drug product of TH-302, glufosfamide and 2DG. We intend to continue to use our financial resources to accelerate the development of our product candidates rather than diverting resources to establish our own manufacturing facilities.

We are currently using contract manufacturers to manufacture TH-302 API and TH-302 drug product. We have scheduled manufacturing to meet our clinical supply needs for 2009. We based our estimates for the amount of drug we will need based on assumptions about study enrollment and study dose levels including the maximum tolerated dose. If we are not successful in manufacturing sufficient quantities of TH-302 API and drug product or consume more drug product than anticipated because of a higher than expected maximum tolerated dose, we may experience a significant delay in our TH-302 clinical program.

If we partner or secure external funding for the continued development of glufosfamide, we will be dependent on contract manufacturers to produce additional API and drug product.

If we partner or secure external funding for the continued development of 2DG, we will be dependent on contract manufacturers to produce additional API and drug product.

We will need to enter into additional agreements for additional supplies of each of our product candidates to complete clinical development and/or commercialize them. These products will need to satisfy all cGMP manufacturing requirements, including passing product specifications. Our inability to satisfy these requirements could delay our clinical programs.

During the years ended December 31, 2008, 2007 and 2006, we spent $13.4 million, $23.4 million and $46.3 million, respectively, on research and development, including product development, discovery research and contract manufacturing activities.

License and Development Agreements

Glufosfamide License

In August 2003, we entered into an agreement with Baxter International, Inc. and Baxter Healthcare S.A., or together, Baxter, for the licensing and development of glufosfamide. Under this agreement, we have an exclusive worldwide license and/or sublicense under Baxter's patent rights, proprietary information, and know-how relating to glufosfamide to develop and commercialize products containing glufosfamide for the treatment of cancer. Baxter's patent rights include one issued United States patent and 24 foreign counterparts related to glufosfamide, as well as one foreign patent related to its manufacture. Baxter has agreed to provide us with all of its information related to glufosfamide, including animal study data.

In consideration for our licenses under this agreement, we paid an upfront license fee of $100,000 and development milestone payments of $100,000 and $1.3 million. We are obligated to make certain additional development milestone payments, with the next such payment of $1.0 million due in connection with the filing of a new drug application with the FDA for glufosfamide. Future milestone payments in connection with the development of glufosfamide and United States and foreign regulatory submissions and approvals could equal $8.0 million, and sales-based milestone payments could total up to $17.5 million. Following regulatory approval, we will be obligated to pay up to mid-single digit royalties to Baxter based on sales of glufosfamide products.

This agreement remains in effect until terminated by either party. We may terminate the agreement at will upon 60 days prior written notice to Baxter. Baxter may terminate this agreement if we:

- fail to meet our obligations under the agreement to develop and commercialize a glufosfamide product, and we have not cured this breach within 90 days after receiving a notice from Baxter;
- discontinue development of glufosfamide products for a continuous period of 12 months, in a manner that is inconsistent with our then-current plan to develop glufosfamide products, and we have not cured this breach within 90 days after receiving a notice from Baxter;
- are in material breach of any other term of the agreement, which is not cured within 60 days of any notice by Baxter; or
- become insolvent.

Glufosfamide Asian Development Agreement

In November 2004, we entered into a Development Agreement with MediBIC Co. Ltd ("MediBIC"). MediBIC is a publicly traded Japanese biotechnology company focused on developing therapeutic compounds in partnership with non-Japanese biotechnology firms and providing consulting services in the design, management, and data analysis of clinical trials using pharmacogenomic platforms developed internally and in collaboration with other companies. By working with MediBIC, we believe that we will be able to develop glufosfamide in Asian countries more quickly than by undertaking such efforts on our own or with other third parties. Pursuant to this agreement, we agreed with MediBIC on a development plan for glufosfamide for the treatment of pancreatic cancer in certain Asian countries, including Japan, South Korea, India, China, Taiwan and Hong Kong. We have also received an exclusive, royalty-free license to MediBIC's know-how for the manufacture, sale, and distribution of glufosfamide products for the treatment of cancer worldwide. In connection with the Development Agreement, we granted to MediBIC a non-exclusive license to use our confidential information relating to glufosfamide for the limited purpose of preparing the development plan and any associated marketing plans as authorized under the Development Agreement, and a non-exclusive license to use our confidential information for the time necessary for MediBIC to perform its obligations under the development plan.

Under this agreement, in December 2004 we received an upfront payment of $4.75 million to support the development of glufosfamide in the Asian countries covered by the agreement and, under a separate but related agreement, an option payment of $250,000. We are responsible for all development activities and MediBIC has no other funding obligations. We have agreed to pay MediBIC a percentage of net sales or net revenues from the sales of glufosfamide products for the treatment of cancer by us or third parties in the Asian countries covered by the agreement. We may also be required to pay MediBIC a percentage of up-front or milestone payments we receive from any third-party sublicensee of ours for the development of a glufosfamide product for the treatment of cancer in those Asian countries.

We may terminate the agreement at any time by making certain payments to MediBIC ranging from $7.0 million to $15.0 million, depending on the stage of development of the glufosfamide product. Otherwise, the agreement will continue until the expiration of the last-to-expire patent in a country in the Asian countries covered by the agreement that is owned or controlled by us and claims glufosfamide, its use for the treatment of cancer or a process to make such compound in such country.

2DG License

In November 2002, we entered into an exclusive license agreement with Dr. Theodore J. Lampidis and Dr. Waldemar Priebe. This agreement gives us exclusive worldwide rights to international patent application US01/07173, to all of its United States counterpart and priority applications, and any United States and foreign patents and patent applications that claim priority from such applications. Two United States patents and one foreign patent licensed under this agreement have been issued. These patents and the related applications cover the treatment of cancer with 2DG or certain other glycolytic inhibitors, alone or in combination with certain other cancer drugs.

In consideration for this license, we have reimbursed Drs. Lampidis and Priebe for patent costs and will bear all future patent costs incurred under this agreement. We are also obligated to make certain milestone payments, including milestone payments of up to $700,000 in connection with the filing and approval of a new drug application, or NDA, for the first product covered by the licensed patents, as well as royalties based on sales of such products. This license terminates upon the last to expire issued patent covering the technology licensed under it. We have the right to terminate the license at will upon written notice to Drs. Lampidis and Priebe.

The United States government funded research conducted by Drs. Lampidis and Priebe and, therefore, the research is subject to certain federal regulations. For example, under the "march-in" provisions of the Bayh-Dole Act, which governs the transfer of technology developed under federal grants and contracts, the government may have the right under limited circumstances to grant licenses to the technology.

Patents and Proprietary Rights

Our policy is to patent the technologies, inventions and improvements that we consider important to the development of our business. As of December 31, 2008, we owned or held exclusive license to United States, Patent Cooperation Treaty ("PCT"), and foreign patents and patent applications relating to our research and development programs.

Intellectual Property Related to TH-302

Our TH-302 product candidate and its use in the treatment of cancer are claimed in US and corresponding foreign patent applications in major market countries and are owned by us. We are seeking compound *per se* patent protection for TH-302 as well as claims directed to its use, alone or in combination with other cancer drugs, in the treatment of cancer. We also own other United States, PCT, and foreign national patent applications relating to the results of our research on hypoxia-activated prodrugs and their use as cancer drugs and related reagents and methods.

Intellectual Property Related to Glufosfamide

Our glufosfamide product candidate is covered by one issued United States patent and 24 issued foreign counterpart patents, as well as one issued foreign patent relating to a method for its manufacture, which are owned by Baxter and exclusively licensed to us. The major European market counterparts of the United States patent expire in 2009, and the United States patent expires in 2014. We also own United States, PCT and foreign patent applications describing the use of glufosfamide, alone or in combination with other cancer drugs, including gemcitabine, to treat pancreatic cancer, including gemcitabine-resistant pancreatic cancer and certain other types of cancer, including sarcoma and lymphoma. There can be no assurance that any of our patent applications will issue in major market countries.

Intellectual Property Related to 2DG

Our 2DG product candidate is protected by four issued United States patents and corresponding foreign applications relating to the use of 2DG in the treatment of cancer. The term of three of the issued United States patents, which we have licensed from the inventors, lapses in 2020, without patent term extension.

The patent positions of companies like ours are generally uncertain and involve complex legal and factual questions. Our ability to maintain and solidify our proprietary position for our technology will depend on our success in obtaining effective claims and enforcing those claims once granted. We do not know whether any of our pending patent applications will result in the issuance of any patents. Moreover, an issued patent does not guarantee us the right to practice the patented technology or commercialize the patented product. Other parties may have blocking patents that could be used to prevent us from commercializing our patented products and practicing our patented technology. Our issued patents and those that may be issued in the future may be challenged, invalidated, or circumvented, which could limit our ability or render us unable to stop competitors from marketing related products as well as shorten the term of patent protection that we may have for our products. In addition, the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies that do not infringe our intellectual property rights. For these reasons, we may have competition for our products. Moreover, because of the extensive time required for development, testing and regulatory review of a potential therapeutic product, it is possible that, before any of our products can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent.

We also rely on trade secrets, technical know-how and continuing innovation to develop and maintain our competitive position. We seek to protect our proprietary information by requiring our employees and certain of our consultants, contractors, outside scientific collaborators and other advisors to execute non-disclosure and

assignment of invention agreements on commencement of their employment or engagement. Agreements with our employees also forbid them from using third party trade secret or other confidential information in their work. We also require confidentiality or material transfer agreements from third parties that receive our confidential data or proprietary materials.

The biotechnology and biopharmaceutical industries are characterized by the existence of a large number of patents and frequent litigation based on allegations of patent infringement. For so long as our product candidates are in clinical trials, we believe our clinical activities fall within the scope of the exemptions provided by 35 U.S.C. Section 271(e) in the United States, which exempts from patent infringement liability activities reasonably related to the development and submission of information to the FDA. This exemption does not apply to commercialization activities, however; if our product candidates are commercialized, then the possibility of a patent infringement claim against us increases. While we attempt to ensure that our clinical product candidates and the methods we employ to manufacture them, as well as the methods for their use we intend to promote, do not infringe other parties' patents and other proprietary rights, there can be no assurance that they do not, and competitors or other parties may assert that we infringe their proprietary rights in any event.

Competition

We operate in the highly competitive segment of the pharmaceutical market comprised of pharmaceutical and biotechnology companies that research, develop and commercialize products designed to treat cancer. Many of our competitors have significantly greater financial, manufacturing, marketing and product development resources than we do. Large pharmaceutical companies in particular have extensive experience in clinical testing and in obtaining regulatory approval for drugs. These companies also have significantly greater research capabilities than we do. In addition, many universities and private and public research institutes are active in cancer research, some in direct competition with us. We also compete with these organizations to recruit scientists and clinical development personnel.

Each cancer indication for which we are developing products has a number of established medical therapies with which our candidates will compete. Most major pharmaceutical companies and many biotechnology companies are aggressively pursuing cancer development programs, including traditional therapies and therapies with novel mechanisms of action. Our TH-302 product candidate for targeting the tumor hypoxia may eventually compete with other companies who are developing or were developing drugs that target tumor hypoxia such as Novacea and Proacta Incorporated. A number of biotechnology and pharmaceutical companies are marketing and/or developing cancer therapeutics competing in prostate, lung, pancreatic, melanoma and soft tissue sarcoma. Such companies include: AstraZeneca PLC, Genentech, Inc., Bristol-Myers Squibb Company, Eli Lilly and Company, GlaxoSmithKline plc, Bayer Pharmaceuticals, Hoffmann-LaRoche, Inc., Johnson & Johnson, Onyx Pharmaceuticals, Inc., Merck KGaA, Novartis AG, Pfizer, Inc., Amgen Inc., ImClone Systems, Inc., Millennium Pharmaceuticals, Inc., OSI Pharmaceuticals, Inc., Telik, Inc., Sunesis Pharmaceuticals, Inc., ARIAD Pharmaceuticals, Inc. and ZIOPHARM Oncology, Inc.

Governmental Regulation and Product Approval

The manufacturing and marketing of our potential products and our ongoing research and development activities are subject to extensive regulation by the FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries.

United States Regulation

Before any of our products can be marketed in the United States, they must secure approval by the FDA. To secure this approval, any drug we develop must undergo rigorous preclinical testing and clinical trials that demonstrate the product candidate's safety and effectiveness for each chosen indication for use. This extensive regulatory process controls, among other things, the development, testing, manufacture, safety, efficacy, record keeping, labeling, storage, approval, advertising, promotion, sale, and distribution of biopharmaceutical products.

In general, the process required by the FDA before investigational drugs may be marketed in the United States involves the following steps:

- pre-clinical laboratory and animal tests;
- submission of an IND, which must become effective before human clinical trials may begin;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed drug for its intended use;
- pre-approval inspection of manufacturing facilities and selected clinical investigators; and
- FDA approval of an NDA, or of an NDA supplement (for subsequent indications).

Preclinical Testing

In the United States, drug candidates are tested in animals until adequate proof of safety is established. These preclinical studies generally evaluate the mechanism of action of the product and assess the potential safety and efficacy of the product. Tested compounds must be produced according to applicable current good manufacturing practice, or cGMP, requirements and preclinical safety tests must be conducted in compliance with FDA and international regulations regarding good laboratory practices, or GLP. The results of the preclinical tests, together with manufacturing information and analytical data, are generally submitted to the FDA as part of an IND, which must become effective before human clinical trials may commence. The IND will automatically become effective 30 days after receipt by the FDA, unless before that time the FDA requests an extension or raises concerns about the conduct of the clinical trials as outlined in the application. If the FDA has any concerns, the sponsor of the application and the FDA must resolve the concerns before clinical trials can begin. Submission of an IND may not result in FDA authorization to commence a clinical trial. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development, and the FDA must grant permission for each clinical trial to start and continue. Regulatory authorities may require additional data before allowing the clinical trials to commence or proceed from one Phase to another, and could demand that the trials be discontinued or suspended at any time if there are significant safety issues. Furthermore, an independent institutional review board, or IRB, for each medical center proposing to participate in the conduct of the clinical trial must review and approve the clinical protocol and patient informed consent before the center commences the clinical trial.

Clinical Trials

Clinical trials for new drug candidates are typically conducted in three sequential phases that may overlap. In Phase 1 involves the initial introduction of the drug candidate into humans and are conducted in volunteers or in patients with a specific disease depending on the intended use. The emphasis in Phase 1 is on testing for safety or adverse effects, dosage, tolerance, metabolism, distribution, excretion, and clinical pharmacology. Phase 2 involves clinical trials in a limited patient population to determine the initial efficacy of the drug candidate for specific targeted indications, to determine dosage tolerance and optimal dosage and to identify possible adverse side effects and safety risks. Once a compound shows evidence of effectiveness and is found to have an acceptable safety profile in Phase 2 clinical trials, pivotal controlled Phase 3 clinical trials are undertaken to more fully evaluate clinical outcomes and to establish the overall risk/benefit profile of the drug, and to provide, if appropriate, an adequate basis for product labeling. During all clinical trials, physicians monitor patients to determine effectiveness of the drug candidate and observe and report any reactions or safety risks that may result from use of the drug candidate. The FDA, the IRB, or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects are being exposed to an unacceptable health risk.

The data from the clinical trials, together with preclinical data and other supporting information that establishes a drug candidate’s safety, are submitted to the FDA in the form of an NDA or NDA supplement (for approval of a new indication if the product candidate is already approved for another indication). Under

applicable laws and FDA regulations, each NDA submitted for FDA approval is usually given an internal administrative review within 45 to 60 days following submission of the NDA. If deemed complete, the FDA will "file" the NDA, thereby triggering substantive review of the application. The FDA can refuse to file any NDA that it deems incomplete or not properly reviewable. The FDA has established internal substantive review goals of six months for priority NDAs (for drugs addressing serious or life threatening conditions for which there is an unmet medical need) and 10 months for regular NDAs. The FDA, however, is not legally required to complete its review within these periods, and these performance goals may change over time. Moreover, the outcome of the review, even if generally favorable, is not typically an actual approval, but an "action letter" that describes additional work that must be done before the NDA can be approved. The FDA's review of an NDA may involve review and recommendations by an independent FDA advisory committee. The FDA may deny approval of an NDA or NDA supplement if the applicable regulatory criteria are not satisfied, or it may require additional clinical data and/or an additional pivotal Phase 3 clinical trial. Even if such data are submitted, the FDA may ultimately decide that the NDA or NDA supplement does not satisfy the criteria for approval.

Data Review and Approval

Satisfaction of FDA requirements or similar requirements of state, local and foreign regulatory agencies typically takes several years and requires the expenditure of substantial financial resources. Information generated in this process is susceptible to varying interpretations that could delay, limit, or prevent regulatory approval at any stage of the process. Accordingly, the actual time and expense required to bring a product to market may vary substantially. We cannot be certain that we will submit applications for required authorizations to manufacture and/or market potential products or that any such application will be reviewed and approved by the appropriate regulatory authorities in a timely manner, if at all. Data obtained from clinical activities is not always conclusive and may be susceptible to varying interpretations, which could delay, limit, or prevent regulatory approval. Success in early stage clinical trials does not ensure success in later stage clinical trials. Even if a product candidate receives regulatory approval, the approval may be significantly limited to specific disease states, patient populations, and dosages, or have conditions placed on them that restrict the commercial applications, advertising, promotion, or distribution of these products.

Once issued, the FDA may withdraw product approval if ongoing regulatory standards are not met or if safety problems occur after the product reaches the market. In addition, the FDA may require testing and surveillance programs to monitor the effect of approved products which have been commercialized, and the FDA has the power to prevent or limit further marketing of a product based on the results of these post-marketing programs. The FDA may also request additional clinical trials after a product is approved. These so-called Phase 4 studies may be made a condition to be satisfied after a drug receives approval. The results of Phase 4 studies can confirm the effectiveness of a product candidate and can provide important safety information to augment the FDA's voluntary adverse drug reaction reporting system. The product may be subject to withdrawal of the approval if effectiveness is not confirmed in the Phase 4 studies. Any products manufactured or distributed by us pursuant to FDA approvals would be subject to continuing regulation by the FDA, including record-keeping requirements and reporting of adverse experiences with the drug. Drug manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with good manufacturing practices, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. We cannot be certain that we or our present or future suppliers will be able to comply with the cGMP regulations and other FDA regulatory requirements. If our present or future suppliers are not able to comply with these requirements, the FDA may halt our clinical trials, require us to recall a drug from distribution, or withdraw approval of the NDA for that drug. Furthermore, even after regulatory approval is obtained, later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market.

The FDA closely regulates the marketing and promotion of drugs. Approval may be subject to post-marketing surveillance and other record keeping and reporting obligations, and involve ongoing requirements.

Product approvals may be withdrawn if compliance with regulatory standards is not maintained or if problems occur following initial marketing. A company can make only those claims relating to safety and efficacy that are approved by the FDA. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising, and potential civil and criminal penalties. Physicians may prescribe legally available drugs for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturers' communications on the subject of off-label use.

Fast Track Approval

The Federal Food, Drug and Cosmetic Act, as amended, and FDA regulations provide certain mechanisms for the accelerated "Fast Track" approval of potential products intended to treat serious or life-threatening illnesses that have been studied for safety and effectiveness and that demonstrate the potential to address unmet medical needs. The procedures permit early consultation and commitment from the FDA regarding the preclinical and clinical trials necessary to gain marketing approval. Provisions of this regulatory framework also permit, in certain cases, NDAs to be approved on the basis of valid indirect measurements of benefit of product effectiveness, thus accelerating the normal approval process. Certain potential products employing our technology might qualify for this accelerated regulatory procedure. Even if the FDA agrees that these potential products qualify for accelerated approval procedures, the FDA may deny approval of our drugs or may require additional clinical trials before approval. The FDA may also require us to perform post-approval, or Phase 4, studies as a condition of such early approval. In addition, the FDA may impose restrictions on distribution and/or promotion in connection with any accelerated approval, and may withdraw approval if post-approval studies do not confirm the intended clinical benefit or safety of the potential product.

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States. Orphan drug designation must be requested before submitting an NDA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process. If a product that has orphan drug designation subsequently receives FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same disease, except in limited circumstances, for seven years. These circumstances are an inability to supply the drug in sufficient quantities or a situation in which a new formulation of the drug has shown superior safety or efficacy. This exclusivity, however, also could block the approval of our product for seven years if a competitor obtains earlier approval of the same drug for the same indication.

In September 2006, the FDA granted orphan drug designation to glufosfamide, for the treatment of pancreatic cancer. For those indications meeting the orphan drug requirements, we intend to seek orphan drug designation for the cancer indications that our drug product candidates are intended to treat. Obtaining FDA approval to market a product with orphan drug exclusivity may not provide us with a material commercial advantage.

Anti-Kickback and False Claims Laws

In the United States, we are subject to various federal and state laws pertaining to healthcare "fraud and abuse," including anti-kickback and false claims laws. The federal Anti-Kickback Law makes it illegal for any person, including a prescription drug manufacturer (or a party acting on its behalf) to knowingly and willfully

solicit, offer, receive or pay any remuneration, directly or indirectly, in exchange for, or to induce, the referral of business, including the purchase, order or prescription of a particular drug, for which payment may be made under federal healthcare programs such as Medicare and Medicaid. Violations of the law are punishable by up to five years in prison, criminal fines, administrative civil money penalties, and exclusion from participation in federal healthcare programs. In addition, many states have adopted laws similar to the federal Anti-Kickback Law. Some of these state prohibitions apply to referral of patients for healthcare services reimbursed by any source, not only the Medicare and Medicaid programs. Due to the breadth of these laws, and the potential for additional legal or regulatory change addressing some of our practices, it is possible that our practices or our relationships with physicians might be challenged under anti-kickback laws, which could harm us.

False claims laws prohibit anyone from knowingly presenting, or causing to be presented, for payment to third-party payors (including Medicare and Medicaid) claims for reimbursed items or services, including drugs, that are false or fraudulent, claims for items or services not provided as claimed, or claims for medically unnecessary items or services. Our future activities relating to the reporting of wholesaler or estimated retail prices for our products, the reporting of Medicaid rebate information and other information affecting federal, state and third-party reimbursement of our products, and the sale and marketing of our products, are subject to scrutiny under these laws. In addition, pharmaceutical companies have been prosecuted under the federal False Claims Act in connection with their off-label promotion of drugs. Penalties for a violation include three times the actual damages sustained by the government, plus mandatory civil penalties of between $5,500 and $11,000 for each separate false claim. In addition, certain states have enacted laws modeled after the federal False Claims Act. If the government were to allege that we were, or convict us of, violating these false claims laws, we could be subject to a substantial fine and suffer a decline in our stock price.

Drug Price Competition and Patent Term Restoration Act of 1984

Under the Drug Price Competition and Patent Term Restoration Act of 1984, known as the Hatch-Waxman Amendments, a portion of a product's patent term that was lost during clinical development and application review by the FDA may be restored. The Hatch-Waxman Amendments also provide for a statutory protection, known as nonpatent market exclusivity, against the FDA's acceptance or approval of certain competitor applications. The Hatch-Waxman Amendments also provide the legal basis for the approval of abbreviated new drug applications, or ANDAs, for generic drugs.

Patent term restoration can compensate for patent life lost during product development and the regulatory review process by returning up to five years of patent life for a patent that covers a new product or its use. This period is generally one-half the time between the effective date of an IND (falling after issuance of the patent) and the submission date of an NDA, plus the time between the submission date of an NDA and the approval of that application. Patent term restorations, however, are subject to a maximum extension of five years, and the patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years. The application for patent term extension is subject to approval by the United States Patent and Trademark Office in conjunction with the FDA. It takes at least six months to obtain approval of the application for patent term extension. Up to five years of interim one year extensions are available if a product is still undergoing development or FDA review at the time of its expiration.

The Hatch-Waxman Amendments also provide for a period of statutory protection for new drugs that receive NDA approval from the FDA. If a new drug receives NDA approval as a new chemical entity, meaning that the FDA has not previously approved any other new drug containing the same active moiety, then the Hatch-Waxman Amendments prohibit an abbreviated new drug application or an NDA where the applicant does not own or have a legal right of reference to all of the data required for approval, or a "505(b)(2)" NDA, to be submitted by another company for a generic version of such drug, with some exceptions, for a period of five years from the date of approval of the NDA. The statutory protection provided pursuant to the Hatch-Waxman Amendments will not prevent the filing or approval of a full NDA. In order to gain approval of a full NDA, however, a competitor would be required to conduct its own preclinical investigations and clinical trials. If NDA

approval is received for a new drug containing an active ingredient that was previously approved by the FDA but the NDA is for a drug that includes an innovation over the previously approved drug, for example, an NDA approval for a new indication or formulation of the drug with the same active ingredient, and if such NDA approval was dependent upon the submission to the FDA of new clinical investigations, other than bioavailability studies, then the Hatch-Waxman Amendments prohibit the FDA from making effective the approval of an ANDA or a 505(b)(2) NDA for a generic version of such drug for a period of three years from the date of the NDA approval. This three year exclusivity, however, only covers the innovation associated with the NDA to which it attaches. Thus, the three year exclusivity does not prohibit the FDA, with limited exceptions, from approving ANDAs or 505(b)(2) NDAs for drugs containing the same active ingredient but without the new innovation.

While the Hatch-Waxman Amendments provide certain patent term restoration and exclusivity protections to innovator drug manufacturers, it also permits the FDA to approve ANDAs for generic versions of their drugs. The ANDA process permits competitor companies to obtain marketing approval for a drug with the same active ingredient for the same uses but does not require the conduct and submission of clinical trials demonstrating safety and effectiveness for that product. Instead of safety and effectiveness data, an ANDA applicant needs only to submit data demonstrating that its product is bioequivalent to the innovator product as well as relevant chemistry, manufacturing and control data. The Hatch-Waxman Amendments also instituted a third type of drug application that requires the same information as an NDA including full reports of clinical and preclinical studies except that some of the information from the reports required for marketing approval comes from studies which the applicant does not own or have a legal right of reference. This type of application, a "505(b)(2) NDA," permits a manufacturer to obtain marketing approval for a drug without needing to conduct or obtain a right of reference for all of the required studies.

Finally, the Hatch-Waxman Amendments require, in some circumstances, an ANDA or a 505(b)(2) NDA applicant to notify the patent owner and the holder of the approved NDA of the factual and legal basis of the applicant's opinion that the patent listed by the holder of the approved NDA in FDA's Orange Book is not valid or will not be infringed (the patent certification process). Upon receipt of this notice, the patent owner and the NDA holder have 45 days to bring a patent infringement suit in federal district court and obtain a 30-month stay against the company seeking to reference the NDA. The NDA holder could still file a patent suit after the 45 days, but if they did, they would not have the benefit of the 30-month stay. Alternatively, after this 45-day period, the applicant may file a declaratory judgment action, seeking a determination that the patent is invalid or will not be infringed. Depending on the circumstances, however, the applicant may not be able to demonstrate a controversy sufficient to confer jurisdiction on the court. The discovery, trial and appeals process in such suits can take several years. If such a suit is commenced, the Hatch-Waxman Act provides a 30-month stay on the approval of the competitor's ANDA or 505(b)(2) NDA. If the litigation is resolved in favor of the competitor or the challenged patent expires during the 30-month period, unless otherwise extended by court order, the stay is lifted and the FDA may approve the application. Under regulations recently issued by the FDA, and essentially codified under the recent Medicare prescription drug legislation, the patent owner and the NDA holder have the opportunity to trigger only a single 30-month stay per ANDA or 505(b)(2) NDA.

Foreign Approvals

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our products. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country, and the time may be longer or shorter than that required for FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

Under European Union regulatory systems, we may submit marketing authorizations either under a centralized or decentralized procedure. The centralized procedure provides for the grant of a single marketing

authorization that is valid for all European Union member states. The decentralized procedure provides for mutual recognition of national approval decisions. Under this procedure, the holder of a national marketing authorization may submit an application to the remaining member states. Within 90 days of receiving the applications and assessment report, each member state must decide whether to recognize approval.

The policies of the FDA and foreign regulatory authorities may change and additional government regulations may be enacted which could prevent or delay regulatory approval of our investigational drugs or approval of new diseases for our existing products. We cannot predict the likelihood, nature or extent of adverse governmental regulation that might arise from future legislative or administrative action, either in the United States or abroad.

Other Government Regulation

Our research and development activities use biological and hazardous materials that are dangerous to human health and safety or the environment. We are subject to a variety of federal, state and local laws and regulations governing the use, generation, manufacture, storage, handling and disposal of these materials and wastes resulting from these materials. We are also subject to regulation by the Occupational Safety and Health Administration, or OSHA, the California and federal environmental protection agencies and to regulation under the Toxic Substances Control Act. OSHA or the California or federal EPA may adopt regulations that may affect our research and development programs. We are unable to predict whether any agency will adopt any regulations that could have a material adverse effect on our operations. We have incurred, and will continue to incur, capital and operating expenditures and other costs in the ordinary course of our business in complying with these laws and regulations.

Employees

As of December 31, 2008, we had 31 full-time employees, including 10 who hold Ph.D. and/or M.D. degrees. Twenty five of our employees are engaged in research and development, and our remaining employees are management or administrative staff. None of our employees is subject to a collective bargaining agreement. We believe that we have good relations with our employees.

Our Corporate Information

We were incorporated in Delaware on October 17, 2001. Our principal executive offices are located at 1300 Seaport Boulevard, Suite 500, Redwood City, California, 94063. Our telephone number is (650) 474-8200.

Available Information

We file electronically with the Securities and Exchange Commission, or SEC, our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K pursuant to Section 13(a) or 15(d) of the Exchange Act. The SEC maintains an Internet site that contains reports, proxy information and information statements, and other information regarding issuers that file electronically with the SEC. The address of that website is http://www.sec.gov. The materials are also available at the SEC's Public Reference Room, located at 100 F Street, Washington, D.C. 20549. The public may obtain information through the public reference room by calling the SEC at 1-800-SEC-0330.

You may obtain a free copy of our annual report on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and amendments to those reports on the day of filing with the SEC on our website at http://www.thresholdpharm.com or by contacting the Investor Relations Department at our corporate offices by calling (650) 474-8200.

ITEM 1A. RISK FACTORS

RISKS RELATED TO OUR BUSINESS

Risks Related to Drug Discovery, Development and Commercialization

We are substantially dependent upon the success of TH-302 and our other product candidates. Clinical trials may not demonstrate efficacy or lead to regulatory approval.

We will not be able to commercialize our drug candidates until we obtain FDA approval in the United States or approval by comparable regulatory agencies in Europe and other countries. To satisfy FDA or foreign regulatory approval standards for the commercial sale of our product candidates, we must demonstrate in adequate and controlled clinical trials that our product candidates are safe and effective. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful. For example, preliminary results from clinical trials of TH-302 may not be confirmed by later analysis or subsequent clinical trials. A number of companies in the pharmaceutical industry, including us, have suffered significant setbacks in advanced clinical trials, even after obtaining promising results in earlier clinical trials.

Our product candidates must undergo rigorous clinical testing, the results of which are uncertain and could substantially delay or prevent us from bringing them to market.

Before we can obtain regulatory approval for a product candidate, we must undertake extensive clinical testing in humans to demonstrate safety and efficacy to the satisfaction of the FDA or other regulatory agencies. Clinical trials of new drug candidates sufficient to obtain regulatory marketing approval are expensive and take years to complete.

We cannot be certain of successfully completing clinical testing within the time frame we have planned, or at all. We may experience numerous unforeseen events during, or as a result of, the clinical trial process that could delay or prevent us from receiving regulatory approval or commercializing our product candidates, including the following:

- our clinical trials may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical and/or preclinical testing or to abandon programs;
- the results obtained in earlier stage clinical testing may not be indicative of results in future clinical trials;
- clinical trial results may not meet the level of statistical significance required by the FDA or other regulatory agencies;
- enrollment in our clinical trials for our product candidates may be slower than we anticipate, resulting in significant delays;
- we, or regulators, may suspend or terminate our clinical trials if the participating patients are being exposed to unacceptable health risks; and
- the effects of our product candidates on patients may not be the desired effects or may include undesirable side effects or other characteristics that may delay or preclude regulatory approval or limit their commercial use, if approved.

Completion of clinical trials depends, among other things, on our ability to enroll a sufficient number of patients, which is a function of many factors, including:

- the therapeutic endpoints chosen for evaluation;
- the eligibility criteria defined in the protocol;
- the perceived benefit of the investigational drug under study;
- the size of the patient population required for analysis of the clinical trial’s therapeutic endpoints;

- our ability to recruit clinical trial investigators and sites with the appropriate competencies and experience;
- our ability to obtain and maintain patient consents; and
- competition for patients by clinical trial programs for other treatments.

We may experience difficulties in enrolling patients in our clinical trials, which could increase the costs or affect the timing or outcome of these clinical trials. This is particularly true with respect to diseases with relatively small patient populations.

Pre-clinical studies of our product candidates may not predict the results of their human clinical trials.

Pre-clinical studies, including studies of our product candidates in animal models of disease, may not accurately predict the result of human clinical trials of those product candidates. In particular, promising animal studies suggesting the efficacy of TH-302 for the treatment of different types of cancer may not accurately predict the ability of TH-302 to treat cancer effectively in humans. TH-302 may be found not to be efficacious in treating cancer, alone or in combination with other agents, when studied in human clinical trials.

We are subject to significant regulatory approval requirements, which could delay, prevent or limit our ability to market our product candidates.

Our research and development activities, preclinical studies, clinical trials and the anticipated manufacturing and marketing of our product candidates are subject to extensive regulation by the FDA and other regulatory agencies in the United States and by comparable authorities in Europe and elsewhere. We require the approval of the relevant regulatory authorities before we may commence commercial sales of our product candidates in a given market. The regulatory approval process is expensive and time-consuming, and the timing of receipt of regulatory approval is difficult to predict. Our product candidates could require a significantly longer time to gain regulatory approval than expected, or may never gain approval. We cannot be certain that, even after expending substantial time and financial resources, we will obtain regulatory approval for any of our product candidates. A delay or denial of regulatory approval could delay or prevent our ability to generate product revenues and to achieve profitability.

Changes in regulatory approval policies during the development period of any of our product candidates, changes in, or the enactment of, additional regulations or statutes, or changes in regulatory review practices for a submitted product application may cause a delay in obtaining approval or result in the rejection of an application for regulatory approval.

Regulatory approval, if obtained, may be made subject to limitations on the indicated uses for which we may market a product. These limitations could adversely affect our potential product revenues. Regulatory approval may also require costly post-marketing follow-up studies. In addition, the labeling, packaging, adverse event reporting, storage, advertising, promotion and record-keeping related to the product will be subject to extensive ongoing regulatory requirements. Furthermore, for any marketed product, its manufacturer and its manufacturing facilities will be subject to continual review and periodic inspections by the FDA or other regulatory authorities. Failure to comply with applicable regulatory requirements may, among other things, result in fines, suspensions of regulatory approvals, product recalls, product seizures, operating restrictions and criminal prosecution.

Our product candidates are based on targeting the microenvironment of solid tumors, which currently are unproven approaches to therapeutic intervention.

Our product candidates are designed to target the microenvironment of solid tumors either by harnessing hypoxia for selective toxin activation in the case of TH-302 and our HAP program or potentially utilizing the increased uptake of glucose or enhanced activation of glufosfamide in cancer cells relative to most normal cells.

Our product candidates glufosfamide and 2DG share certain structural characteristics with glucose but act instead as poisons when taken up by a cancer cell. We have not, nor to our knowledge has any other company, received regulatory approval for a drug based on either of these approaches. We cannot be certain that our approaches will lead to the development of approvable or marketable drugs.

In addition, the FDA or other regulatory agencies may lack experience in evaluating the safety and efficacy of drugs based on these targeting approaches, which could lengthen the regulatory review process, increase our development costs and delay or prevent commercialization of our product candidates.

Our product candidates may have undesirable side effects that prevent or delay their regulatory approval or limit their use if approved.

Certain anti-tumor drugs being developed by us, such as TH-302, glufosfamide and 2DG, are expected to have undesirable side effects. The extent, severity and clinical significance of these effects may not be apparent initially and may be discovered during drug development or even post-approval. These expected side effects or other side effects identified in the course of our clinical trials or that may otherwise be associated with our product candidates may outweigh the benefits of our product candidates. Side effects may prevent or delay regulatory approval or limit market acceptance if our products are approved.

Delays in clinical testing could result in increased costs to us and delay our ability to obtain regulatory approval and commercialize our product candidates.

Significant delays in clinical testing could materially impact our product development costs and delay regulatory approval of our product candidates. We do not know whether planned clinical trials will need to be redesigned or will be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including adverse safety events experienced during our clinical trials and delays in:

- obtaining regulatory approval to commence a clinical trial;
- obtaining clinical materials;
- reaching agreement on acceptable clinical trial agreement terms with prospective sites;
- obtaining institutional review board approval to conduct a clinical trial at a prospective site; and
- recruiting patients to participate in a clinical trial.

Orphan drug exclusivity affords us limited protection, and if another party obtains orphan drug exclusivity for the drugs and indications we are targeting, we may be precluded from commercializing our product candidates in those indications.

In September 2006, the FDA granted orphan drug designation to glufosfamide for the treatment of pancreatic cancer. For those drugs that meet the eligible requirements, we intend to seek orphan drug designation for the cancer indications that our drug candidates are intended to treat. Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is defined by the FDA as a disease or condition that affects fewer than 200,000 individuals in the United States. The company that obtains the first FDA approval for a designated orphan drug indication receives marketing exclusivity for use of that drug for that indication for a period of seven years. Orphan drug exclusive marketing rights may be lost if the FDA later determines that the request for designation was materially defective, or if the manufacturer is unable to assure sufficient quantity of the drug. Orphan drug designation does not shorten the development or regulatory review time of a drug.

Orphan drug exclusivity may not prevent other market entrants. A different drug, or, under limited circumstances, the same drug may be approved by the FDA for the same orphan indication. The limited

circumstances include an inability to supply the drug in sufficient quantities or where a new formulation of the drug has shown superior safety or efficacy. As a result, if our product is approved and receives orphan drug status, the FDA can still approve other drugs for use in treating the same indication covered by our product, which could create a more competitive market for us.

Moreover, due to the uncertainties associated with developing pharmaceutical products, we may not be the first to obtain marketing approval for any orphan drug indication. Even if we obtain orphan drug designation, if a competitor obtains regulatory approval for TH-302, glufosfamide or 2DG for the same indication we are targeting before we do, we would be blocked from obtaining approval for that indication for seven years, unless our product is a new formulation of the drug that has shown superior safety or efficacy, or the competitor is unable to supply sufficient quantities.

Even if we obtain regulatory approval, our marketed drugs will be subject to ongoing regulatory review. If we fail to comply with continuing United States and foreign regulations, we could lose our approvals to market drugs and our business would be seriously harmed.

Following initial regulatory approval of any drugs we may develop, we will be subject to continuing regulatory review, including review of adverse drug experiences and clinical results that are reported after our drug products become commercially available. This would include results from any post-marketing tests or vigilance required as a condition of approval. The manufacturer and manufacturing facilities we use to make any of our drug candidates will also be subject to periodic review and inspection by the FDA. If a previously unknown problem or problems with a product or a manufacturing and laboratory facility used by us is discovered, the FDA or foreign regulatory agency may impose restrictions on that product or on the manufacturing facility, including requiring us to withdraw the product from the market. Any changes to an approved product, including the way it is manufactured or promoted, often require FDA approval before the product, as modified, can be marketed. We and our contract manufacturers will be subject to ongoing FDA requirements for submission of safety and other post-market information. If we and our contract manufacturers fail to comply with applicable regulatory requirements, a regulatory agency may:

- issue warning letters;
- impose civil or criminal penalties;
- suspend or withdraw our regulatory approval;
- suspend or terminate any of our ongoing clinical trials;
- refuse to approve pending applications or supplements to approved applications filed by us;
- impose restrictions on our operations;
- close the facilities of our contract manufacturers; or
- seize or detain products or require a product recall.

The FDA and foreign regulatory authorities may impose significant restrictions on the indicated uses and marketing of pharmaceutical products.

FDA rules for pharmaceutical promotion require that a company not promote an unapproved drug or an approved drug for an unapproved use. In addition to FDA requirements, regulatory and law enforcement agencies, such as the United States Department of Health and Human Services' Office of Inspector General and the United States Department of Justice, monitor and investigate pharmaceutical sales, marketing and other practices. For example, sales, marketing and scientific/educational grant programs must comply with the Medicare-Medicaid Anti-Fraud and Abuse Act, as amended, the False Claims Act, as amended, and similar state laws. In recent years, actions by companies' sales forces and marketing departments have been scrutinized intensely to ensure, among other things, that actions by such groups do not qualify as "kickbacks" to healthcare

professionals. A "kickback" refers to the provision of any item of value to a healthcare professional or other person in exchange for purchasing, recommending, or referring an individual for an item or service reimbursable by a federal healthcare program. These kickbacks increase the expenses of the federal healthcare program and may result in civil penalties, criminal prosecutions, and exclusion from participation in government programs, any of which would adversely affect our financial condition and business operations. In addition, even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which would also harm our financial condition. Comparable laws also exist at the state level.

We are, and in the future may be, subject to new federal and state requirements to submit information on our open and completed clinical trials to public registries and databases.

In 1997, a public registry of open clinical trials involving drugs intended to treat serious or life-threatening diseases or conditions was established under the Food and Drug Administration Modernization Act, or FDMA, in order to promote public awareness of and access to these clinical trials. Under FDMA, pharmaceutical manufacturers and other clinical trial sponsors are required to post the general purpose of these clinical trials, as well as the eligibility criteria, location and contact information of the clinical trials. Since the establishment of this registry, there has been significant public debate focused on broadening the types of clinical trials included in this or other registries, as well as providing for public access to clinical trial results. A voluntary coalition of medical journal editors has adopted a resolution to publish results only from those clinical trials that have been registered with a no-cost, publicly accessible database, such as http://www.clinicaltrials.gov. The Pharmaceuticals and Research Manufacturers of America has also issued voluntary principles for its members to make results from certain clinical trials publicly available and has established a website for this purpose. Other groups have adopted or are considering similar proposals for clinical trial registration and the posting of clinical trial results. The state of Maine has enacted legislation, with penalty provisions, requiring the disclosure of results from clinical trials involving drugs marketed in the state, and similar legislation has been introduced in other states. Federal legislation was introduced in the fall of 2004 to expand www.clinicaltrials.gov and to require the inclusion of clinical trial results in this registry. In some states, such as New York, prosecutors have alleged that a lack of disclosure of clinical trial information constitutes fraud, and these allegations have resulted in settlements with pharmaceutical companies that include agreements to post clinical trial results. Our failure to comply with any clinical trial posting requirements could expose us to negative publicity, fines, and other penalties, all of which could materially harm our business.

Risks Related to Our Financial Performance and Operations

We have incurred losses since our inception and anticipate that we will continue to incur significant losses for the foreseeable future, and our future profitability is uncertain.

We are a development stage company with a limited operating history and no current source of revenue from the sale of our product candidates. We have incurred losses in each year since our inception in 2001, and we expect to incur losses for the foreseeable future. We have devoted, and will continue to devote for the foreseeable future, substantially all of our resources to research and development of our product candidates. For the year ended December 31, 2008, we had a net loss of $18.3 million and an accumulated deficit of $183.6 million. Clinical trials are costly. We do not expect to generate any revenue from the sale of our product candidates in the near term, and we expect to continue to have significant losses.

To attain profitability, we will need to develop products successfully and market and sell them effectively. We cannot predict when we will become profitable, if at all. We have never generated revenue from the sale of our product candidates, and there is no guarantee that we will be able to do so in the future. If we fail to become profitable, or if we are unable to fund our continuing losses, we would be unable to continue our research and development programs.

We are likely to require substantial additional funding and may be unable to raise capital when needed, which could force us to delay, reduce or eliminate our drug discovery, product development and commercialization activities.

Developing drugs, conducting clinical trials, and commercializing products is expensive. Our future funding requirements will depend on many factors, including:

- the terms and timing of any collaborative, licensing, acquisition or other arrangements that we may establish;
- the progress and cost of our clinical trials and other research and development activities;
- the costs and timing of obtaining regulatory approvals;
- the costs of filing, prosecuting, defending and enforcing any patent applications, claims, patents and other intellectual property rights;
- the cost and timing of securing manufacturing capabilities for our clinical product candidates and commercial products, if any; and
- the costs of lawsuits involving us or our product candidates.

We believe that our existing cash, cash equivalents and marketable securities as of December 31, 2008, will be sufficient to fund our projected operating requirements into the first quarter of 2010, including prosecuting our current clinical trials, conducting research and discovery efforts towards additional HAP product candidates, working capital and general corporate purposes. Additional funds will be required to in-license or otherwise acquire and develop additional products or programs. We expect to seek funds through arrangements with collaborators or others that may require us to relinquish rights to certain products candidates that we might otherwise seek to develop or commercialize independently. We cannot be certain that we will be able to enter into any such arrangements on reasonable terms, if at all.

We expect to need to raise additional capital or incur indebtedness to continue to fund our future operations. We may seek to raise capital through a variety of sources, including:

- the public equity market;
- private equity financing;
- collaborative arrangements;
- licensing arrangements; and/or
- public or private debt.

Our ability to raise additional funds will depend, in part on our clinical and regulatory events, our ability to identify promising in-licensing opportunities, and factors related to financial, economic, and market conditions, many of which are beyond our control. We cannot be certain that sufficient funds will be available to us when required or on satisfactory terms, if at all. If adequate funds are not available, we may be required to significantly reduce or refocus our operations or to obtain funds through arrangements that may require us to relinquish rights to certain of our products, technologies or potential markets, any of which could delay or require that we curtail or eliminate some or all of our development programs or otherwise have a material adverse effect on our business, financial condition and results of operations.

If we are unable to secure additional financing on a timely basis or on terms favorable to us, we may be required to cease or reduce certain research and development projects, to sell some or all of our technology or assets or to merge all or a portion of our business with another entity. Insufficient funds may require us to delay, scale back, or eliminate some or all of our activities, and if we are unable to obtain additional funding, there is uncertainty regarding our continued existence.

Our success depends in part on retaining and motivating key personnel and, if we fail to do so, it may be more difficult for us to execute our business strategy. As a small organization we are dependent on key employees and may need to hire additional personnel to execute our business strategy successfully.

Our success depends on our continued ability to attract, retain and motivate highly qualified management, clinical and scientific personnel and on our ability to develop and maintain important relationships with leading academic institutions, clinicians and scientists. We are highly dependent upon our senior management and scientific staff, particularly our Chief Executive Officer, Dr. Harold E. Selick, President and Chief Medical Officer, Dr. John M. Curd and Senior Vice President of Discovery Research, Dr. Mark G. Matteucci. We do not have employment agreements with Drs. Selick, Curd or Matteucci. The loss of the services of Drs. Selick, Curd or Matteucci or one or more of our other key employees could delay or have an impact on the successful completion of our clinical trials or the development of additional product candidates.

As of December 31, 2008, we had 31 employees. Our success will depend on our ability to retain and motivate remaining personnel and hire additional qualified personnel when required. Competition for qualified personnel in the biotechnology field is intense. We face competition for personnel from other biotechnology and pharmaceutical companies, universities, public and private research institutions and other organizations. We may not be able to attract and retain qualified personnel on acceptable terms given the competition for such personnel. If we are unsuccessful in our retention, motivation and recruitment efforts, we may be unable to execute our business strategy.

The reduction in our work force may cause difficulties in conducting operations and maintaining an effective work environment.

The reductions in our work force in August 2006 and October 2007 imposed significant added responsibilities on remaining management and other employees, including the need to consolidate job functions and to conduct operation with fewer employees. We expect that we may need to increase our use of various third parties in order to continue and conduct some operations. Our ability to manage our operations and outside relationships will require us to continue to improve our operational, financial and management controls, reporting systems and procedures. If we are unable to do this effectively, it may be difficult for us to execute our business strategy.

Our facilities in California are located near an earthquake fault, and an earthquake or other natural disaster or resource shortage could disrupt our operations.

Important documents and records, such as hard copies of our laboratory books and records for our product candidates, are located in our corporate headquarters at a single location in Redwood City, California, near active earthquake zones. In the event of a natural disaster, such as an earthquake, drought or flood, or localized extended outages of critical utilities or transportation systems, we do not have a formal business continuity or disaster recovery plan, and could therefore experience a significant business interruption. In addition, California from time to time has experienced shortages of water, electric power and natural gas. Future shortages and conservation measures could disrupt our operations and could result in additional expense. Although we maintain business interruption insurance coverage, the policy specifically excludes coverage for earthquake and flood.

Risks Related to Our Dependence on Third Parties

We rely on third parties to manufacture TH-302, glufosfamide and 2DG. If these parties do not manufacture the active pharmaceutical ingredients or finished drug products of satisfactory quality, in a timely manner, in sufficient quantities or at an acceptable cost, clinical development and commercialization of our product candidates could be delayed.

We do not currently own or operate manufacturing facilities; consequently, we rely and expect to continue to rely on third parties for the production of clinical and commercial quantities of our product candidates. We have not yet entered into any long term manufacturing or supply agreement for any of our product candidates.

Our current and anticipated future dependence upon others for the manufacture of our product candidates may adversely affect our ability to develop and commercialize any product candidates on a timely and competitive basis.

Our contract manufacturers have produced sufficient TH-302 Active Pharmaceutical Ingredient, API, and drug product for the initial stages of our ongoing clinical trials. Additional clinical trial material continues to be manufactured as required. This amount will be partially dependent on the maximum tolerated dose of TH-302 as a single agent and as a combination agent with chemotherapy. In addition, we will need to obtain additional supplies of TH-302 API and drug product to complete our currently initiated Phase 1/2 clinical trials and any other additional trials. If we are not successful in procuring sufficient TH-302 clinical trial material, we may experience a significant delay in our TH-302 clinical program.

Our initial supplies of glufosfamide were prepared by a subsidiary of Baxter International, Inc. and were used to initiate some of our clinical trials. We subsequently relied on new contract manufacturers for the manufacturing of glufosfamide API and drug product. If we seek a partner to continue development of glufosfamide, we will be dependent on contract manufacturers to produce additional API and drug product. If we are not successful, we may experience a significant delay in our glufosfamide clinical development program.

We rely on contract manufacturers for the manufacturing of 2DG API and drug product. If we seek a partner to continue development of 2DG, we will be dependent on contract manufacturers to produce additional API and drug product. If we are not successful, we may experience problems in seeking a partner or in meeting our obligations under a potential partnership to continue development of 2DG.

We will need to enter into additional agreements for additional supplies of each of our product candidates to complete clinical development and/or commercialize them. We cannot be certain that we can do so on favorable terms, if at all. The products will need to satisfy all cGMP manufacturing requirements, including passing specifications. Our inability to satisfy these requirements could delay our clinical programs.

If any of our product candidates is approved by the FDA or other regulatory agencies for commercial sale, we will need to have it manufactured in commercial quantities. We may not be able to increase the manufacturing capacity for any of our product candidates in a timely or economic manner successfully or at all. Significant scale-up of manufacturing may require additional validation studies, which the FDA and other regulatory agencies must review and approve. If we are unable to successfully increase the manufacturing capacity for a product candidate, the regulatory approval or commercial launch of that product candidate may be delayed, or there may be a shortage of supply which could limit our sales.

In addition, if the facility or the equipment in the facility that produces our product candidates is significantly damaged or destroyed, or if the facility is located in another country and trade or commerce with such country is interrupted, we may be unable to replace the manufacturing capacity quickly or inexpensively. The inability to obtain manufacturing agreements, the damage or destruction of a facility on which we rely for manufacturing or any other delays in obtaining supply would delay or prevent us from completing our clinical trials and commercializing our current product candidates.

We have no control over our manufacturers' and suppliers' compliance with manufacturing regulations, and their failure to comply could result in an interruption in the supply of our product candidates.

The facilities used by our contract manufacturers must undergo an inspection by the FDA for compliance with current good manufacturing practice, or cGMP regulations, before the respective product candidates can be approved. In the event these facilities do not receive a satisfactory cGMP inspection for the manufacture of our product candidates, we may need to fund additional modifications to our manufacturing process, conduct additional validation studies, or find alternative manufacturing facilities, any of which would result in significant cost to us as well as a delay of up to several years in obtaining approval for such product candidate. In addition,

our contract manufacturers, and any alternative contract manufacturer we may utilize, will be subject to ongoing periodic inspection by the FDA and corresponding state and foreign agencies for compliance with cGMP regulations, similar foreign regulations and other regulatory standards. We do not have control over our contract manufacturers' compliance with these regulations and standards. Any failure by our third-party manufacturers or suppliers to comply with applicable regulations could result in sanctions being imposed on them (including fines, injunctions and civil penalties), failure of regulatory authorities to grant marketing approval of our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of product candidates or products, operating restrictions and criminal prosecution.

We rely on third parties to conduct some of our clinical trials, and their failure to perform their obligations in a timely or competent manner may delay development and commercialization of our product candidates.

We may use clinical research organizations to assist in conduct of our clinical trials. There are numerous alternative sources to provide these services. However, we may face delays outside of our control if these parties do not perform their obligations in a timely or competent fashion or if we are forced to change service providers. This risk is heightened for clinical trials conducted outside of the United States, where it may be more difficult to ensure that clinical trials are conducted in compliance with FDA requirements. Any third-party that we hire to conduct clinical trials may also provide services to our competitors, which could compromise the performance of their obligations to us. If we experience significant delays in the progress of our clinical trials and in our plans to file NDAs, the commercial prospects for product candidates could be harmed and our ability to generate product revenue would be delayed or prevented.

We may rely on strategic collaborators to market and sell our products.

We have no sales and marketing experience. We may contract with strategic collaborators to sell and market our products, when and if approved. We may not be successful in entering into collaborative arrangements with third parties for the sale and marketing of any products. Any failure to enter into collaborative arrangements on favorable terms could delay or hinder our ability to develop and commercialize our product candidates and could increase our costs of development and commercialization. Dependence on collaborative arrangements will subject us to a number of risks, including:

- we may not be able to control the amount or timing of resources that our collaborators may devote to the product candidates;
- we may be required to relinquish important rights, including intellectual property, marketing and distribution rights;
- we may have lower revenues than if we were to market and distribute such products ourselves;
- should a collaborator fail to commercialize one of our product candidates successfully, we may not receive future milestone payments or royalties;
- a collaborator could separately move forward with a competing product candidate developed either independently or in collaboration with others, including our competitors;
- our collaborators may experience financial difficulties;
- business combinations or significant changes in a collaborator's business strategy may also adversely affect a collaborator's willingness or ability to complete its obligations under any arrangement; and
- our collaborators may operate in countries where their operations could be adversely affected by changes in the local regulatory environment or by political unrest.

Risks Related to Our Intellectual Property

2DG is a known compound that is not protected by patents on the composition of the molecule.

2DG is a known compound that is no longer eligible for patent protection on the composition of the molecule. A patent of this nature, known as a compound per se patent, excludes others from making, using or selling the patented compound, regardless of how or for what purpose the compound is formulated or intended to be used. Consequently, this compound and certain of its uses are in the public domain.

We have an issued U.S. patent for the use of orally administered 2DG for the treatment of cancer at certain doses and administration schedules, and we have in-licensed three issued U.S. patents that cover the treatment of certain cancers with 2DG in combination with other specific anti-cancer agents.

Others may develop and market 2DG for the treatment of cancer, however, if they develop treatments using dosing and administration schedules or combination therapies outside the scope of our patents or in contravention of our patent rights.

Hypoxia Activated Prodrug technology is not a platform technology broadly protected by patents, and others may be able to develop competitive drugs using this approach.

We have not issued patents or pending patent applications that would prevent others from taking advantage of Hypoxia Activated Prodrug technology generally to discover and develop new therapies for cancer or other diseases. Consequently, our competitors may seek to discover and develop potential therapeutics that operate by mechanisms of action that are the same or similar to the mechanisms of action of our hypoxia activated prodrug product candidates.

Metabolic Targeting by targeting the increased uptake of glucose and the increased reliance on glycolysis as an energy source in cancer cells is not protected by patents, and others may be able to develop competitive drugs using this approach.

We have not issued patents or pending patent applications that would prevent others from taking advantage of targeting the increased uptake of glucose and the increased reliance of glycolysis as an energy source in solid tumors to discover and develop new therapies for cancer or other diseases. Consequently, our competitors may seek to discover and develop potential therapeutics that operate by mechanisms of action that are the same or similar to the mechanisms of action of our product candidates.

We are dependent on patents and proprietary technology, both our own and those licensed from others. If we or our licensors fail to adequately protect this intellectual property or if we otherwise do not have exclusivity for the marketing of our products, our ability to commercialize products could suffer.

Our commercial success will depend in part on our ability and the ability of our licensors to obtain and maintain patent protection sufficient to prevent others from marketing our product candidates, as well as to defend and enforce these patents against infringement and to operate without infringing the proprietary rights of others. We will only be able to protect our product candidates from unauthorized use by third parties to the extent that valid and enforceable patents cover our product candidates or their manufacture or use if they are effectively protected by trade secrets. If our patent applications do not result in issued patents, or if our patents, or those patents we have licensed, are found to be invalid, we will lose the ability to exclude others from making, using or selling the inventions claimed therein. We have a limited number of patents and pending patent applications.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions. No consistent policy regarding the breadth of claims allowed in biotechnology patents has emerged to date in the United States. The laws of many countries may not protect intellectual property rights to the same extent as United States laws, and those countries may lack adequate rules

and procedures for defending our intellectual property rights. Changes in either patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. We do not know whether any of our patent applications will result in the issuance of any patents and we cannot predict the breadth of claims that may be allowed in our patent applications or in the patent applications we license from others.

The degree of future protection for our proprietary rights is uncertain because legal means afford only limited protection and may not adequately protect our rights or permit us to gain or keep our competitive advantage. For example:

- we or our licensors might not have been the first to make the inventions covered by each of our or our licensors' pending patent applications and issued patents, and we may have to participate in expensive and protracted interference proceedings to determine priority of invention;
- we or our licensors might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative product candidates or duplicate any of our or our licensors' product candidates;
- our or our licensors' pending patent applications may not result in issued patents;
- our or our licensors' issued patents may not provide a basis for commercially viable products or may not provide us with any competitive advantages or may be challenged by third parties;
- others may design around our or our licensors' patent claims to produce competitive products that fall outside the scope of our or our licensors' patents;
- we may not develop or in-license additional patentable proprietary technologies related to our product candidates; or
- the patents of others may prevent us from marketing one or more of our product candidates for one or more indications that may be valuable to our business strategy.

Moreover, an issued patent does not guarantee us the right to practice the patented technology or commercialize the patented product. Third parties may have blocking patents that could be used to prevent us from commercializing our patented products and practicing our patented technology. Our issued patents and those that may be issued in the future may be challenged, invalidated or circumvented, which could limit our ability to prevent competitors from marketing the same or related product candidates or could limit the length of the term of patent protection of our product candidates. In addition, the rights granted under any issued patents may not provide us with proprietary protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may independently develop similar technologies. Moreover, because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that, before any of our product candidates can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of the patent. For glufosfamide, the major European counterparts to the U.S. patent expire in 2009 and the U.S. patent expires in 2014. Patent term extension may not be available for these patents.

We rely on trade secrets and other forms of non-patent intellectual property protection. If we are unable to protect our trade secrets, other companies may be able to compete more effectively against us.

We rely on trade secrets to protect certain aspects of our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect, especially in the pharmaceutical industry, where much of the information about a product must be made public during the regulatory approval process. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our information to competitors. Enforcing a claim that a third party illegally obtained and is using our

trade secret information is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to or may not protect trade secrets. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how.

If we are sued for infringing intellectual property rights of third parties or if we are forced to engage in an interference proceeding, it will be costly and time consuming, and an unfavorable outcome in that litigation or interference would have a material adverse effect on our business.

Our ability to commercialize our product candidates depends on our ability to develop, manufacture, market and sell our product candidates without infringing the proprietary rights of third parties. Numerous United States and foreign issued patents and pending patent applications, which are owned by third parties, exist in the general field of cancer therapies or in fields that otherwise may relate to our product candidates. We are also aware of a patent that claims certain agents, including 2DG, to inhibit the import of glucose-6-phosphate into the endoplasmic reticulum of a cell. We do not know whether administration of 2DG for our intended uses inhibits such import. If it does, we would be required to license the patent or risk that a claim of infringement could be made. If we are shown to infringe, we could be enjoined from use or sale of the claimed invention if we are unable to prove that the patent is invalid. In addition, because patent applications can take many years to issue, there may be currently pending applications, unknown to us, which may later result in issued patents that our product candidates or any other compound that we may develop, may infringe, or which may trigger an interference proceeding regarding one of our owned or licensed patents or applications. There could also be existing patents of which we are not aware that our product candidates may inadvertently infringe or which may become involved in an interference proceeding.

The biotechnology and biopharmaceutical industries are characterized by the existence of a large number of patents and frequent litigation based on allegations of patent infringement. For so long as our product candidates are in clinical trials, we believe our clinical activities fall within the scope of the exemptions provided by 35 U.S.C. Section 271(e) in the United States, which exempts from patent infringement liability activities reasonably related to the development and submission of information to the FDA. As our clinical investigational drugs progress toward commercialization, the possibility of a patent infringement claim against us increases. While we attempt to ensure that our active clinical investigational drugs and the methods we employ to manufacture them, as well as the methods for their use we intend to promote, do not infringe other parties' patents and other proprietary rights, we cannot be certain they do not, and competitors or other parties may assert that we infringe their proprietary rights in any event.

We may be exposed to future litigation based on claims that our product candidates, or the methods we employ to manufacture them, or the uses for which we intend to promote them, infringe the intellectual property rights of others. Our ability to manufacture and commercialize our product candidates may depend on our ability to demonstrate that the manufacturing processes we employ and the use of our product candidates do not infringe third-party patents. If third-party patents were found to cover our product candidates or their use or manufacture, we could be required to pay damages or be enjoined and therefore unable to commercialize our product candidates, unless we obtained a license. A license may not be available to us on acceptable terms, if at all.

Risks Related to Our Industry

If our competitors are able to develop and market products that are more effective, safer or more affordable than ours, or obtain marketing approval before we do, our commercial opportunities may be limited.

Competition in the biotechnology and pharmaceutical industries is intense and continues to increase, particularly in the area of cancer treatment. Most major pharmaceutical companies and many biotechnology companies are aggressively pursuing oncology development programs, including traditional therapies and therapies with novel mechanisms of action. Our cancer product candidates face competition from established biotechnology and pharmaceutical companies, including sanofi-aventis Group, Astrazeneca PLC, Genentech,

Inc., Eli Lilly and Company and Pfizer, Inc. and from generic pharmaceutical manufacturers. In particular, our drug candidates for pancreatic cancer will compete with Gemzar, marketed by Eli Lilly and Company, doxorubicin, cisplatin, paclitaxel, ifosfamide, and 5-flurouracil, or 5-FU, a generic product which is sold by many manufacturers. In addition, several drugs marketed for different indications, such as Camptosar®, marketed by Pfizer, Inc., Erbitux®, marketed by Imclone Systems Inc. and Bristol-Myers Squibb Company, Taxotere®, marketed by the sanofi-aventis Group, DTIC-Dome®, marketed by Bayer Pharmaceuticals Corporation, Xeloda®, marketed by Hoffmann-LaRoche, Inc., Avastin®, marketed by Genentech, Inc., Nexavar®, marketed by Onyx Pharmaceuticals, Inc. and Bayer AG, and Alimta®, marketed by Eli Lilly and Company, are under investigation or have completed investigation as combination therapies or monotherapy for pancreatic, prostate, ovarian, non small cell lung and small cell lung cancers, melanoma and soft tissue sarcoma. Additionally OSI Pharmaceuticals, Inc. and Genentech, Inc. market Tarceva® as a combination therapy with gemcitabine for the first-line treatment of pancreatic cancer. In addition, Proacta Inc. has a compound under clinical investigation that targets the hypoxic zones of tumors, as our TH-302 clinical product candidate is intended to do. Novacea has conducted studies on AQ4N and sanofi-aventis recently completed a Phase 3 clinical trial on Tirapazamine, a hypoxically activated prodrug, and while Novacea has stopped current clinical development of AQ4N and sanofi-aventis has released rights to the compound to the innovator SRI, another company may pursue further clinical development of either compound.

We also face potential competition from academic institutions, government agencies and private and public research institutions engaged in the discovery and development of drugs and therapies. Many of our competitors have significantly greater financial resources and expertise in research and development, preclinical testing, conducting clinical trials, obtaining regulatory approvals, manufacturing, sales and marketing than we do. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established pharmaceutical companies.

Our competitors may succeed in developing products that are more effective, have fewer side effects and are safer or more affordable than our product candidates, which would render our product candidates less competitive or noncompetitive. These competitors also compete with us to recruit and retain qualified scientific and management personnel, establish clinical trial sites and patient registration for clinical trials, as well as to acquire technologies and technology licenses complementary to our programs or advantageous to our business. Moreover, competitors that are able to achieve patent protection obtain regulatory approvals and commence commercial sales of their products before we do, and competitors that have already done so, may enjoy a significant competitive advantage.

There is a substantial risk of product liability claims in our business. If we do not obtain sufficient liability insurance, a product liability claim could result in substantial liabilities.

Our business exposes us to significant potential product liability risks that are inherent in the development, manufacturing and marketing of human therapeutic products. Regardless of merit or eventual outcome, product liability claims may result in:

- delay or failure to complete our clinical trials;
- withdrawal of clinical trial participants;
- decreased demand for our product candidates;
- injury to our reputation;
- litigation costs;
- substantial monetary awards against us; and
- diversion of management or other resources from key aspects of our operations.

If we succeed in marketing products, product liability claims could result in an FDA investigation of the safety or efficacy of our products, our manufacturing processes and facilities or our marketing programs. An FDA investigation could also potentially lead to a recall of our products or more serious enforcement actions, or limitations on the indications, for which they may be used, or suspension or withdrawal of approval.

We have product liability insurance that covers our clinical trials up to an $8 million annual aggregate limit. We intend to expand our insurance coverage to include the sale of commercial products if marketing approval is obtained for our product candidates or any other compound that we may develop. However, insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or at all, and the insurance coverage that we obtain may not be adequate to cover potential claims or losses.

Even if we receive regulatory approval to market our product candidates, the market may not be receptive to our product candidates upon their commercial introduction, which would negatively affect our ability to achieve profitability.

Our product candidates may not gain market acceptance among physicians, patients, healthcare payors and the medical community. The degree of market acceptance of any approved products will depend on a number of factors, including:

- the effectiveness of the product;
- the prevalence and severity of any side effects;
- potential advantages or disadvantages over alternative treatments;
- relative convenience and ease of administration;
- the strength of marketing and distribution support;
- the price of the product, both in absolute terms and relative to alternative treatments; and
- sufficient third-party coverage or reimbursement.

If our product candidates receive regulatory approval but do not achieve an adequate level of acceptance by physicians, healthcare payors and patients, we may not generate product revenues sufficient to attain profitability.

If third-party payors do not adequately reimburse patients for any of our product candidates, if approved for marketing, we may not be successful in selling them.

Our ability to commercialize any products successfully will depend in part on the extent to which reimbursement will be available from governmental and other third-party payors, both in the United States and in foreign markets. Even if we succeed in bringing one or more products to the market, the amount reimbursed for our products may be insufficient to allow us to compete effectively and could adversely affect our profitability.

Reimbursement by a governmental and other third-party payor may depend upon a number of factors, including a governmental or other third-party payor's determination that use of a product is:

- a covered benefit under its health plan;
- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining reimbursement approval for a product from each third-party and governmental payor is a time-consuming and costly process that could require us to provide supporting scientific, clinical and cost-effectiveness data for the use of our products to each payor. We may not be able to provide data sufficient to obtain reimbursement.

Eligibility for coverage does not imply that any drug product will be reimbursed in all cases or at a rate that allows us to make a profit. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not become permanent. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on payments allowed for lower-cost drugs that are already reimbursed, may be incorporated into existing payments for other products or services, and may reflect budgetary constraints and/or Medicare or Medicaid data used to calculate these rates. Net prices for products also may be reduced by mandatory discounts or rebates required by government health care programs or by any future relaxation of laws that restrict imports of certain medical products from countries where they may be sold at lower prices than in the United States.

The health care industry is experiencing a trend toward containing or reducing costs through various means, including lowering reimbursement rates, limiting therapeutic class coverage and negotiating reduced payment schedules with service providers for drug products. The Medicare Prescription Drug, Improvement and Modernization Act of 2003, or MMA, became law in November 2003 and created a broader prescription drug benefit for Medicare beneficiaries. The MMA also contains provisions intended to reduce or eliminate delays in the introduction of generic drug competition at the end of patent or nonpatent market exclusivity. The impact of the MMA on drug prices and new drug utilization over the next several years is unknown. The MMA also made adjustments to the physician fee schedule and the measure by which prescription drugs are presently paid, changing from Average Wholesale Price to Average Sales Price. The effects of these changes are unknown but may include decreased utilization of new medicines in physician prescribing patterns, and further pressure on drug company sponsors to provide discount programs and reimbursement support programs. There have been, and we expect that there will continue to be, federal and state proposals to constrain expenditures for medical products and services, which may affect reimbursement levels for our future products. In addition, the Centers for Medicare and Medicaid Services frequently change product descriptors, coverage policies, product and service codes, payment methodologies and reimbursement values. Third-party payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates and may have sufficient market power to demand significant price reductions.

Foreign governments tend to impose strict price controls, which may adversely affect our future profitability.

In some foreign countries, particularly in the European Union, prescription drug pricing is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after the receipt of marketing approval for a product. To obtain reimbursement or pricing approval in some countries, we may be required to conduct a clinical trial that compares the cost-effectiveness of our product candidate to other available therapies. If reimbursement of our products is unavailable or limited in scope or amount, or if pricing is set at unsatisfactory levels, our profitability will be negatively affected.

We may incur significant costs complying with environmental laws and regulations, and failure to comply with these laws and regulations could expose us to significant liabilities.

Our research and development activities use biological and hazardous materials that are dangerous to human health and safety or the environment. We are subject to a variety of federal, state and local laws and regulations governing the use, generation, manufacture, storage, handling and disposal of these materials and wastes resulting from these materials. We are also subject to regulation by the Occupational Safety and Health Administration, or OSHA, the California and federal environmental protection agencies and to regulation under

the Toxic Substances Control Act. OSHA or the California or federal Environmental Protection Agency, or EPA, may adopt regulations that may affect our research and development programs. We are unable to predict whether any agency will adopt any regulations that could have a material adverse effect on our operations. We have incurred, and will continue to incur, capital and operating expenditures and other costs in the ordinary course of our business in complying with these laws and regulations.

Although we believe our safety procedures for handling and disposing of these materials comply with federal, state and local laws and regulations, we cannot entirely eliminate the risk of accidental injury or contamination from the use, storage, handling or disposal of hazardous materials. In the event of contamination or injury, we could be held liable for any resulting damages, and any liability could significantly exceed our insurance coverage.

We may not be able to conduct, or contract with others to conduct, animal testing in the future, which could harm our research and development activities.

Certain laws and regulations relating to drug development require us to test our product candidates on animals before initiating clinical trials involving humans. Animal testing activities have been the subject of controversy and adverse publicity. Animal rights groups and other organizations and individuals have attempted to stop animal testing activities by pressing for legislation and regulation in these areas and by disrupting these activities through protests and other means. To the extent the activities of these groups are successful, our research and development activities may be interrupted or delayed.

Risks Related to Our Common Stock

We may not maintain the listing of our common stock on the NASDAQ Capital Market.

Our ability to raise additional capital may be dependent upon our stock being quoted on the NASDAQ Capital Market. Previously, we had fallen out of compliance with continued listing requirements because our common stock did not comply with the $1.00 minimum bid price requirement for continued listing set forth in NASDAQ Marketplace Rule 4450(a)(5). To regain compliance, effective August 20, 2008, we implemented a 1-for-6 reverse stock split of our common stock. After that date, our common stock traded above the minimum $1.00 bid price for at least ten consecutive business days and on September 5, 2008, the NASDAQ Stock Market notified us that we had regained compliance with the minimum bid price requirements. On October 16, 2008, the NASDAQ Stock Market suspended the enforcement of the minimum bid price and market value requirements through January 16, 2009 and on December 19, 2008 the suspension was extended to April 20, 2009. Even though we regained compliance with the minimum bid price or other listing requirement, we cannot assure you that we will be able to maintain compliance with the minimum bid price requirement in the future, and our failure to do so could result in the delisting of our shares from the NASDAQ Capital Market.

The reverse stock split may have an effect on the trading market for our shares.

The reduction in the number of issued and outstanding shares occasioned by the reverse stock split, on August 20, 2008, resulted in an increase in the market price of our common stock, although such price increase is not necessarily in proportion to the ratio of the reverse stock split. The trading price of our common stock depends on many factors, many which are beyond our control. A higher stock price may increase investor interest and reduce resistance of brokerage firms to recommend the purchase of our common stock. On the other hand, to the extent that negative investor sentiment regarding our common stock is not based on our underlying business fundamentals, the reverse stock split may not overcome such sentiment enough to increase our stock price. In addition, the liquidity of our common stock may be adversely affected by the reduced number of shares outstanding after the reverse stock split, and the reverse stock split increased the number of stockholders who own “odd lots,” which consist of blocks of fewer than 100 shares. Stockholders who hold “odd lots” may be required to pay higher brokerage commissions when they sell their shares and may have greater difficulty in making sales.

A significant number of shares of our common stock are subject to issuance upon exercise of outstanding warrants, which upon such exercise would result in dilution to our security holders.

On August 29, 2008, we issued outstanding warrants to purchase an aggregate of 3,588,221 shares of our common stock, at an exercise price of $2.34 per share. The exercise price and/or the number of shares of common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including certain issuances of securities at a price equal to less than the then current exercise price, subdivisions and stock splits, stock dividends, combinations, reorganizations, reclassifications, consolidations, mergers or sales of properties and assets and upon the issuance of certain assets or securities to holders of our common stock, as applicable. Although we cannot determine at this time which of these warrants will ultimately be exercised, it is reasonable to assume that such warrants will be exercised only if the exercise price is below the market price of our common stock. To the extent the warrants are exercised, additional shares of our common stock will be issued that will be eligible for resale in the public market, which will result in dilution to our security holders. The issuance of additional securities could also have an adverse effect on the market price of our common stock.

The price of our common stock has been and may continue to be volatile.

The stock markets in general, the markets for biotechnology stocks and, in particular, the stock price of our common stock, have experienced extreme volatility.

Price declines in our common stock could result from general market and economic conditions and a variety of other factors, including:

- adverse results or delays in our clinical trials;
- announcements of FDA non-approval of our product candidates, or delays in the FDA or other foreign regulatory agency review process;
- adverse actions taken by regulatory agencies with respect to our product candidates, clinical trials, manufacturing processes or sales and marketing activities;
- announcements of technological innovations, patents or new products by our competitors;
- regulatory developments in the United States and foreign countries;
- any lawsuit involving us or our product candidates;
- announcements concerning our competitors, or the biotechnology or pharmaceutical industries in general;
- developments concerning any strategic alliances or acquisitions we may enter into;
- actual or anticipated variations in our operating results;
- changes in recommendations by securities analysts or lack of analyst coverage;
- deviations in our operating results from the estimates of analysts;
- sales of our common stock by our executive officers, directors and five percent stockholders or sales of substantial amounts of common stock; and
- loss of any of our key scientific or management personnel.

In the past, following periods of volatility in the market price of a particular company's securities, litigation has often been brought against that company. On July 5 and July 18, 2007, purported shareholder class action complaints alleging violations of the federal securities laws were filed against us, our Chief Executive Officer Harold E. Selick and our former Chief Financial Officer Janet I. Swearson in the United States District Court for the Southern District of New York. On September 14, 2007, these lawsuits, which have been consolidated by the Court into a single proceeding, were ordered transferred to the United States District Court for the Northern

District of California On January 15, 2008, the plaintiffs filed a first consolidated amended complaint. On July 11, 2008, the Court granted the defendants' motions to dismiss that complaint but afforded the plaintiffs leave to file a further amended complaint. On September 19, 2008, the plaintiffs filed a second consolidated amended complaint, which, on behalf of an alleged class of purchasers of our common stock from the date of our initial public offering of securities on February 4, 2005 through July 14, 2006, purports to allege claims arising under Sections 11, 12(a)(2) and 15 of the Securities Act and under Sections 10(b) and 20(a) of the Exchange Act. The plaintiffs allege generally that the defendants violated the federal securities laws by, among other things, making material misstatements or omissions concerning our Phase II and Phase III clinical trials of Lonidamine (TH-070). Defendants have filed motions to dismiss the second consolidated amended complaint, which are pending. We believe that plaintiffs' claims are without merit and intend to defend against the actions vigorously. We cannot reasonably predict the outcome of this matter at this time. Although we believe our directors and officer's insurance coverage is adequate, if our defense of the suit is unsuccessful, there can be no assurances that the insurance will substantially cover any resulting claim or that the premiums for directors and officers insurance will not be substantially higher in the future.

If our officers, directors and largest stockholders choose to act together, they may be able to control our management and operations, acting in their best interests and not necessarily those of other stockholders.

As of December 31, 2008, our officers, directors and holders of 5% or more of our outstanding common stock beneficially own approximately 80.6% of our common stock. As a result, these stockholders, acting together, will be able to significantly influence all matters requiring approval by our stockholders, including the election of directors and the approval of mergers or other business combination transactions. The interests of this group of stockholders may not always coincide with the interests of other stockholders, and they may act in a manner that advances their best interests and not necessarily those of other stockholders.

Our certificate of incorporation, our bylaws and Delaware law contain provisions that could discourage another company from acquiring us and may prevent attempts by our stockholders to replace or remove our current management.

Provisions of Delaware law, where we are incorporated, our certificate of incorporation and bylaws may discourage, delay or prevent a merger or acquisition that stockholders may consider favorable, including transactions in which you might otherwise receive a premium for your shares. In addition, these provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace or remove our board of directors. These provisions include:

- authorizing the issuance of "blank check" preferred stock without any need for action by stockholders;
- providing for a classified board of directors with staggered terms;
- requiring supermajority stockholder voting to effect certain amendments to our certificate of incorporation and bylaws;
- eliminating the ability of stockholders to call special meetings of stockholders;
- prohibiting stockholder action by written consent; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

In addition, in August 2006, our board of directors adopted a preferred shares rights agreement, the provisions of which could make it more difficult for a potential acquirer to consummate a transaction without the approval of our board of directors.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We sublease approximately 33,700 square feet of laboratory and office space in Redwood City, California under an agreement that terminates in February 2010. We lease an additional 6,489 square feet of laboratory space in Redwood City, California under an agreement that terminates in February 2010. On February 3, 2006, we entered into a lease for additional 34,205 square feet of office space at our Redwood City headquarters that terminates in 2011 and extends our lease on the current space to 2011. We believe these facilities are suitable and adequate for our current needs.

ITEM 3. LEGAL PROCEEDINGS

On July 5 and July 18, 2007, purported shareholder class action complaints alleging violations of the federal securities laws were filed against us, our Chief Executive Officer Harold E. Selick and our former Chief Financial Officer Janet I. Swearson in the United States District Court for the Southern District of New York. On September 14, 2007, these lawsuits, which have been consolidated by the Court into a single proceeding, were ordered transferred to the United States District Court for the Northern District of California. On January 15, 2008, the plaintiffs filed a first consolidated amended complaint. On July 11, 2008, the Court granted Defendants' motions to dismiss that complaint but afforded the plaintiffs leave to file a further amended complaint. On September 19, 2008, the plaintiffs filed a second consolidated amended complaint, which, on behalf of an alleged class of purchasers of our common stock from the date of our initial public offering of securities on February 4, 2005 through July 14, 2006, purports to allege claims arising under Sections 11, 12(a)(2) and 15 of the Securities Act, and under Sections 10(b) and 20(a) of the Exchange Act . Plaintiffs allege generally that the defendants violated the federal securities laws by, among other things, making material misstatements or omissions concerning our Phase II and Phase III clinical trials of Lonidamine (TH-070). Defendants have filed motions to dismiss the second consolidated amended complaint, which are pending. We believe that the plaintiffs' claims are without merit and intend to defend against the actions vigorously. We cannot reasonably predict the outcome of this matter at this time.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matters were submitted to a vote for our stockholders, through solicitation of proxies or otherwise, in the fourth quarter of our fiscal year ended December 31, 2008.

PART II

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

Our common stock has been traded on the NASDAQ Capital Market under the symbol "THLD" since August 20, 2008 and the NASDAQ Global Market from February 4, 2005 to August 19, 2008. Prior to that time there was no public market for our stock. The following table lists quarterly information on the price range of our common stock based on the high and low reported sale prices for our common stock as reported by the NASDAQ Capital Market and the NASDAQ Global Market for the periods indicated below, respectively. These prices do not include retail markups, markdowns or commissions. In August 2008, our Board of Directors approved a 1-for-6 reverse split of its common stock, effective August 20, 2008. Accordingly, the prices of our common stock have been retroactively adjusted to reflect the reverse split.

	High	Low
Year Ended December 31, 2008:		
First Quarter	$ 4.56	$2.10
Second Quarter	$ 2.76	$1.86
Third Quarter	$ 2.66	$1.25
Fourth Quarter	$ 1.37	$0.21
Year Ended December 31, 2007:		
First Quarter	$24.60	$8.64
Second Quarter	$13.44	$7.14
Third Quarter	$ 7.80	$3.90
Fourth Quarter	$ 5.76	$3.06

We estimate that there were approximately 97 holders of record of our common stock as of February 28, 2009.

Dividends

We have never declared or paid any dividends on our capital stock. We currently intend to retain any future earnings to fund the development and expansion of our business, and therefore we do not anticipate paying cash dividends on our common stock in the foreseeable future. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, restrictions contained in future financing instruments and other factors our board of directors deems relevant.

Recent Sales of Unregistered Securities

None.

Use of Proceeds From Sale of Registered Securities

(c) Issuer Purchases of Equity Securities

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Period	(a) Total number of shares (or Units) Purchased*	(b) Average Price Paid per Share (or Unit)	(c) Total Number of Shares (or Units) Purchased as Part of Publicly Announced Plans or Programs	(d) Maximum Number (or Approximate Dollar Value) of Shares (or Units) that May Yet Be Purchased Under the Plans or Programs
10/01/2008 to 10/31/2008	—	$ —	—	—
11/01/2008 to 11/30/2008	—	$ —	—	—
12/01/2008 to 12/31/2008	—	$ —	—	—

* Shares repurchased from former employees upon termination of their employment pursuant to our contractual repurchase rights under the terms of the 2004 Amended and Restated Equity Incentive Plan.

Equity Compensation Plans

The following table provides certain information with respect to all of our equity compensation plans in effect as of December 31, 2008:

	Number of securities to be issued upon exercise of outstanding options	Weighted-average exercise price of outstanding options	Number of securities remaining available for future issuance under equity compensation plans (1) (2)
Equity compensation plans approved by stockholders	617,098	$ 8.41	387,595
Equity compensation plans not approved by stockholders	—	—	—
Total	617,098	$ 8.41	387,595

(1) Includes 119,165 shares of common stock issuable under our 2004 Employee Stock Purchase Plan.

(2) On January 1, 2006, and annually thereafter, the authorized shares for the 2004 Equity Incentive Plan will automatically be increased by a number of shares equal to the lesser of:

- 5% of the number of our shares issued and outstanding prior to the preceding December 31;
- 202,401 shares; or
- an amount determined by our Board of Directors.

ITEM 6. SELECTED FINANCIAL DATA

We are a development stage company. The following selected statement of operations data for the years ended December 31, 2008, 2007 and 2006 and balance sheet data as of December 31, 2008 and 2007 have been derived from our audited financial statements included elsewhere in this Annual Report on Form 10-K. The following selected statement of operations data for years ended December 31, 2005 and 2004, and balance sheet data as of December 31, 2006, 2005 and 2004 are derived from our financial statements not included in this Annual Report on Form 10-K. The selected financial data set forth below have been prepared in accordance with accounting principles generally accepted in the United States of America and should be read together with our financial statements and the related notes to those financial statements, as well as "Management's Discussion and Analysis of Financial Condition and Results of Operations," appearing elsewhere in this Annual Report on Form 10-K. In August 2008, our Board of Directors approved a 1-for-6 reverse split of its common stock, effective August 20, 2008. Accordingly, all references to common shares of stock and net loss per common share have been retroactively adjusted to reflect the reverse split.

As discussed in Note 9 in Item 8 "Financial Statements and Supplementary Data", on January 1, 2006, we began accounting for stock options and stock purchase rights under the provisions of Statement of Financial Accounting Standards No. 123(R), *"Share-Based Payments"* ("SFAS 123(R)"), which requires the recognition of the fair value of stock-based compensation.

	Years Ended December 31,				
	2008	2007	2006	2005	2004
	(In thousands, except per share data)				
Revenue	$ 1,440	$ 1,436	$ 1,461	$ 690	$ —
Operating expenses:					
Research and development (1)	13,440	23,375	46,267	35,991	16,327
General and administrative (1)	6,734	10,411	14,453	11,235	7,649
Total operating expenses	20,174	33,786	60,720	47,226	23,976
Loss from operations	(18,734)	(32,350)	(59,259)	(46,536)	(23,976)
Interest and other income, net	503	1,841	3,729	2,159	443
Interest expense	(61)	(155)	(156)	(31)	(33)
Net loss attributable to common stockholders	(18,292)	(30,664)	(55,686)	$(44,408)	$(23,566)
Net loss per common share:					
Basic and diluted	$ (1.97)	$ (4.97)	$ (9.20)	$ (9.81)	$(121.51)
Weighted average number of shares used in net loss per common share calculations:					
Basic and diluted	9,275	6,176	6,056	4,529	194
(1) Includes employee and non-employee non-cash stock-based compensation of:					
Research and development	$ 1,504	$ 2,413	$ 5,008	$ 5,951	$ 2,960
General and administrative	$ 1,748	$ 3,496	$ 5,141	3,470	3,015

	As of December 31,				
	2008	2007	2006	2005	2004
	(In thousands)				
Balance Sheet Data:					
Cash, cash equivalents and marketable securities	$22,337	$22,693	$52,810	$ 99,654	$ 28,665
Working capital	20,292	17,884	43,698	90,655	21,967
Total assets	24,531	25,814	57,034	102,101	32,213
Notes payable, less current portion	—	337	1,247	151	382
Total liabilities	3,117	6,227	12,796	12,733	8,847
Redeemable convertible preferred stock	—	—	—	—	49,839
Total stockholders' equity (deficit)	21,414	19,587	44,238	89,368	(26,473)

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with our consolidated financial statements and related notes included elsewhere in this Annual Report on Form 10-K. This discussion may contain forward-looking statements based upon current expectations that involve risks and uncertainties, including those set forth under the heading "Risk Factors" and elsewhere in this Annual Report on Form 10-K. Our actual results and the timing of selected events discussed below could differ materially from those expressed in, or implied by, these forward-looking statements.

Overview

We are a biotechnology company focused on the discovery and development of drugs targeting the microenvironment of solid tumors as novel treatments for patients living with cancer. The microenvironment of solid tumors is characterized by, among other things, hypoxia or lack of oxygen, disordered blood vessel growth, and the upregulation of glucose transport. This hypoxic environment is known to be resistant to standard chemotherapy and radiation. It is thought to be responsible for the poor prognosis of many solid tumors and treating the hypoxic environment is currently believed to be a significant unmet medical need. Our product candidates are designed to selectively target the hypoxic microenvironment of tumors either by selective toxin activation in the case of our hypoxia activated prodrug (HAP) program, including TH-302, or potentially utilizing the consequences of increased uptake of glucose in cancer cells relative to most normal cells. Our product candidates glufosfamide and 2DG share certain structural characteristics with glucose but act instead as chemotherapeutic toxins when taken up by a cell.

Our focus is on product candidates for the treatment of patients with cancer. We have three product candidates for which we have exclusive worldwide marketing rights:

- TH-302, which we discovered, is our lead product candidate for the potential treatment of patients with cancer. It is a novel drug candidate that is activated under the severe hypoxic conditions of most solid tumors. In May 2007, we announced the filing of an IND with the FDA for TH-302, and in July 2007, we initiated a Phase 1 clinical trial evaluating the safety of TH-302 in patients with advanced solid tumors. In October 2008, we reported interim results for this clinical trial. In the first quarter of 2009 we expanded enrollment to explore activity in specific indications and expect to provide top-line results in the second quarter of 2009. In August 2008, we initiated a multi-armed Phase 1/2 clinical trial of TH-302 which includes three separate treatment arms with each arm combining TH-302 with a different chemotherapeutic agent for the treatment of patients with solid tumors. In September 2008, we also initiated a Phase 1/2 clinical trial of TH-302 in combination with doxorubicin in patients with advanced soft tissue sarcoma. We expect to provide interim results for the two trials in the second quarter of 2009 and we expect to complete enrollment in the fourth quarter of 2009.
- Glufosfamide is for the potential treatment of patients with cancer. In February 2007, we announced that our Phase 3 clinical trial did not reach its primary endpoint of a statistically significant survival benefit for patients with metastatic pancreatic cancer that relapsed following chemotherapy with gemcitabine. In May 2008, we completed the Phase 3 study and we are conducting no further clinical trials at this time. We plan to partner or seek external funding for the future development of glufosfamide.
- 2DG is our product candidate for the potential treatment of patients with cancer and has been evaluated in a Phase 1 clinical trial alone and in combination with docetaxel as a combination therapy. This clinical trial began in the first quarter of 2004 and we completed enrollment in the first half of 2008. We presented top-line results for this clinical trial in August 2008. We are not currently planning or conducting any additional clinical trials of 2DG. We plan to partner or seek external funding for the future development of 2DG.

We are working to discover additional hypoxia activated prodrugs that will selectively target cancer cells.

We are a development stage company incorporated in October 2001. We have devoted substantially all of our resources to research and development of our product candidates. We have not generated any revenue from the sale of our product candidates, and prior to our initial public offering in February 2005, we funded our operations through the private placement of equity securities. In February 2005, we completed our initial public offering that raised net proceeds of $38.1 million, and in October 2005, we completed an offering of common stock that raised net proceeds of $62.4 million. In August 2008, we completed an offering of common stock and warrants that raised net proceeds of $16.8 million. As of December 31, 2008 we had cash, cash equivalents and marketable securities of $22.3 million. The net loss for the year ended December 31, 2008 was $18.3 million, respectively, and the cumulative net loss since our inception through December 31, 2008 was $183.6 million.

We expect to continue to devote substantial resources to research and development in future periods as we complete our current clinical trials, start additional clinical trials and continue our discovery efforts. Research and development expenses are expected to increase in 2009 compared to 2008 due to the continued execution of existing clinical trials and beginning of new clinical trials. We expect that our cash, cash equivalents and marketable securities as of December 31, 2008 will be sufficient to fund our projected operating requirements into the first quarter of 2010, including completing our current ongoing clinical trials and conducting research and discovery efforts toward additional product candidates, working capital and general corporate purposes. Research and development expenses may fluctuate significantly from period to period as a result of the progress and results of our clinical trials.

Revenue

We have not generated any revenue from the sale of our product candidates since our inception and do not expect to generate any revenue from the sale of our product candidates in the near term. Through 2008, we recognized $5.0 million in revenue related to the upfront payment received in connection with a 2004 agreement with MediBIC for the development of glufosfamide in Japan and several other Asian countries. The payment was contingent upon the finalization of the clinical development plan, which occurred in July 2005. Revenue has been recognized on a straight-line basis over the estimated development period, through December 31, 2008. We are responsible for all development activities under this agreement.

Research and Development Expenses

Research and development expenses consist primarily of costs of conducting clinical trials, salaries and related costs for personnel including non-cash stock-based compensation, costs of clinical materials, costs for research projects and preclinical studies, costs related to regulatory filings, and facility costs. Contracting and consulting expenses are a significant component of our research and development expenses as we rely on consultants and contractors in many of these areas. We recognize expenses as they are incurred. Our accruals for expenses associated with preclinical and clinical studies and contracts associated with clinical materials are based upon the terms of the service contracts, the amount of services provided and the status of the activities. We expect annual research and development expenses will decrease significantly in the future as we progress with a reduced workforce and smaller clinical trials. From inception through December 31, 2008, we incurred an aggregate of $143.9 million on research and development expenses, including non-cash stock-based compensation expense.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for our personnel in the executive, finance, patent, accounting and other administrative functions, including non-cash stock-based compensation, as well as consulting costs for functions for which we either do not staff or only partially staff, including public relations, market research and recruiting. Other costs include professional fees for legal and accounting services, insurance and facility costs. From inception through December 31, 2008, we incurred an aggregate of $53.0 million on general and administrative expenses, including non-cash stock-based compensation expense.

Stock-Based Compensation

We recognize stock-based compensation in accordance with the fair value provisions of Statement of Financial Accounting Standards No.123(R), '*Share-Based Payment*" ("SFAS 123(R)") using the modified prospective transition method, except for options granted prior to our initial public offering in February 2005, for which the fair value was determined for disclosure purposes using the minimum value method. Refer to the discussion of accounting treatment of stock based compensation below under ***Critical Accounting Policies***.

Results of Operations for the Years Ended December 31, 2008 and 2007

Revenue

For the years ended December 31, 2008 and 2007, we recognized $1.4 million and $1.4 million in revenue related to a $5.0 million upfront payment received in connection with a 2004 agreement with MediBIC for the development of glufosfamide in Japan and several other Asian countries. Revenue was recognized on a straight-line basis through 2008, the development period. We are responsible for all development activities under this agreement.

Research and Development

Research and development expenses were $13.4 million for the year ended December 31, 2008, compared to $23.4 million for the year ended December 31, 2007. The $10.0 million decrease in expenses is due to a $5.8 million decrease in clinical and development expenses, $2.6 million in lower staffing and facilities expenses due to a lower headcount compared to the prior year and $0.7 million in lower consulting expenses. Staffing expenses in 2007 included $0.6 million in severance expenses. In addition, stock-based compensation expense decreased by $0.9 million primarily due to a reduction in the number of employees and consultants compared to the prior year, as well as lower valuations for 2008 stock option grants resulting from a lower stock price.

	Years ended December 31,		
Research and development expenses by project (in thousands)	**2008**	**2007**	**2006**
TH-302	$ 6,876	$ 5,079	$ 2,410
Glufosfamide	1,976	11,877	17,018
2DG	414	1,130	1,640
Discovery research	4,174	5,338	9,552
TH-070	—	(49)	15,647
Total research and development expenses	$ 13,440	$ 23,375	$ 46,267

Research and development expenses associated with our internally discovered compound TH-302 were $6.9 million for 2008 and $5.1 million for 2007. The increase of $1.8 million was primarily due to $1.0 in employee related expenses and $0.6 million in clinical and manufacturing expenses. TH-302 continues to progress through the Phase 1 monotherapy clinical trial initiated in July 2007, with enrollment completed in the fourth quarter of 2008. In addition, in the third quarter of 2008, we initiated a Phase 1/2 combination therapy clinical trial of TH-302 which includes three separate treatment arms and a Phase 1/2 clinical trial of TH-302 in combination with doxorubicin in patients with advanced soft tissue sarcoma. Research and development expenses associated with glufosfamide were $2.0 million for 2008 and $11.9 million for 2007. This decrease was primarily due to a $5.8 million decrease in clinical and manufacturing expenses, a $3.3 million decrease in employee-related and stock compensation expenses and a $0.8 million decrease in outside consulting expenses. These declines in expenses were due to completion and announcement of results for our Phase 2 trials in pancreatic cancer and soft-tissue sarcoma in 2007 and discontinuation of our Phase 2 trials in recurrent sensitive small cell lung cancer and platinum-resistant ovarian cancer in October 2007 and January 2008, respectively. Research and development expenses associated with 2DG were $0.4 million for 2008 and $1.1 million for 2007, as we completed enrollment of our 2DG Phase 1 trial in second quarter of 2008 and announced results in third quarter

of 2008. We are not currently planning or conducting any additional clinical trials of 2DG. We plan to partner or seek external funding for the future development of 2DG. Discovery research and development expenses were $4.2 million for 2008 and $5.3 million for 2007. The decrease was primarily due to the allocation of resources towards our TH-302 program, and lower staffing and facilities expenses to support our other discovery research programs.

We expect to continue to devote substantial resources to research and development in future periods as we complete our current clinical trials, start additional clinical trials and continue our discovery efforts. Research and development expenses are expected to increase in 2009 compared to 2008 due to the continued execution of existing clinical trials and beginning of new clinical trials.

General and Administrative

General and administrative expenses were $6.7 million for 2008, compared to $10.4 million for 2007. The $3.7 million decrease reflects $1.8 million in lower staffing and facilities expense, $1.7 million decrease in stock-based compensation, and $0.1 million in lower consulting expenses. Staffing expenses in 2007 included $0.5 million in severance expenses.

We currently expect our general and administrative expenses to remain approximately flat in 2009 compared to 2008.

Interest and Other Income

Interest and other income for 2008 was $0.5 million compared to $1.8 million for 2007. The decrease was primarily due to lower invested cash, cash equivalents and marketable securities balances during 2008 compared to the prior year.

Interest Expense

Interest expense for the years ended December 31, 2008 and 2007 was $0.1 million and $0.2 million, respectively.

Results of Operations for the Years Ended December 31, 2007 and 2006

Revenue

For the years ended December 31, 2007 and 2006, we recognized $1.4 million and $1.5 million in revenue related to a $5.0 million upfront payment received in connection with a 2004 agreement with MediBIC for the development of glufosfamide in Japan and several other Asian countries. Revenue is being recognized on a straight-line basis over the estimated development period, currently estimated to be through 2008. We are responsible for all development activities under this agreement.

Research and Development

Research and development expenses were $23.4 million for the year ended December 31, 2007, compared to $46.3 million for the year ended December 31, 2006. The $22.9 million decrease in expenses is due to a $14.6 million decrease in clinical and development expenses and $6.1 million in lower staffing and facilities expenses due to a lower headcount compared to the prior year. In addition, stock-based compensation expense decreased by $2.6 million primarily due to a reduction in the number of employees and consultants compared to the prior year, as well as lower valuations for 2007 stock option grants resulting from a lower stock price.

Research and development expenses associated with glufosfamide were $11.9 million for 2007 and $17.0 million for 2006. This decrease was due to a $4.4 million decrease in clinical and manufacturing expenses and a

$0.7 million decrease in staffing expenses. Research and development expenses associated with our internally discovered compound TH-302 were $5.1 million for 2007 and $2.4 million for 2006, primarily due to the compound's progress through preclinical studies towards the IND filing in April 2007 and commencement of the Phase 1 clinical trial in July 2007. Research and development expenses associated with 2DG were $1.1 million for 2007 and $1.6 million for 2006, due to $0.1 million decrease in employee-related expenses and a $0.4 million decrease in clinical and manufacturing as the Phase 1 clinical trial nears completion. Discovery research and development expenses were $5.3 million for 2007 and $9.6 million for 2006. The decrease was primarily due to the allocation of resources towards our TH-302 program, and lower staffing and facilities expenses to support our other discovery research programs. Research and development expenses associated with TH-070 were ($49,000) for 2007 and $15.7 million for 2006. This decrease in expenses was due to costs associated with fully-enrolled clinical trials in the 2006 period, followed by the discontinuation and close out of the program beginning in July 2006. For 2007, our payments were less than previously estimated accruals.

General and Administrative

General and administrative expenses were $10.4 million for 2007, compared to $14.5 million for 2006. The $4.1 million decrease reflects $1.9 million in lower staffing expense, $1.6 million decrease in stock-based compensation, and $0.9 million in lower consulting expenses. These reductions in expenses were partially offset by $0.3 million in higher facilities expense.

Interest and Other Income

Interest and other income for 2007 was $1.8 million compared to $3.7 million for 2006. The decrease was primarily due to lower invested cash, cash equivalents and marketable securities balances and lower interest rates during 2007 compared to the prior year.

Interest Expense

Interest expense for the years ended December 31, 2007 and 2006 was $0.2 million and $0.2 million, respectively.

Liquidity and Capital Resources

We have incurred net losses since inception through December 31, 2008 of $183.6 million. We have not generated any product revenues and do not expect to generate revenue from the sale of product candidates in the near term. From inception until our initial public offering in February 2005, we funded our operations primarily through the private placement of our preferred stock. In February 2005, we completed our initial public offering of 1.0 million shares of our common stock, raising net proceeds of $38.1 million. In October 2005, we completed a public offering of 1.1 million shares of our common stock for net proceeds of $62.4 million. In August 2008, we sold to certain investors an aggregate of 8,970,574 shares of our common stock for a purchase price equal to $2.04 per share and warrants exercisable for a total of 3,588,221 shares of our common stock with an exercise price equal to $2.34 per share (subject to adjustment). We received aggregate gross proceeds of $18.3 million in connection with the offering. Net proceeds generated from the offering were $16.8 million.

In August 2008, our Board of Directors approved a 1-for-6 reverse split of its common stock, effective August 20, 2008. Accordingly, all references to common shares of stock have been retroactively adjusted to reflect the reverse split.

We had cash, cash equivalents and marketable securities of $22.3 million and $22.7 million at December 31, 2008 and 2007, respectively.

Net cash used in operating activities for the years ended December 31, 2008, 2007 and 2006 was $16.3 million, $29.2 million and $46.4 million, respectively. For the year ended December 31, 2008, cash used in

operations was attributable to the net loss for the year after adding back non-cash charges for stock-based compensation expense and depreciation and amortization expenses, offset by a decrease in accrued liabilities and a decrease in deferred revenue. For the year ended December 31, 2007, cash used in operations was attributable to the net loss for the year after adding back non-cash charges for stock-based compensation expense, depreciation and amortization expenses, a decrease in accrued liabilities and a decrease in deferred revenue. For the year ended December 31, 2006, cash used in operations resulted from the net loss for the year after adding back non-cash charges for stock-based compensation expense, depreciation and amortization expenses and deferred revenue.

Net cash provided by investing activities for the year ended December 31, 2008 was $4.4 million, primarily due to proceeds from sales and maturities of investments of $13.7 million, offset by purchases of marketable securities of $9.2 million. Net cash provided by investing activities for the year ended December 31, 2007 was $13.1 million, primarily due to proceeds from sales and maturities of investments of $35.2 million, offset by purchases of marketable securities of $22.1 million. Net cash used in investing activities was $2.4 million for the year ended December 31, 2006, primarily due to purchases of marketable securities of $42.9 million, capital spending of $2.4 million, partially offset by sales of marketable securities of $43.2 million.

Net cash provided by financing activities was $15.9 million for the year ended December 31, 2008, reflecting the $16.8 million net proceeds from the sale of our common stock in August 2008, offset by repayments of notes payable totaling $0.9 for the year. Net cash used in financing activities was $0.9 million for the year ended December 31, 2007, primarily due to repayments of notes payable during the year partially offset by proceeds from the sale of stock under the employee stock purchase plan. Net cash provided by financing activities was $2.3 million for the year ended December 31, 2006, which was primarily attributable to borrowings under a loan and security agreement, net of repayments and to lesser extent cash from stock option exercises and sale of stock under the employee stock purchase plan.

We expect 2009 cash requirements to be in the range of $19.0 million to $21.0 million. We believe that our cash, cash equivalents and marketable securities as of December 31, 2008 will be sufficient to fund our projected operating requirements into the first quarter of 2010, including completing our current trials, conducting research and discovery efforts towards additional product candidates, working capital and general corporate purposes.

We expect to need to raise additional capital or incur indebtedness to continue to fund our future operations. We may seek to raise capital through a variety of sources, including:

- the public equity market;
- private equity financing;
- collaborative arrangements;
- licensing arrangements; and/or
- public or private debt.

Our ability to raise additional funds will depend on our clinical and regulatory events, our ability to identify promising in-licensing opportunities, and factors related to financial, economic, and market conditions, many of which are beyond our control. We cannot be certain that sufficient funds will be available to us when required or on satisfactory terms. If adequate funds are not available, we may be required to significantly reduce or refocus our operations or to obtain funds through arrangements that may require us to relinquish rights to certain of our products, technologies or potential markets, any of which could delay or require that we curtail our development programs or otherwise have a material adverse effect on our business, financial condition and results of operations. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of such securities would result in ownership dilution to our existing stockholders.

In addition, our ability to raise additional capital may be dependent upon our stock being quoted on the NASDAQ Capital Market. Previously we had fallen out of compliance with continued listing requirements because our common stock did not comply with the $1.00 minimum bid price requirement for continued listing set forth in NASDAQ Marketplace Rule 4450(a)(5). On August 13, 2008 our Board of Directors implemented a one for six reverse stock split, effective August 20, 2008, to regain compliance with the minimum bid price requirement. On September 5, 2008, the NASDAQ Stock Market notified us that we had regained compliance with the minimum bid price. Even though we regained compliance with the minimum bid price requirement, we cannot be assured that we will be able to maintain compliance with the minimum bid price requirement in the future, and our failure to do so could result in the delisting of our shares from the NASDAQ Capital Market. To maintain our listing on the NASDAQ Capital Market, we are also required, among other things, to either maintain stockholders' equity of at least $5 million or a market value of at least $15 million. While we currently satisfy the stockholders' equity requirement, we may not continue to do so. On October 16, 2008, the NASDAQ Stock Market suspended the enforcement of the minimum bid price and market value requirements through January 16, 2009 and on December 19, 2008, the suspension period was extended to April 20, 2009.

If we are unable to secure additional financing on a timely basis or on terms favorable to us, we may be required to cease or reduce certain research and development projects, to sell some or all of our technology or assets or to merge all or a portion of our business with another entity. Insufficient funds may require us to delay, scale back, or eliminate some or all of our activities, and if we are unable to obtain additional funding, there is uncertainty regarding our continued existence.

Obligations and Commitments

In March 2003, we entered into a loan and security agreement with a financial institution to borrow up to $1.0 million for working capital and equipment purchases. As of December 31, 2004, we had borrowed the full amount under this facility, which is being repaid over a 36-month period from the dates of borrowing. These borrowings bear interest at an average rate of 5.8% per year at December 31, 2007. At December 31, 2007, all borrowing under this facility had been fully repaid. In April 2006, we amended the existing loan and security agreement to borrow up to an additional $4.0 million for working capital and equipment purchases. The interest rate for borrowings under this facility will be determined based on the 36-month U.S. Treasury note plus 2.25% on the date of borrowing. We borrowed $2.6 million under this facility, which will be repaid over a 36-month period from the date of borrowing. The interest rate on these borrowings was approximately 7.2% per annum. At December 31, 2008, the total amount due under this facility was $0.3 million.

We may borrow up to an additional $1.4 million for equipment purchases. The amended agreement requires us to maintain the lower of 85% of our total cash and cash equivalents or $10.0 million at the financial institution. At December 31, 2008, we were in compliance with this covenant.

In August 2004, we entered into a noncancelable facilities sublease agreement that expires on February 28, 2010 for our headquarters in Redwood City, California. On April 1, 2005, we entered into a noncancelable facilities lease agreement that expires on February 28, 2010 for additional laboratory space in Redwood City, California.

In February 2006, we entered into a lease for an additional 34,205 square feet of space and increased the lease term for the existing space located at our headquarters in Redwood City, California to September 30, 2011. The lease is for a period of 66 months, beginning on April 1, 2006 with respect to the additional square footage and will begin on March 1, 2010 with respect to the existing square footage. The lease will expire, unless otherwise terminated under the terms of the lease, on September 30, 2011. The aggregate rent for the term of the lease is approximately $4.8 million.

In addition, the lease requires us to pay certain taxes, assessments, fees and other costs and expenses associated with the premises as well as a customary management fee. We are also responsible for the costs of certain tenant improvements associated with the leased space. In connection with the lease, we furnished a letter of credit to the landlord for approximately $0.3 million.

Our major outstanding contractual obligations consist of amounts due under our financing and lease agreements, and purchase commitments. Contractual obligations and related scheduled payments as of December 31, 2008, are as follows (in thousands):

	Within one year	One to three years	Four to five years	After five years	Total
Facilities sublease and lease	$1,398	$ 2,591	$ —	$ —	$3,989
Notes payable, principal and interest	343	—	—	—	343
Purchase commitments	1,702	—	—	—	1,702
Total	$3,443	$ 2,591	$ —	$ —	$6,034

In November 2004, we entered into an agreement with MediBIC to develop glufosfamide in Japan and several other Asian countries, and received an upfront payment of $5.0 million contingent upon the finalization of the clinical development plan. In July 2005, we finalized the development plan with MediBIC and began recognizing revenue from the upfront payment on a straight-line basis over the development period, through December 31, 2008. We are responsible for all development activities under this agreement. We will also be required to make royalty payments upon product commercialization. We may terminate the agreement at any time by making certain payments ranging from $7.0 million to $15.0 million, depending on the stage of development of the glufosfamide product in Japan.

In August 2003, we entered into an agreement with Baxter for the licensing and development of glufosfamide. Under this agreement, we paid Baxter an upfront license fee of $0.1 million and a $0.1 million development milestone in 2003. We also made a development milestone payment of $1.3 million in November 2004 and we are obligated to make certain additional development milestone payments, with the next payment due in connection with the filing of a new drug application with the FDA for glufosfamide. We will be required to make a milestone payment of $1.0 million within 30 days of filing an NDA for glufosfamide with the FDA. Future milestone payments in connection with the development of glufosfamide and United States and foreign regulatory submissions could total up to $8.0 million, and sales-based milestone payments could total up to $17.5 million. Following regulatory approval, we will be obligated to pay up to mid-single digit royalties to Baxter based on sales of glufosfamide products. We cannot be certain when, if ever, we will have to make development or sales-based milestone or royalty payments to Baxter.

Under our license agreement with Dr. Theodore J. Lampidis and Dr. Waldemar Priebe for rights under a patent and certain patent applications that generally cover the treatment of cancer with 2DG in combination with certain other cancer drugs, we are obligated to make certain milestone payments, including milestone payments of up to $0.7 million in connection with the filing and approval of an NDA for the first product covered by the licensed patents, as well as royalties based on sales of such products. We cannot be certain when, if ever, we will have to make these milestone or royalty payments.

Off-Balance Sheet Arrangements

As of December 31, 2008, 2007 and 2006, we did not have any relationships with unconsolidated entities or financial partnerships, such as entities often referred to as structured finance or special purpose entities, which would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes. In addition, we do not engage in trading activities involving non-exchange traded contracts. Therefore, we are not materially exposed to any financing, liquidity, market or credit risk that could arise if we had engaged in these relationships.

Income Taxes

We incurred net operating losses for the years ended December 31, 2008, 2007 and 2006 and, accordingly, we did not pay any federal or state income taxes. As of December 31, 2008, we had accumulated approximately $128 million in both federal and state net operating loss carryforwards to reduce future taxable income. If not utilized, our federal and state net operating loss carryforwards begin to expire in 2021 and 2013 for federal and state tax purposes, respectively. Our net operating loss carryforwards are subject to certain limitations on annual utilization in case of changes in ownership, as defined by federal and state tax laws.

At December 31, 2008, we had research credit carryforwards of approximately $1.2 million and $2.5 million for federal and California state income tax purposes, respectively. If not utilized, the federal carryforwards will expire in 2021 through 2028. The California state research credit can be carried forward indefinitely.

We have not recorded a benefit from our net operating loss or research credit carryforwards because we believe that it is uncertain that we will have sufficient income from future operations to realize the carryforwards prior to their expiration. Accordingly, we have established a valuation allowance against the deferred tax asset arising from the carryforwards.

Critical Accounting Policies

Our 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 consolidated financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities and expenses and related disclosures. We review our estimates on an ongoing basis. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. While our significant accounting policies are described in more detail in the notes to our consolidated financial statements included in this Annual Report on Form 10-K, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our consolidated financial statements.

Stock-Based Compensation

Beginning on January 1, 2006, we began accounting for stock options and stock purchase rights related to our 2004 Employee Stock Purchase Plan under the provisions of SFAS 123(R), which requires the recognition of the fair value of stock-based compensation. The fair value of stock options and ESPP shares was estimated using a Black-Scholes option valuation model. This model requires the input of subjective assumptions in implementing SFAS 123(R), including expected stock price volatility, expected life and estimated forfeitures of each award. The fair value of equity-based awards is amortized over the vesting period of the award, and we have elected to use the straight-line method of amortization. Due to the limited amount of historical data available to us, particularly with respect to stock-price volatility, employee exercise patterns and forfeitures, actual results could differ from our assumptions.

Prior to the implementation of SFAS 123(R), we accounted for stock options and ESPP shares under the provisions of Accounting Principles Board Opinion No. 25, *"Accounting for Stock Issued to Employees"* and made pro forma footnote disclosures as required by SFAS No. 148, *"Accounting For Stock-Based Compensation—Transition and Disclosure,"* which amended SFAS No. 123, *"Accounting For Stock-Based Compensation."*

The fair value of our common stock for options granted through the date of the initial public offering in February 2005 was originally estimated by our board of directors, with input from management. We did not obtain contemporaneous valuations by an unrelated valuation specialist. Subsequently, we reassessed the

valuations of common stock relating to grants of options during the period from January 1, 2005 through the date of our initial public offering and the years ended December 31, 2004 and 2003. As disclosed more fully in Note 9 of the notes of our consolidated financial statements, we granted stock options and restricted common stock with exercise prices ranging from $0.96 to $3.18 per share during the period from January 1, 2005 through the date of our initial public offering and the years ended December 31, 2004 and 2003. In addition, we determined that the fair value of our common stock increased from $0.96 to $98.34 per share during that period.

For financial reporting purposes, we have recorded stock-based compensation representing the difference between the estimated fair value of common stock and the option exercise price. Because shares of our common stock were not publicly traded before our initial public offering in February 2005, we determined the estimated fair value based upon several factors, including significant milestones attained, sales of our redeemable convertible preferred stock, changes in valuations of existing comparable publicly-registered biotech companies, trends in the broad market for biotechnology stocks and the expected valuation we would obtain in an initial public offering. Although it was reasonable to expect that the completion of our initial public offering would add value to the shares as a result of increased liquidity and marketability, the amount of additional value could not be measured with precision or certainty. We amortize employee stock-based compensation on a straight-line basis for equity instruments subject to fixed accounting. We amortize employee stock-based compensation in accordance with the provisions of FASB Interpretation No. 28, *"Accounting for Stock Appreciation Rights and Other Variable Stock Option or Award Plans"* for equity instruments subject to variable accounting.

We account for equity instruments issued to non-employees in accordance with the provisions of SFAS No. 123 and Emerging Issues Task Force ("EITF") 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."* As a result, the non-cash charge to operations for non-employee options with vesting or other performance criteria is affected each reporting period by changes in the estimated fair value of our common stock. The two factors which most affect these changes are the fair value of the common stock underlying stock options for which stock-based compensation is recorded and the volatility of such fair value. If our estimates of the fair value of these equity instruments change, it would have the effect of changing compensation expenses.

Preclinical and Clinical Trial Accruals

Most of our preclinical and clinical trials are performed by third party contract research organizations, or CROs, and clinical supplies are manufactured by contract manufacturing organizations, or CMOs. Invoicing from these third parties may be monthly based upon services performed or based upon milestones achieved. We accrue these expenses based upon our assessment of the status of each clinical trial and the work completed, and upon information obtained from the CROs and CMOs. Our estimates are dependent upon the timeliness and accuracy of data provided by the CROs and CMOs regarding the status and cost of the studies, and may not match the actual services performed by the organizations. This could result in adjustments to our research and development expenses in future periods. To date we have had no significant adjustments.

Marketable Securities

We classify all of our marketable securities as available-for-sale. We carry these investments at fair value, based upon the levels of inputs described below, and unrealized gains and losses are included in accumulated other comprehensive income which is reflected as a separate component of stockholders' equity. The amortized cost of securities in this category is adjusted for amortization of premiums and accretions of discounts to maturity. Such amortization is included in interest income. Realized gains and losses are recorded in our statement of operations. If we believe that an other-than-temporary decline exists, it is our policy to record a write-down to reduce the investments to fair value and record the related charge as a reduction of interest income.

We adopted FASB Statement No. 157, "Fair Value Measurements" ("SFAS 157") in the first quarter of 2008. SFAS 157 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. SFAS 157 also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

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

Level 2 - Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. Our short-term investments primarily utilize broker quotes in a non-active market for valuation of these securities.

Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

SFAS No. 157 requires us to maximize the use of observable inputs and minimize the use of unobservable inputs. If a financial instrument uses inputs that fall in different levels of the hierarchy, the instrument will be categorized based upon the lowest level of input that is significant to the fair value calculation. Our financial assets measured at fair value on a recurring basis include securities available for sale. Securities available for sale include money market funds, government securities, commercial paper and corporate bonds.

Accounting for Income Taxes

Our income tax policy records the estimated future tax effects of temporary differences between the tax basis of assets and liabilities and amounts reported in the accompanying balance sheets, as well as operating loss and tax credit carry forwards. We have recorded a full valuation allowance to reduce our deferred tax assets, as based on available objective evidence; it is more likely than not that the deferred tax assets will not be realized. In the event that we were to determine that we would be able to realize our deferred tax assets in the future, an adjustment to the deferred tax assets would increase net income in the period such determination was made.

Recent Accounting Pronouncements

In December 2007, the FASB issued SFAS No. 141 (revised 2007), "*Business Combinations" (*"SFAS No. 141(R)"), which replaces SFAS No. 141. SFAS No. 141(R) establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any non-controlling interest in the acquiree and the goodwill acquired. SFAS No. 141(R) also establishes disclosure requirements which will enable users to evaluate the nature and financial effects of the business combination. SFAS No. 141(R) is effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. We are currently evaluating the impact of the adoption of SFAS No. 141(R) on our consolidated financial statements.

In February 2008, the FASB issued FASB Staff Position No. FAS 157-2, "Effective Date of FASB Statement No. 157" ("FSP 157-2"), to partially defer SFAS 157. FSP 157-2 defers the effective date of SFAS 157 for nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually), to fiscal years, and interim periods within those fiscal years, beginning after November 15, 2008. We adopted SFAS No. 157 in the first quarter of 2008 and are currently evaluating the impact of adopting the provisions of FSP 157-2 on our consolidated financial statements.

In June 2008, the FASB ratified the consensus reached on EITF Issue No. 07-5, "Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock" ("EITF 07-5"). EITF 07-5 clarifies the determination of whether an instrument (or an embedded feature) is indexed to an entity's own stock, which would qualify as a scope exception under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. EITF 07-5 is effective for financial statements issued for fiscal years beginning after December 15, 2008. Early adoption for an existing instrument is not permitted. The adoption of EITF 07-5 will result in the reclassification of our outstanding warrants from stockholders' equity to liability, which will require the warrants to be marked to market at each reporting period, with the changes in market value recorded in our consolidated statement of operations. At December 31, 2008, we had warrants outstanding to purchase 3,588,221 shares of common stock at an exercise price of $2.34 per share. We are currently evaluating the impact of the adoption of EITF 07-05 on our consolidated financial statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISKS

Interest Rate Risk. Our exposure to market risk for changes in interest rates relates to our cash equivalents on deposit in highly liquid money market funds and investments in short-term marketable securities. The primary objective of our cash investment activities is to preserve principal while at the same time maximizing the income we receive from our invested cash without significantly increasing risk of loss. We invest in high-quality financial instruments, which currently have weighted average maturity of less than one year. We do not use derivative financial instruments in our investment portfolio. Our cash and investments policy emphasizes liquidity and preservation of principal over other portfolio considerations. Our investment portfolio is subject to interest rate risk and will fall in value if market interest rates rise. However, due to the short duration of our investment portfolio we believe an increase in the interest rates of one percentage point would not be material to our financial condition or results of operations.

In addition, we do not have any material exposure to foreign currency rate fluctuations as we operate primarily in the United States. Although we conduct some clinical and safety studies, and manufacture some active pharmaceutical product with vendors outside the United States, most of our transactions are denominated in U.S. dollars.

We are also exposed to equity price risk inherent in our portfolio of publicly-traded marketable securities. We review our investment portfolio to identify and evaluate investments that have indications of possible impairment. Factors considered in determining whether a loss is temporary include the length of time and extent to which fair value has been less than the cost basis, the financial condition and near-term prospects of the investee, credit quality and our ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

THRESHOLD PHARMACEUTICALS, INC.
(A DEVELOPMENT STAGE ENTERPRISE)
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
Threshold Pharmaceuticals, Inc.
(a development stage enterprise)

In our opinion, the consolidated financial statements listed in the accompanying index appearing under Item 15 present fairly, in all material respects, the financial position of Threshold Pharmaceuticals, Inc. and its subsidiary (the "Company") (a development stage enterprise) at December 31, 2008 and December 31, 2007, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2008 and cumulatively for the period from October 17, 2001 (date of inception) to December 31, 2008 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, the Company has incurred recurring losses and negative cash flows from operations since inception. Additional financing will be needed to enable the Company to fund the Company's future operations, which raises substantial doubt about its ability to continue as a going concern. Management's plans regarding these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for share-based compensation effective January 1, 2006.

/s/ PricewaterhouseCoopers LLP

San Jose, California
March 13, 2009

THRESHOLD PHARMACEUTICALS, INC.
(A DEVELOPMENT STAGE ENTERPRISE)
CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share data)

	December 31, 2008	December 31, 2007
ASSETS		
Current assets:		
Cash and cash equivalents	$ 15,466	$ 11,404
Marketable securities	6,871	11,289
Prepaid expenses and other current assets	518	516
Total current assets	22,855	23,209
Property and equipment, net	1,168	2,097
Restricted cash	483	483
Other assets	25	25
Total assets	$ 24,531	$ 25,814
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 840	$ 1,022
Accrued clinical and development expenses	544	1,240
Accrued liabilities	842	717
Deferred revenue, current portion	—	1,437
Notes payable, current portion	337	909
Total current liabilities	2,563	5,325
Notes payable, less current portion	—	337
Deferred rent	554	565
Total liabilities	3,117	6,227
Commitments and contingencies (Note 7)		
Stockholders' equity:		
Preferred stock, $0.001 par value:		
Authorized: 2,000,000 shares authorized; no shares issued and outstanding.	—	—
Common stock, $0.001 par value:		
Authorized: 50,000,000 shares at December 31, 2008 and 150,000,000 shares at December 31, 2007; Issued and outstanding: 15,214,044 and 6,228,056 shares at December 31, 2008 and 2007, respectively.	15	6
Additional paid-in capital	204,999	185,733
Deferred stock-based compensation	(6)	(834)
Accumulated other comprehensive income	19	3
Deficit accumulated during the development stage	(183,613)	(165,321)
Total stockholders' equity	21,414	19,587
Total liabilities and stockholders' equity	$ 24,531	$ 25,814

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

THRESHOLD PHARMACEUTICALS, INC.
(A DEVELOPMENT STAGE ENTERPRISE)
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share data)

	Years Ended December 31,			Cumulative Period from October 17, 2001 (date of inception) to December 31, 2008
	2008	2007	2006	
Revenue	$ 1,440	$ 1,436	$ 1,461	$ 5,027
Operating expenses:				
Research and development	13,440	23,375	46,267	143,866
General and administrative	6,734	10,411	14,453	53,046
Total operating expenses	20,174	33,786	60,720	196,912
Loss from operations	(18,734)	(32,350)	(59,259)	(191,885)
Interest and other income, net	503	1,841	3,729	8,767
Interest expense	(61)	(155)	(156)	(495)
Net loss	(18,292)	(30,664)	(55,686)	(183,613)
Dividend related to beneficial conversion feature of redeemable convertible preferred stock	—	—	—	(40,862)
Net loss attributable to common stockholders	$ (18,292)	$ (30,664)	$ (55,686)	$ (224,475)
Net loss per common share:				
Basic and diluted	$ (1.97)	$ (4.97)	$ (9.20)	
Weighted average number of shares used in net loss per common share calculations:				
Basic and diluted	9,275	6,176	6,056	

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

THRESHOLD PHARMACEUTICALS, INC.
(A DEVELOPMENT STAGE ENTERPRISE)
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
FOR THE PERIOD
FROM OCTOBER 17, 2001 (DATE OF INCEPTION) TO DECEMBER 31, 2008
(in thousands, except share and per share data)

	Common Stock		Additional Paid-In Capital	Deferred Stock-Based Compensation	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficit)
	Shares	Amount					
Issuance of restricted common stock to a founder and member of the Board of Directors in October 2001 for cash at $0.12 per share	25,300	$ —	$ 2	$ —	$ —	$ —	$ 2
Net loss	—	—	—	—	—	(236)	(236)
Balances, December 31, 2001	25,300	—	2	—	—	(236)	(234)
Issuance of restricted common stock to a member of the Board of Directors for cash at $0.96 per share in January 2002	3,795	—	4	—	—	—	4
Issuance of common stock pursuant to exercise of stock options for cash at $0.96 per share	405	—	—	—	—	—	—
Deferred stock-based compensation	—	—	25	(25)	—	—	—
Amortization of deferred stock-based compensation	—	—	—	1	—	—	1
Non-employee stock-based compensation	—	—	21	—	—	—	21
Components of other comprehensive income (loss):							
Unrealized loss on marketable securities	—	—	—	—	(1)	—	(1)
Net loss	—	—	—	—	—	(2,458)	(2,458)
Comprehensive loss							(2,459)
Balances, December 31, 2002	29,500	—	52	(24)	(1)	(2,694)	(2,667)
Issuance of common stock pursuant to exercise of stock options for cash at $0.96 per share	1,285	—	1	—	—	—	1
Issuance of a warrant to purchase Series A redeemable convertible preferred stock	—	—	44	—	—	—	44
Beneficial conversion feature related to issuance of Series B redeemable convertible preferred stock	—	—	40,862	—	—	—	40,862
Deemed dividend related to beneficial conversion feature of Series B redeemable convertible preferred stock	—	—	(40,862)	—	—	—	(40,862)
Deferred stock-based compensation, net of cancellations	—	—	2,332	(2,332)	—	—	—
Amortization of deferred stock-based compensation	—	—	—	810	—	—	810
Non-employee stock-based compensation	—	—	256	—	—	—	256
Components of other comprehensive income (loss):							
Change in unrealized gain (loss) on marketable securities	—	—	—	—	164	—	164
Net loss	—	—	—	—	—	(8,303)	(8,303)
Comprehensive loss							(8,139)
Balances, December 31, 2003	30,785	—	2,685	(1,546)	163	(10,997)	(9,695)
Issuance of common stock pursuant to exercise of stock options for cash	586,385	—	878	—	—	—	878
Deferred stock-based compensation, net of cancellations	—	—	20,385	(20,385)	—	—	—
Amortization of deferred stock-based compensation	—	—	—	5,294	—	—	5,294
Non-employee stock-based compensation	—	—	681	—	—	—	681
Repurchase of unvested common stock	(2,073)	—	(6)	—	—	—	(6)

THRESHOLD PHARMACEUTICALS, INC.
(A DEVELOPMENT STAGE ENTERPRISE)
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)—(Continued)
FOR THE PERIOD
FROM OCTOBER 17, 2001 (DATE OF INCEPTION) TO DECEMBER 31, 2008
(in thousands, except share and per share data)

	Common Stock		Additional Paid-In Capital	Deferred Stock-Based Compensation	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficit)
	Shares	Amount					
Components of other comprehensive income (loss):							
Change in unrealized gain (loss) on marketable securities	—	—	—	—	(59)	—	(59)
Net loss	—	—	—	—	—	(23,566)	(23,566)
Comprehensive loss							(23,625)
Balances, December 31, 2004	615,097	—	24,623	(16,637)	104	(34,563)	(26,473)
Issuance of common stock in an initial public offering for cash of $42.00, per share, net of issuance costs of $4.6 million	1,018,768	1	38,134	—	—	—	38,135
Issuance of common stock for cash of $62.76 per share, net of issuance costs of $4.5 million	1,066,537	1	62,394	—	—	—	62,395
Issuance of common stock pursuant to exercise of warrants	3,211	—	—	—	—	—	—
Conversion of convertible preferred stock upon initial public offering	3,425,468	4	49,835	—	—	—	49,839
Issuance of common stock pursuant to stock plans	84,772	—	557	—	—	—	557
Deferred stock-based compensation, net of cancellations	—	—	3,321	(3,321)	—	—	—
Reversal of deferred stock-based compensation related to employee terminations	—	—	(2,862)	2,862	—	—	—
Amortization of deferred stock-based compensation	—	—	(416)	5,740	—	—	5,324
Non-employee stock-based compensation	—	—	4,097	—	—	—	4,097
Repurchase of unvested common stock	(8,591)	—	(18)	—	—	—	(18)
Components of other comprehensive income (loss):							
Change in unrealized gain (loss) on marketable securities	—	—	—	—	(80)	—	(80)
Net loss	—	—	—	—	—	(44,408)	(44,408)
Comprehensive loss							(44,488)
Balances, December 31, 2005	6,205,262	6	179,665	(11,356)	24	(78,971)	89,368
Issuance of common stock pursuant to stock plans	46,144	—	518	—	—	—	518
Reversal of deferred stock-based compensation related to employee terminations	—	—	(2,970)	2,970	—	—	—
Amortization of deferred stock-based compensation	—	—	—	4,411	—	—	4,411
Stock-based compensation	—	—	5,738	—	—	—	5,738
Repurchase of unvested common stock	(27,091)	—	(80)	—	—	—	(80)
Components of other comprehensive income (loss):							
Change in unrealized gain (loss) on marketable securities	—	—	—	—	(31)	—	(31)
Net loss	—	—	—	—	—	(55,686)	(55,686)
Comprehensive loss							(55,717)
Balances, December 31, 2006	6,224,315	$ 6	$ 182,871	$ (3,975)	$ (7)	$ (134,657)	$ 44,238
Issuance of common stock pursuant to stock plans	20,151	—	128	—	—	—	128
Reversal of deferred stock-based compensation related to employee terminations	—	—	(304)	304	—	—	—

THRESHOLD PHARMACEUTICALS, INC.
(A DEVELOPMENT STAGE ENTERPRISE)
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)—(Continued)
FOR THE PERIOD
FROM OCTOBER 17, 2001 (DATE OF INCEPTION) TO DECEMBER 31, 2008
(in thousands, except share and per share data)

	Common Stock		Additional Paid-In Capital	Deferred Stock-Based Compensation	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Total Stockholders' Equity (Deficit)
	Shares	Amount					
Amortization of deferred stock-based compensation	—	—	—	2,837	—	—	2,837
Stock-based compensation	—	—	3,072	—	—	—	3,072
Repurchase of unvested common stock	(16,410)	—	(34)	—	—	—	(34)
Components of other comprehensive income (loss):							
Change in unrealized gain (loss) on marketable securities	—	—	—	—	10	—	10
Net loss	—	—	—	—	—	(30,664)	(30,664)
Comprehensive loss							(30,654)
Balances, December 31, 2007	6,228,056	$ 6	$ 185,733	$ (834)	$ 3	$ (165,321)	$ 19,587
Issuance of common stock and warrants to certain investors, net of issuance costs of $1.5 million	8,970,574	9	16,812	—	—	—	16,821
Issuance of common stock pursuant to stock plans	15,461	—	30	—	—	—	30
Amortization of deferred stock-based compensation	—	—	—	828	—	—	828
Stock-based compensation	—	—	2,424	—	—	—	2,424
Repurchase of unvested common stock	(47)	—	—	—	—	—	—
Components of other comprehensive income (loss):							
Change in unrealized gain (loss) on marketable securities	—	—	—	—	16	—	16
Net loss	—	—	—	—	—	(18,292)	(18,292)
Comprehensive loss							(18,276)
Balances, December 31, 2008	15,214,044	$ 15	$ 204,999	$ (6)	$ 19	$ (183,613)	$ 21,414

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

THRESHOLD PHARMACEUTICALS, INC.
(A DEVELOPMENT STAGE ENTERPRISE)
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	Years Ended December 31,			Cumulative Period from October 17, 2001 (date of inception) to December 31, 2008
	2008	2007	2006	
Cash flows from operating activities:				
Net loss	$ (18,292)	$ (30,664)	$ (55,686)	$ (183,613)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation and amortization	935	1,040	938	3,730
Stock-based compensation expense	3,252	5,909	10,149	35,794
Amortization of debt issuance costs	—	—	—	44
(Gain) loss on sale of investments, property and equipment	—	9	(41)	(27)
Changes in operating assets and liabilities:				
Prepaid expenses and other current assets	(2)	32	16	(543)
Accounts payable	(182)	403	(618)	840
Accrued clinical and development expenses	(696)	(3,080)	(180)	544
Accrued liabilities	125	(1,569)	128	842
Deferred rent	(11)	111	307	554
Deferred revenue	(1,437)	(1,436)	(1,437)	—
Net cash used in operating activities	(16,308)	(29,245)	(46,424)	(141,835)
Cash flows from investing activities:				
Acquisition of property and equipment	(30)	(42)	(2,405)	(4,966)
Acquisition of marketable securities	(9,242)	(22,083)	(42,915)	(145,609)
Proceeds from sales and maturities of marketable securities	13,700	35,228	43,238	138,852
Restricted cash	—	—	(291)	(483)
Net cash provided by (used in) investing activities	4,428	13,103	(2,373)	(12,206)
Cash flows from financing activities:				
Proceeds from redeemable convertible preferred stock, net	—	—	—	49,839
Proceeds from issuance of common stock, net of offering expenses	16,851	94	438	119,331
Proceeds from issuance of notes payable	—	—	2,616	3,616
Repayment of notes payable	(909)	(998)	(754)	(3,279)
Net cash provided by (used in) financing activities	15,942	(904)	2,300	169,507
Net increase (decrease) in cash and cash equivalents	4,062	(17,046)	(46,497)	15,466
Cash and cash equivalents, beginning of period	11,404	28,450	74,947	—
Cash and cash equivalents, end of period	$ 15,466	$ 11,404	$ 28,450	$ 15,466
Supplemental disclosures:				
Cash paid for interest	$ 61	$ 155	$ 156	$ 450
Non-cash investing and financing activities:				
Deferred stock-based compensation	$ —	$ (304)	$ (2,970)	$ 19,511
Conversion of redeemable convertible preferred stock	$ —	$ —	$ —	$ 49,839
Change in unrealized gain (loss) in marketable securities	$ 16	$ 10	$ (31)	$ 19
Fair value of redeemable convertible preferred stock warrant	$ —	$ —	$ —	$ 44
Dividend related to beneficial conversion feature of redeemable convertible preferred stock	$ —	$ —	$ —	$ 40,862

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

THRESHOLD PHARMACEUTICALS, INC.
(A DEVELOPMENT STAGE ENTERPRISE)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1—SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Description of Operations and Basis of Presentation

Threshold Pharmaceuticals, Inc. (the "Company") was incorporated in the State of Delaware on October 17, 2001. The Company is a biotechnology company focused on the discovery and development of drugs targeting the microenvironment of solid tumors.

In June 2005, the Company formed a wholly-owned subsidiary, THLD Enterprises (UK), Limited in the United Kingdom in connection with conducting clinical trials in Europe. As of December 31, 2008, there has been no financial activity related to this entity.

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America and include the accounts of the Company and its wholly owned subsidiary, and reflect the elimination of intercompany accounts and transactions.

Reverse Stock Split

On August 13, 2008, the Company's Board of Directors approved a 1-for-6 reverse split of its common stock, following approval by the Company's stockholders on May 13, 2008. The reverse stock split was effective August 20, 2008. The par value of the common stock was not affected by the reverse stock split and remains at $0.001 per share. Consequently, on the Company's consolidated balance sheet, the aggregate par value of the issued common stock was reduced by reclassifying the par value amount of the eliminated shares of common stock to Additional Paid-in Capital. The Company paid cash in lieu of any fractional shares to which a holder of common stock would otherwise be entitled as a result of the reverse stock split, including fractional shares for the in-the-money stock options. In addition, the number of authorized shares of common stock was reduced from 150,000,000 to 50,000,000. All common share and per share amounts contained in the accompanying consolidated financial statements have been retroactively adjusted to reflect the reverse stock split.

Liquidity

The Company has product candidates in various stages of development as well as discovery and, since inception, has devoted substantially all of its time and efforts to performing research and development, raising capital and recruiting personnel. The accompanying consolidated financial statements of the Company were prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The Company has incurred significant losses since its inception. At December 31, 2008, the Company had an accumulated deficit of $183.6 million. On August 29, 2008, the Company sold to certain investors an aggregate of 8,970,574 shares of its common stock for a purchase price equal to $2.04 per share and warrants exercisable for a total of 3,588,221 shares of its common stock with an exercise price equal to $2.34 per share (subject to adjustment). The Company received aggregate gross proceeds equal to $18.3 million in connection with the offering. Net proceeds generated from the offering were $16.8 million. The Company's history of losses and negative cash flows from operations and its reliance on raising additional external funding raises substantial doubt about the Company's ability to continue as a going concern.

The Company expects to need to raise additional capital or incur indebtedness to continue to fund its future operations. The Company may seek to raise capital through a variety of sources, including:

- the public equity market;
- private equity financing;

- collaborative arrangements; and/or
- public or private debt.

The Company's ability to raise additional funds will depend on its clinical and regulatory events, its ability to identify promising in-licensing opportunities, and factors related to financial, economic, and market conditions, many of which are beyond its control. The Company cannot be certain that sufficient funds will be available when required or on satisfactory terms. If adequate funds are not available, the Company may be required to significantly reduce or refocus its operations or to obtain funds through arrangements that may require the Company to relinquish rights to certain of its products, technologies or potential markets, any of which could delay or require that the Company curtail its development programs or otherwise have a material adverse effect on its business, financial condition and results of operations. In addition, the Company may have to delay, reduce the scope or eliminate some of its research and development, which could delay the time to market for any of its product candidates, if such adequate funds are not available. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of such securities would result in ownership dilution to existing stockholders.

Use of Estimates

The preparation of consolidated 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 reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents

The Company considers all highly liquid investments purchased with original maturities of three months or less on the date of purchase, to be cash equivalents. All cash and cash equivalents are held in the United States of America in financial institutions or money market funds, which are unrestricted as to withdrawal or use.

Restricted Cash

Restricted cash represents two certificates of deposit held at a financial institution that serve as collateral for the Company's facility lease and sublease agreement.

Marketable Securities

The Company classifies its marketable securities as "available-for-sale." Such marketable securities are recorded at fair value and unrealized gains and losses are recorded as a separate component of stockholders' equity until realized. Realized gains and losses on sale of all such securities are reported in net loss, computed using the specific identification cost method. The Company places its marketable securities primarily in U.S. government securities, money market funds, corporate bonds and commercial paper.

Fair value of financial instruments

The carrying amounts of certain of the Company's financial instruments, including cash and cash equivalents, accounts payable and accrued liabilities approximate fair value due to their relatively short maturities. Based on borrowing rates currently available to the Company for loans with similar terms, the carrying value of the notes payable at December 31, 2008 and 2007 approximates fair value. Estimated fair values for marketable securities, which are separately disclosed elsewhere, are based on quoted market prices for the same or similar instruments.

Concentration of credit risk and other risks and uncertainties

Financial instruments which potentially subject the Company to concentrations of risk consist principally of cash and cash equivalents. The Company's cash and cash equivalents are invested in deposits with two major financial institutions in the United States of America that management believes are creditworthy. The Company is exposed to credit risk in the event of default by the financial institutions for amounts in excess of Federal Deposit Insurance Corporation insured limits. The Company performs periodic evaluations of the relative credit standings of these financial institutions and limits the amount of credit exposure with any institution.

Any products developed by the Company will require approval from the U.S. Food and Drug Administration ("FDA") or foreign regulatory agencies prior to commercial sales. There can be no assurance that the Company's products will receive the necessary approvals. If the Company is denied such approvals or such approvals are delayed, it could have a material adverse effect on the Company.

The Company has three drug candidates in development, none of which have received regulatory approval. To achieve profitable operations, the Company must successfully develop, test, manufacture and market its products. There can be no assurance that any such products can be developed successfully or manufactured at an acceptable cost and with appropriate performance characteristics, or that such products will be successfully marketed. These factors could have a material adverse effect on the Company's future financial results.

Property and equipment

Property and equipment is stated at cost less accumulated depreciation. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets, generally three years. Leasehold improvements are amortized using the straight-line method over the estimated useful life of the improvement, or the lease term, if shorter. Accordingly, leasehold improvements are being amortized over lease terms of approximately 4-5 years. Maintenance and repairs are charged to operations as incurred. Upon sale or retirement of assets, the cost and related accumulated depreciation are removed from the balance sheet and the resulting gain or loss is reflected in operations.

Impairment of long-lived assets

In accordance with the provisions of Statement of Financial Accounting Standards Board ("SFAS") No. 144, "Accounting for the Impairment or Disposal of Long-lived Assets," ("SFAS No. 144") the Company reviews long-lived assets, including property and equipment, for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. Under SFAS No. 144, an impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying amount. Impairment, if any, is measured as the amount by which the carrying amount of a long-lived asset exceeds its fair value. The Company considers various valuation factors, principally discounted cash flows, to assess the fair values of long-lived assets. As of December 31, 2008, the Company has not incurred any such impairment losses.

Related Parties

In March 2008, the Company entered into a License Agreement, for the use of 5,500 square feet of its facilities and laboratory space with Ethos Pharmaceuticals (formerly AllChemie, Inc.), a Delaware corporation. Dr. Harold E. Selick, the Company's Chief Executive Officer and a member of the board of directors, is the chairman of the board of directors of Ethos Pharmaceuticals. Ethos Pharmaceuticals paid the Company a fee in the aggregate of $0.2 million for the one-year initial term of the License Agreement. In addition, Ethos Pharmaceuticals paid $0.1 million for costs incurred relating to agreed upon services provided by the Company. In January 2009, the License Agreement was terminated at end of the initial term.

The Company's offering of common stock and warrants, on August 29, 2008, included 980,391 shares of common stock and warrants exercisable for a total of 392,156 shares of common stock sold to entities affiliated with Three Arch Management III, L.L.C. ("Three Arch"). Wilfred E. Jaeger, a member of the Company's board of directors, is a managing member of Three Arch. In addition included in the offering were 2,941,173 shares of common stock and warrants exercisable for a total of 1,176, 464 shares of common stock sold to entities affiliated with Sutter Hill Ventures, a California Limited Partnership ("Sutter Hill"). Jeffrey R. Bird, a member of the Company's board of directors, is a managing member of Sutter Hill. Also as part of this offering, certain members of the Company's management team purchased 245,095 shares and received warrants to purchase 98,038 shares of common stock.

Comprehensive income (loss)

Comprehensive income (loss) generally represents all changes in stockholders' equity (deficit) except those resulting from investments or contributions by stockholders. The Company's net loss and unrealized gain (loss) on available-for-sale marketable securities represent the only components of other comprehensive loss.

Revenue Recognition

The Company recognizes revenue in accordance with Staff Accounting Bulletin No. 104 "Revenue Recognition" and Emerging Issues Task Force (EITF) Issue 00-21 "Revenue Arrangements with Multiple Deliverables" (EITF 00-21). In connection with the Company's agreement with MediBIC, the Company recognizes revenue from the non-refundable, upfront payment ratably over the term of its performance under the agreement. The upfront payment received, pending recognition as revenue, is recorded as deferred revenue and classified as a short-term or long-term liability on the consolidated balance sheet to be recognized over the period of deferral.

Research and development expenses

Research and development expenses are charged to research and development expense as incurred. Research and development expenses consist of salaries and benefits, laboratory supplies, consulting fees and fees paid to third party contract research and manufacturing organizations.

Preclinical and Clinical Trial Accruals

The Company's preclinical and clinical trials are performed by third party contract research organizations (CROs) and/or clinical investigators, and clinical supplies are manufactured by contract manufacturing organizations (CMOs). Invoicing from these third parties may be monthly based upon services performed or based upon milestones achieved. The Company accrues these expenses based upon its assessment the status of each clinical trial and the work completed, and upon information obtained from the CROs and CMOs. The Company's estimates are dependent upon the timeliness and accuracy of data provided by the CROs and CMOs regarding the status and cost of the studies, and may not match the actual services performed by the organizations. This could result in adjustments to the Company's research and development expenses in future periods. To date the Company has had no significant adjustments.

Income taxes

The Company accounts for income taxes under the liability method. Under this method, deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce deferred tax assets to the amounts expected to be realized.

Segments

The Company has one reportable segment and uses one measurement of profitability to manage its business. All long-lived assets are maintained in the United States of America.

Stock-based compensation

Beginning January 1, 2006, the Company began accounting for stock-based compensation using the modified prospective transition method prescribed by SFAS No. 123(R) "*Share-Based Payment—An Amendment of FASB Statements No. 123 and 95"*("SFAS No. 123(R)"), issued by the Financial Accounting Standards Board in December 2004. SFAS No. 123(R) requires measurement of all employee stock-based compensation awards using a fair-value method and recording of such expense in the consolidated financial statements over the requisite service period. See Note 9 "Equity Incentive Plans and Stock Based Compensation" for further discussion.

The Company accounts for equity instruments issued to non-employees in accordance with the provisions of SFAS No. 123 and Emerging Issues Task Force ("EITF") 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", which require that such equity instruments are recorded at their fair value on the measurement date. The measurement of stock-based compensation is subject to periodic adjustment as the underlying equity instruments vest.

Recent accounting pronouncements

In December 2007, the FASB issued SFAS No. 141 (revised 2007), "*Business Combinations" (*"SFAS No. 141(R)"), which replaces SFAS No. 141. SFAS No. 141(R) establishes principles and requirements for how an acquirer recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any non-controlling interest in the acquiree and the goodwill acquired. SFAS No. 141(R) also establishes disclosure requirements which will enable users to evaluate the nature and financial effects of the business combination. SFAS No. 141(R) is effective for business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. The Company is currently evaluating the impact of the adoption of SFAS No. 141(R) on its consolidated financial statements.

In February 2008, the FASB issued FASB Staff Position No. FAS 157-2, "Effective Date of FASB Statement No. 157" ("FSP 157-2"), to partially defer FASB Statement No. 157, "Fair Value Measurements" ("SFAS 157"). FSP 157-2 defers the effective date of SFAS 157 for nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually), to fiscal years, and interim periods within those fiscal years, beginning after November 15, 2008. The Company adopted SFAS No. 157 in the first quarter of 2008 and is currently evaluating the impact of adopting the provisions of FSP 157-2 on its consolidated financial statements.

In June 2008, the FASB ratified the consensus reached on EITF Issue No. 07-5, "Determining Whether an Instrument (or Embedded Feature) Is Indexed to an Entity's Own Stock" ("EITF 07-5"). EITF 07-5 clarifies the determination of whether an instrument (or an embedded feature) is indexed to an entity's own stock, which would qualify as a scope exception under SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. EITF 07-5 is effective for financial statements issued for fiscal years beginning after December 15, 2008. Early adoption for an existing instrument is not permitted. The adoption of EITF 07-5 will result in the reclassification of the Company's outstanding warrants from stockholders' equity to liability, which will require the warrants to be marked to market at each reporting period, with the changes in market value recorded in the Company's consolidated statement of operations. At December 31, 2008 the Company had warrants outstanding to purchase 3,588,221 shares of common stock at an exercise price of $2.34 per share. The Company is currently evaluating the impact of the adoption of EITF 07-05 on its consolidated financial statements.

NOTE 2—NET LOSS PER COMMON SHARE

Basic net loss per common share is computed by dividing net loss attributable to common stockholders by the weighted average number of vested common shares outstanding during the period. Diluted net loss per common share is computed by giving effect to all potential dilutive common shares, including outstanding options, common stock subject to repurchase and warrants. A reconciliation of the numerator and denominator used in the calculation of basic and diluted net loss per common share follows (in thousands):

	Years Ended December 31,		
	2008	2007	2006
Numerator:			
Net loss attributable to common stockholders	$(18,292)	$(30,664)	$(55,686)
Denominator:			
Weighted-average number of common shares outstanding	9,285	6,238	6,232
Less: Weighted-average shares subject to repurchase	(10)	(62)	(176)
Weighted-average number of common shares outstanding used in computing basic and diluted net loss per common share	9,275	6,176	6,056
Basic and diluted net loss per common share	$ (1.97)	$ (4.97)	$ (9.20)

The following warrants, outstanding options, common stock subject to repurchase and purchase rights under the Company's ESPP were excluded from the computation of diluted net loss per common share for the periods presented because including them would have had an antidilutive effect (in thousands):

	December 31,		
	2008	2007	2006
Warrants to purchase common stock	3,588	—	—
Options to purchase common stock	617	497	346
Common stock subject to repurchase	—	20	103
Shares issuable related to the ESPP	8	6	12

NOTE 3—FAIR VALUE MEASUREMENTS AND MARKETABLE SECURITIES

In September 2006, the FASB issued Statement of Financial Accounting Standards No. 157, *"Fair Value Measurements"* ("SFAS No. 157"). SFAS No. 157 defines fair value, establishes a framework for measuring fair value in GAAP, and expands disclosures about fair value measurements. In February 2008, the FASB issued FSP FAS 157-2 "Partial Deferral of the Effective Date of Statement 157" (FSP 157-2). FSP-2 delays the effective date of FAS 157 for non-financial assets and liabilities that are not measured or disclosed on a recurring basis to fiscal years beginning after November 15, 2008. The Company adopted SFAS No. 157 in the first quarter of 2008. The Company is currently in the process of evaluating the impact of adopting this pronouncement for other non-financial assets or liabilities.

SFAS 157 defines fair value as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. SFAS 157 also establishes a fair value hierarchy which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard describes three levels of inputs that may be used to measure fair value:

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

Level 2 - Observable inputs other than Level 1 prices such as quoted prices for similar assets or liabilities, quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities. The Company's short-term investments primarily utilize broker quotes in a non-active market for valuation of these securities.

Level 3 - Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

The Company utilizes the market approach to measure fair value for its financial assets and liabilities. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities. The following table sets forth the Company's financial assets (cash equivalents and marketable securities) at fair value on a recurring basis as of December 31, 2008:

(in thousands)	Fair Value as of December 31, 2008	Basis of Fair Value Measurements		
		Level 1	Level 2	Level 3
Money market funds	$ 11,995	$ 11,995	$ —	$ —
Corporate bonds	1,228	—	1,228	—
Government securities	5,846	—	5,846	—
Commercial paper	3,047	—	3,047	—
Total cash equivalents and marketable securities	$ 22,116	$ 11,995	$ 10,121	$ —

The Company invests in highly-liquid, investment-grade securities. The following is a summary of the Company's available-for-sale securities at December 31, 2008 and 2007:

As of December 31, 2008 (in thousands):	Cost Basis	Unrealized Gain	Unrealized Loss	Fair Value
Money market funds	$ 11,995	$ —	$ —	$ 11,995
Corporate bonds	1,229	—	(1)	1,228
Government securities	5,827	19	—	5,846
Commercial paper	3042	5	—	3,047
	22,093	24	(1)	22,116
Less cash equivalents	(15,241)	(4)	—	(15,245)
Total marketable securities	$ 6,852	$ 20	$ (1)	$ 6,871

As of December 31, 2007 (in thousands):	Cost Basis	Unrealized Gain	Unrealized Loss	Fair Value
Money market funds	$ 3,386	$ —	$ —	$ 3,386
Corporate bonds	2,353	1	(2)	2,352
Government securities	8,542	3	—	8,545
Commercial paper	7,230	—	—	7,230
Asset-backed securities	793	2	—	795
	22,304	6	(2)	22,308
Less cash equivalents	(11,018)	(1)	—	(11,019)
Total marketable securities	$ 11,286	$ 5	$ (2)	$ 11,289

There were no realized gains or losses in 2008 and 2007.

As of December 31, 2008, weighted average days to maturity for the Company's available for sale securities was 32 days, with the longest maturity being October 2009.

The following table provides the breakdown of the marketable securities with unrealized losses at December 31, 2008 (in thousands):

As of December 31, 2008 (in thousands):	In loss position for less than twelve months	
	Fair Value	Unrealized Loss
Corporate bonds	$ 925	$ (1)

The gross unrealized losses related to marketable securities are primarily due to a decrease in the fair value of debt securities. The Company has determined that the gross unrealized losses on its marketable securities at December 31, 2008 are temporary in nature. The Company reviews its investment portfolio to identify and evaluate investments that have indications of possible impairment. Factors considered in determining whether a loss is temporary include the length of time and extent to which fair value has been less than the cost basis, the financial condition and near-term prospects of the investee, credit quality and the Company's ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value.

NOTE 4—PROPERTY AND EQUIPMENT

Property and equipment comprise the following (in thousands):

	December 31,	
	2008	2007
Computer and office equipment	$ 866	$ 866
Laboratory equipment	1,253	1,238
Leasehold improvements	2,795	2,795
	4,914	4,899
Less: Accumulated depreciation and amortization	(3,746)	(2,802)
Total property and equipment, net	$ 1,168	$ 2,097

Depreciation and amortization expense was $1.0 million, $1.1 million, $0.9 million and $3.8 million for the years ended December 31, 2008, 2007 and 2006, and, cumulatively, for the period from October 17, 2001 (date of inception) to December 31, 2008, respectively.

Certain laboratory, computer and office equipment with a cost basis of approximately $0.6 million is collateral for borrowings under the loan and security agreement with Silicon Valley Bank.

NOTE 5—ACCRUED LIABILITIES

Accrued liabilities comprise the following (in thousands):

	December 31,	
	2008	2007
Payroll and employee related expenses	$619	$431
Professional services	101	119
Other accrued expenses	122	167
Total Accrued liabilities	$842	$717

In August 2006, the Company adopted a plan to reduce its operating expenses, following its decision to discontinue development of TH-070 for benign prostatic hyperplasia. The plan included a reduction of 29 full-time employees in both research and development and general and administrative areas of the Company. As a

result of the staffing reduction, the Company incurred severance benefits of approximately $1.0 million during the quarter ended September 30, 2006. The payout of the accrued severance benefits was completed in the fourth quarter of 2006.

In October 2007, the Company adopted a plan to reduce its operating expenses and refocus its research and development efforts. The plan included a reduction of 12 positions in both research and development and general and administrative areas of the Company. As a result of the staffing reduction, the Company incurred severance benefits of approximately $1.2 million in the fourth quarter of 2007. The Company made payments on severance benefits of $1.1 million in the fourth quarter of 2007. The Company paid the remaining balance in the first quarter of 2008.

The following table sets forth an analysis of the restructuring accrual at December 31, 2008 (in thousands):

	Severance and benefits
Balance at December 31, 2005	$ —
Charges	1,035
Cash paid	(1,035)
Balance at December 31, 2006	$ —
Charges	1,156
Cash paid	(1,036)
Balance at December 31, 2007	$ 120
Charges	—
Cash paid	(120)
Balance at December 31, 2008	$ —

NOTE 6—NOTES PAYABLE

On March 27, 2003, the Company entered into a loan and security agreement with Silicon Valley Bank to borrow up to $1.0 million for working capital and equipment purchases. The Company borrowed the full amount under this facility as of December 2004, which will be repaid over a 36-month period from the date of borrowing, at an average interest rate of 5.8% per annum. In connection with the agreement, the Company issued Silicon Valley Bank a warrant to purchase 38,000 shares of Series A redeemable convertible preferred stock, which was fully exercised in 2005. At December 31, 2007, all borrowings under this facility were paid in full.

In April 2006, the Company amended the existing loan and security agreement to borrow up to an additional $4.0 million for working capital and equipment purchases. The interest rate for borrowings under this facility will be determined based on the 36-month U.S. Treasury note plus 2.25% on the date of borrowing. The Company borrowed $2.6 million under this facility, which will be repaid over a 36-month period from the date of borrowing. The interest rate on these borrowings was approximately 7.2% per annum.

At December 31, 2008, future principal payments under the amended loan and security agreement are as follows (in thousands):

Year Ending December 31,	
2009	$337
Total	$337

Under the amended loan and security agreement, the Company is required to maintain the lower of 85% of its total cash and cash equivalents or $10.0 million with the financial institution. Borrowings under the equipment

line of credit are collateralized by the related equipment. At December 31, 2008, the Company was in compliance with all financial covenants in the agreement.

NOTE 7—COMMITMENTS AND CONTINGENCIES

The Company leases certain of its facilities under noncancelable leases, which qualify for operating lease accounting treatment under SFAS No. 13,*"Accounting for Leases,"* and, as such, these facilities are not included on its consolidated balance sheets. On August 31, 2004, the Company entered into a noncancelable facility sublease agreement for 33,700 square feet of laboratory and office space. The lease was effective October 1, 2004 and expires February 2010. On April 1, 2005 the Company entered into a noncancelable facility operating lease for approximately 6,489 square feet of laboratory space, which expires in February 2010. In connection with the execution of the lease, the Company paid a security deposit of approximately $25,000.

In February 2006, the Company entered into a new lease for an additional 34,205 square feet of space and an increase in the lease term for the existing space located at the Company's headquarters in Redwood City, California to September 30, 2011. The lease is for a period of 66 months, beginning on April 1, 2006 with respect to the additional square footage and will begin on March 1, 2010 with respect to the existing square footage. The lease will expire, unless otherwise terminated under the terms of the lease, on September 30, 2011. The aggregate rent for the term of the lease is approximately $4.8 million. In addition, the lease requires the Company to pay certain taxes, assessments, fees and other costs and expenses associated with the premises in amounts yet to be determined as well as a customary management fee. The Company will also be responsible for the costs of certain tenant improvements associated with the leased space. In connection with the lease, the Company furnished a letter of credit to the landlord for approximately $0.3 million.

The future rental payments required by the Company for all of its facilities under noncancelable operating leases are as follows (in thousands):

Years Ending December 31,	
2009	$ 1,398
2010	1,462
2011	1,129
Future minimum rental payments	$ 3,989

Rent expense for the years ended December 31, 2008, 2007, 2006 and, cumulatively, for the period from October 17, 2001 (date of inception) to December 31, 2008 was $1.1 million, $1.3 million, $1.1 million, and $5.4 million, respectively.

The Company's purchase commitments at December 31, 2008 were $1.7 million, which are primarily for the manufacture and testing of active pharmaceutical ingredient (API) or drug product for clinical testing.

License agreements

In November 2002, the Company entered into an exclusive license agreement with certain individuals for rights to certain patent applications. Under the terms of the agreement, the Company was required to make aggregate upfront payments of approximately $15,000. Based on the early stage of development and the uncertainty of the feasibility of the licensed technology, the upfront fees were expensed immediately as incurred. The Company is also required to make various milestone payments up to $0.7 million in connection with regulatory filings and approvals and additional royalty payments upon product commercialization. No milestone or royalty payments have been made as of December 31, 2008.

In August 2003, the Company entered into an exclusive worldwide license and development agreement with Baxter International and Baxter Healthcare S.A., together Baxter for certain patent rights and technology

associated with glufosfamide and its drug candidates in development. Under the terms of the agreement, the Company made an initial upfront payment of $0.1 million and in December 2003, another milestone payment of $0.1 million. In November 2004, the Company made an additional milestone payment of $1.3 million. The Company will be required to make a milestone payment of $1.0 million within 30 days of filing an NDA for glufosfamide with the FDA. Total additional milestone payments in connection with the development of glufosfamide and United States of America and foreign regulatory submissions and approvals could total $8.0 million. In addition, based on the attainment of specified sales thresholds the Company could be required to make payments totaling $17.5 million. The Company will also be required to make royalty payments upon product commercialization. No royalty payments have been made as of December 31, 2008.

In November 2004, the Company entered into an agreement with MediBIC Co. Ltd. (MediBIC) to develop glufosfamide in Japan and several other Asian countries, and received an upfront payment of $5.0 million contingent upon the finalization of the clinical development plan. In July 2005, the Company finalized the development plan with MediBIC and began recognizing revenue from the upfront payment on a straight-line basis over the development period, through December 31, 2008. The Company is responsible for all development activities under this agreement. The Company will also be required to make royalty payments upon product commercialization. The Company may terminate the agreement at any time by making certain payments ranging from $7.0 million to $15.0 million, depending on the stage of development.

The unrecognized portion of the upfront payment has been classified as deferred revenue on the Company's consolidated balance sheet at December 31, 2007. At December 31, 2008 the upfront payment had been fully recognized.

Indemnification

The Company enters into indemnification provisions under its agreements with other companies in the ordinary course of business, including business partners, contractors and parties performing its clinical trials. Pursuant to these arrangements, the Company indemnifies, holds harmless, and agrees to reimburse the indemnified parties for losses suffered or incurred by the indemnified party as a result of the Company's activities. The terms of these indemnification agreements are generally perpetual. The maximum potential amount of future payments the Company could be required to make under these agreements is not determinable. The Company has never incurred costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, the Company believes the estimated fair value of these agreements is minimal. The Company maintains commercial general liability insurance and products liability insurance to offset certain of its potential liabilities under these indemnification provisions.

The Company's bylaws provide that it is required to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers, other than liabilities arising from willful misconduct of a culpable nature, to the fullest extent permissible by applicable law; and to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified.

Legal proceedings

On July 5 and July 18, 2007, purported shareholder class action complaints alleging violations of the federal securities laws were filed against the Company, its Chief Executive Officer Harold E. Selick and its former Chief Financial Officer Janet I. Swearson in the United States District Court for the Southern District of New York. On September 14, 2007, these lawsuits, which have been consolidated by the Court into a single proceeding, were ordered transferred to the United States District Court for the Northern District of California. On January 15, 2008, Plaintiffs filed a first consolidated amended complaint. On July 11, 2008, the Court granted Defendants' motions to dismiss that complaint but afforded Plaintiffs leave to file a further amended complaint. On September 19, 2008, Plaintiffs filed a second consolidated amended complaint, which, on behalf of an alleged class of purchasers of our common stock from the date of our initial public offering of securities on February 4,

2005 through July 14, 2006, purports to allege claims arising under Sections 11, 12(a)(2) and 15 of the Securities Act of 1933, as amended (the "Act"), and under Sections 10(b) and 20(a) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Plaintiffs allege generally that the defendants violated the federal securities laws by, among other things, making material misstatements or omissions concerning our Phase II and Phase III clinical trials of Lonidamine (TH-070). Defendants have filed motions to dismiss the second consolidated amended complaint, which are pending. Management believes that Plaintiffs' claims are without merit and intends to defend against the actions vigorously. The Company cannot reasonably predict the outcome of this matter at this time.

NOTE 8—STOCKHOLDERS' EQUITY

Common stock

On August 29, 2008, the Company sold to certain investors an aggregate of 8,970,574 shares of its common stock for a purchase price equal to $2.04 per share for aggregate gross proceeds equal to $18.3 million in connection with the offering. Net proceeds generated from the offering were $16.8 million. As part of the sale of common stock, the Company also issued warrants exercisable for a total of 3,588,221 shares of its common stock to the investors. The warrants have a five-year term and an exercise price equal to $2.34 per share of common stock. The exercise price and/or the number of shares of common stock issuable upon exercise of the warrants may be adjusted in certain circumstances, including certain issuances of securities at a price equal to less than the then current exercise price, subdivisions and stock splits, stock dividends, combinations, reorganizations, reclassifications, consolidations, mergers or sales of properties and assets and upon the issuance of certain assets or securities to holders of our common stock, as applicable. The common stock and warrants have been recorded in stockholders equity in accordance with EITF 00-19, *"Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock"* and FSP 00-19-2, *"Accounting for Registration Payment Arrangements."*

On February 4, 2005, the Company completed its initial public offering of 1.0 million shares of common stock for net proceeds totaling $38.1 million. On October 14, 2005, the Company completed a public offering of 1.1 million shares of its common stock for net proceeds totaling $62.4 million. Each share of common stock has the right to one vote. The holders of common stock are also entitled to receive dividends whenever funds are legally available and when declared by the Board of Directors, subject to the prior rights of holders of all classes of stock outstanding having priority rights as to dividends. No dividends have been declared or paid as of December 31, 2008.

On October 24, 2001, shares of restricted stock were issued to the Company's founder and member of the Board of Directors under a restricted stock purchase agreement. In August 2005, the founder resigned from the Company and entered into a consulting and stock vesting agreement. Under the terms of this agreement, the vesting of his restricted stock accelerated at December 31, 2005, and compensation expense associated with the accelerated vesting of these options was recorded for his services as a consultant through December 31, 2005. On January 29, 2002, shares of restricted common stock were issued to a member of the Board of Directors under a restricted stock purchase agreement. The shares vest over a six-year period. The unvested shares of common stock are subject to repurchase by the Company in the event of termination of the consulting relationship. As of December 31, 2008 and 2007, for both awards, there were no shares subject to the Company's right of repurchase.

Preferred Share Rights Agreement

On August 8, 2006, the Board of Directors adopted a Preferred Shares Rights Agreement. As part of this agreement, preferred stock purchase rights ("the rights") were distributed to stockholders of record as of August 23, 2006, at the rate of one right for each share of common stock held. The rights become exercisable only upon the acquisition, or the acquisition of the right to acquire, by a person or group of affiliated or

associated persons, 15% or more of the outstanding shares of the Company's common stock. Once exercisable, each right entitles the holder to purchase, at a price of $25.00, one one-thousandth of a share of Series A Participating Preferred Stock. For a limited period of time following the announcement of any such acquisition or offer, the rights are redeemable by the Company at a price of $0.01 per right. If the rights are not redeemed or exchanged, each right will then entitle the holder to receive, upon exercise of such right, a number of shares of the Company's common stock having a then current value equal to two times the purchase price of such right. Similarly, if the rights are not redeemed or exchanged and following the acquisition of 15% or more of the outstanding shares of the Company's common stock by a person or group of affiliated or associated persons, (i) the Company consolidates with or merges into another entity, (ii) another entity consolidates with or merges into the Company or (iii) the Company sells or otherwise transfers 50% or more of its consolidated assets or earning power, each right will then entitle the holder to receive, upon exercise of such right, a number of shares of common stock of the acquiring company having a then current value equal to two times the purchase price. For a limited period of time after the exercisability of the rights, each right, at the discretion of the Board of Directors, may be exchanged for one share of common stock per right. The Company has initially reserved 200,000 shares of preferred stock pursuant to the exercise of these rights. These rights expire on August 8, 2016.

NOTE 9—EQUITY INCENTIVE PLANS AND STOCK BASED COMPENSATION

2004 Equity Incentive Plan

On April 7, 2004, the Board of Directors adopted the 2004 Equity Incentive Plan (the "2004 Plan"), and received stockholder approval on January 10, 2005. The 2004 Plan became effective upon the completion of the Company's initial public offering and provides for the granting of incentive stock options, nonstatutory stock options, stock appreciation rights, stock awards and cash awards to employees and consultants. In 2005, 404,801 shares of common stock were authorized for issuance pursuant to the 2004 Plan, plus any shares which had been reserved but not issued under the 2001 Equity Incentive Plan (the "2001 Plan") or issued and forfeited after the date of the initial public offering, plus any shares repurchased at or below the original purchase price and any options which expire or become unexercisable after the initial public offering, thereafter plus all shares of common stock restored by the Board of Directors pursuant to the provision of the 2004 Plan that permits options to be settled on a net appreciation basis. The Company will not grant any options under the 2001 Plan after the effectiveness of the 2004 Plan. On January 1, 2006, and annually thereafter, the authorized shares will automatically be increased by a number of shares equal to the lesser of:

- 5% of the number of the Company's shares issued and outstanding prior to the preceding December 31;
- 202,401 shares; or
- an amount determined by the Board of Directors.

On December 20, 2005, the Board of Directors approved an addition of 1,214,402 shares for issuance under the 2004 Plan effective January 1, 2006. On April 2, 2007, the Board of Directors approved an addition of 202,401 shares for issuance under the 2004 Plan effective January 1, 2007. On January 15, 2009, the Board of Directors approved an addition of 202,401 shares for issuance under the 2004 Plan effective January 1, 2009.

Activity under the 2001 Plan and 2004 Plan is set forth below:

	Shares Available for Grant	Outstanding Options		Weighted Average Exercise Price
		Number of Shares	Exercise Price	
Shares reserved at Plan inception	202,400	—	$ —	$ —
Balances, December 31, 2001	202,400	—	—	—
Options granted	(179,992)	179,992	0.96	0.96
Options exercised	—	(405)	0.96	0.96
Balances, December 31, 2002	22,408	179,587	0.96	0.96
Additional shares reserved	506,000	—	—	—
Options granted	(121,092)	121,092	0.96–1.56	0.96
Options exercised	—	(1,285)	0.96	0.96
Options canceled	927	(927)	0.96	0.96
Balances, December 31, 2003	408,243	298,467	0.96–1.56	0.96
Options granted	(370,372)	370,372	1.56–3.18	2.16
Options exercised	—	(586,365)	0.96–3.18	1.50
Options canceled	7,926	(7,926)	0.96–3.18	1.68
Balances, December 31, 2004	45,797	74,548	0.96–3.18	2.70
Additional shares reserved	404,800	—	—	—
Options granted	(157,849)	157,849	3.18–89.88	49.32
Options exercised	—	(75,544)	0.96–3.18	2.94
Options canceled	2,475	(2,475)	34.80–74.70	39.72
Options repurchased	10,664	—	0.96–3.18	2.46
Balances, December 31, 2005	305,887	154,378	0.96–89.88	49.74
Additional shares reserved	202,401	—	—	—
Options granted (1)	(744,228)	744,228	9.30–99.12	41.94
Options exercised	—	(22,023)	1.56–37.56	5.52
Options canceled (1)	530,831	(530,831)	3.18–99.12	62.88
Options repurchased	27,091	—	0.96–3.18	2.94
Balances, December 31, 2006	321,982	345,752	0.96–89.88	15.60
Additional shares reserved	202,401	—		
Options granted	(283,396)	283,396	3.84–21.66	11.04
Options exercised	—	(337)	3.18–15.42	14.52
Options canceled	131,672	(131,672)	3.18–84.24	16.62
Options repurchased	16,410	—	1.56–3.18	2.10
Balances, December 31, 2007	389,069	497,139	0.96–89.88	12.72
Options granted	(239,538)	239,538	0.42–3.18	2.84
Options exercised	—	(727)	1.56	1.56
Options canceled	118,852	(118,852)	0.96–89.88	15.14
Options repurchased	47	—	3.13	2.10
Balances, December 31, 2008	268,430	617,098	$ 0.42–21.66	$ 8.41

(1) Includes 362,000 options that had a weighted average exercise price of $74.22, which were canceled and re-granted at an exercise price of $15.42 in September 2006.

At December 31, 2008, stock options outstanding and exercisable by exercise price were as follows:

Option Outstanding				Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighed Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$ 0.42 – 2.46	73,168	8.85	$ 1.99	25,307	$ 2.03
$ 3.18 – 3.18	170,037	9.02	3.18	38,216	3.18
$ 3.84 – 3.84	81,666	8.81	3.84	23,748	3.84
$ 4.92 – 9.06	78,427	7.35	8.76	39,173	8.84
$ 9.24 – 15.30	14,999	8.33	9.73	13,661	9.52
$15.42 – 15.42	139,187	6.12	15.42	108,443	15.42
$15.66 – 20.70	24,234	4.31	18.28	18,190	18.03
$21.66 – 21.66	35,380	7.92	21.66	17,265	21.66
$ 0.42 – 21.66	617,098	7.84	$ 8.41	284,003	$ 10.97

The aggregate intrinsic value of options outstanding and options exercisable as of December 31, 2008 were $1,000 and $0, respectively. As of December 31, 2008, the ending vested and expected to vest was 609,614 and the aggregate intrinsic value of these options was $1,000. The aggregate intrinsic value is calculated as the difference between the exercise price of the underlying awards and the quoted price of the Company's common stock for options that were in-the-money at December 31, 2008.

The total intrinsic value of stock options exercised during the years ended December 31, 2008 and 2007 were $400 and $2,000, respectively, determined at the date of the option exercise. Cash received from stock option exercises were $1,000 and $5,000 for the years ended December 31, 2008 and 2007, respectively. The Company issues new shares of common stock upon exercise of options. In connection with these exercises, there was no tax benefit realized by the Company due to its current loss position.

On September 26, 2006, the Company cancelled 362,000 options of 70 eligible employees, consultants and directors that had a weighted average exercise price of $74.22 and re-granted 362,000 options at an exercise price of $15.42, which was the Company's closing price on September 29, 2006. As a result of the repricing of options of eligible employees and directors, the Company will incur an incremental stock-based compensation expense of approximately $1.5 million over the weighted average vesting period of the repriced options of 3.0 years. The incremental compensation cost was measured as the fair value of the new stock option award over the fair value of the original stock option award based on the closing price on the date of re-grant. The incremental expense related to the repricing recorded for the years ended December 31, 2008, 2007 and 2006 was not significant.

On February 13, 2009, the Company cancelled 559,665 options of 41 eligible employees, consultants and directors that had a weighted average exercise price of $8.08 and re-granted 559,665 options at an exercise price of $1.30, which was the Company's closing price on February 17, 2009. As a result of the repricing of options of eligible employees and directors, the Company will incur an incremental stock-based compensation expense over the weighted average vesting period of the repriced options.

Before the initial public offering in February 2005, the 2001 Plan allowed options to be exercised prior to vesting. Included in common stock at December 31, 2008 are 234 shares subject to repurchase related to options exercised prior to vesting.

2004 Employee Stock Purchase Plan

Effective with the initial public offering, the Board of Directors approved the 2004 Employee Stock Purchase Plan (the "Purchase Plan"). The Purchase Plan contains consecutive, overlapping 24 month offering periods. Each offering period includes four six-month purchase periods. The price of the common stock

purchased will be the lower of 85% of the fair market value of the common stock at the beginning of an offering period or at the end of the purchase period. For the year ended December 31, 2008, employees had purchased 14,756 shares of common stock under the Purchase Plan at an average price of $1.97. For the year ended December 31, 2007, employees had purchased 19,809 shares of common stock under the Purchase Plan at an average price of $6.17. For the year ended December 31, 2006, employees had purchased 24,105 shares of common stock under the Purchase Plan at an average price of $18.84. At December 31, 2008, plan participants had $15,000 withheld to purchase stock on February 15, 2009, which is included in accrued liabilities on the accompanying consolidated balance sheet. At December 31, 2008, 119,165 shares were authorized and available for issuance under the ESPP.

Directors Compensation Program

In December 2005, the Board of Directors approved revised compensation arrangements for non-employee directors of the Company. Effective January 1, 2006, non-employee directors receive an annual retainer $30,000, and, in addition, chairpersons of the Audit, Compensation and Nominating and Corporate Governance Committees receive annual retainers of $16,000, $14,000, and $10,000, respectively. In May 2005, each non-employee director was granted an option to purchase 15,000 shares of the Company's common stock under the Company's 2004 Equity Incentive Plan. In addition, at each annual meeting of stockholders of the Company, each non-employee director who has served as director at least six months prior to such meeting will receive an automatic grant of an option to purchase 2,500 shares of the Company's common stock. Pursuant to the provisions of the plan, in May 2008, May 2007 and June 2006, each of the five non-employee directors received an automatic grant of 2,500 shares of the Company's common stock in each respective year. In addition, in November 2008 and April 2007, pursuant to the provisions of the plan, a newly elected non employee director on each respective date received an automatic grant of 5,000 shares.

Stock- based Compensation

On January 1, 2006, the Company adopted the fair value provisions of SFAS No.123(R), '*Share-Based Payment.—An Amendment of FASB Statements No. 123 and 95,"* using the modified prospective transition method, except for options granted prior to the Company's initial public offering in February 2005, for which the fair value was determined for disclosure purposes using the minimum value method. Under this transition method, stock-based compensation cost recognized for the years ended December 31, 2008, 2007 and 2006 includes:

- compensation cost for all unvested stock-based awards as of January 1, 2006 that were granted subsequent to the Company's initial public offering in February 2005, and prior to January 1, 2006, that were earned during the years ended December 31, 2008, 2007 and 2006 based on the recognition of the grant date fair value estimated in accordance with the original provisions of SFAS 123 over the service period, which is generally the vesting period;
- compensation cost for all stock-based awards granted or modified subsequent to January 1, 2006, that were earned during the years ended December 31, 2008, 2007 and 2006 based on the recognition of the grant date fair value estimated in accordance with the provisions of SFAS 123(R) over the service period, which is generally the vesting period; and
- compensation cost for options granted prior to the Company's initial public offering in February 2005 that were earned during the years ended December 31, 2008, 2007 and 2006 based on the grant date intrinsic value over the service period, which is generally the vesting period.

In addition, SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Prior to the adoption of SFAS 123(R), the Company accounted for forfeitures upon occurrence. Under the modified prospective transition method, results for prior periods have not been restated.

Stock-based compensation expense recognized under SFAS 123(R) and APB 25 in the Company's consolidated statement of operations for the years ended December 31, 2008, 2007 and 2006 related to stock options and ESPP were $3.2 million, $5.9 million and $10.1 million, respectively.

Valuation Assumptions

The Company estimated the fair value of stock options granted using the Black-Scholes option-pricing formula and a single option award approach. This fair value is being amortized on a straight-line basis over the requisite service periods of the awards, which is generally the vesting period. The fair value of employee stock options and employee purchase rights under the Company's ESPP was estimated using the following weighted-average assumptions for the years ended December 31, 2008, 2007 and 2006:

	Years ended December 31,		
	2008	2007	2006
Employee Stock Options			
Risk-free interest rate	3.10%	4.49%	4.59%
Expected life (in years)	5.97	6.00	5.73
Dividend yield	—	—	—
Volatility	83%	77%	77%
Weighted-average fair value of stock options granted	$2.10	$7.68	$26.94
Employee Stock Purchase Plan			
Risk-free interest rate	2.14%	4.55%	5.00%
Expected life (in years)	1.25	1.25	1.25
Dividend yield	—	—	—
Volatility	67%	67%	67%
Weighed-average fair value of ESPP purchase rights	$0.94	$2.34	$ 6.78

To determine the expected term of the Company's employee stock options granted during the years ended December 31, 2008, 2007 and 2006, the Company utilized the simplified approach as defined by SEC Staff Accounting Bulletin No. 107, *"Share-Based Payment"* ("SAB 107"). To determine the risk-free interest rate, the Company utilized an average interest rate based on U.S. Treasury instruments with a term consistent with the expected term of the Company's awards. To determine the expected stock price volatility for the Company's stock options for the years ended December 31, 2008, 2007 and 2006, the Company examined historical volatilities for industry peers as the Company did not have sufficient trading history for its common stock and utilized a median of the historical volatilities of the Company's industry peers. The Company will continue to analyze the expected stock price volatility and expected term assumption as more historical data for the Company's common stock becomes available. The expected stock price volatility for the Company's ESPP for the years ended December 31, 2008, 2007 and 2006 was based on expected stock price volatilities of the Company's industry peers, as well as the historical volatility of the Company's common stock as the Company had trading history for its common stock in excess of the expected term of the stock purchase rights under the ESPP. The fair value of all the Company's stock based award assumes no dividends as the Company does not anticipate paying cash dividends on its common stock.

Employee Stock-based Compensation Expense

Deferred stock-based compensation Prior to the Company's initial public offering in February 2005, the Company issued options to certain employees under the 2001 Plan with exercise prices below the fair market value of the Company's common stock at the date of grant, determined with hindsight. In accordance with the requirements of APB No. 25, the Company has recorded deferred stock-based compensation for the difference between the exercise price of the stock option and the fair market value of the Company's stock at the date of grant. This deferred stock-based compensation is amortized to expense on a straight-line basis over the period during which the Company's right to repurchase the stock lapses or the options vest, generally four years. In

accordance with the requirements of APB 25, the Company recorded deferred stock-based compensation aggregating $19.5 million, net of forfeitures. Through December 31, 2008, the Company amortized approximately $19.5 million of such compensation expense, net of forfeitures, with approximately $0.8 million, $2.8 million and $4.4 million being amortized for the years ended December 31, 2008, 2007 and 2006, respectively.

Stock-based compensation expense As required by SFAS 123(R) the Company recognized $2.4 million, $2.9 million and $4.7 million of stock-based compensation expense related to stock options granted and purchase rights granted subsequent to the Company's initial public offering in February 2005, under the Company's stock option plans, for the years ended December 31, 2008, 2007 and 2006, respectively, in addition to the amortization of deferred compensation above. As of December 31, 2008, the total unrecognized compensation cost related to unvested stock-based awards granted to employees under the Company's stock option plans was approximately $2.6 million before estimated forfeitures. This cost will be recorded as compensation expense on a straight-line basis over the remaining weighted average requisite service period of approximately 2.6 years.

Non-employee Stock-based Compensation Expense

Stock-based compensation expense related to stock options granted to non-employees is recognized on a straight-line basis, as the stock options are earned. The Company issued options to non-employees, which generally vest ratably over the time period the Company expects to receive services from the non-employee. The values attributable to these options are amortized over the service period and the unvested portion of these options was remeasured at each vesting date. The Company believes that the fair value of the stock options is more reliably measurable than the fair value of the services received. The fair value of the stock options granted were revalued at each reporting date using the Black-Scholes valuation model as prescribed by SFAS No. 123 using the following assumptions:

	Years Ended December 31,		
	2008	2007	2006
Risk-free interest rate	3.00%	4.25%	4.63%
Expected life (in years)	6.02	4.53	6.12
Dividend yield	—	—	—
Expected volatility	83%	77%	77%

The stock-based compensation expense will fluctuate as the fair market value of the common stock fluctuates. In connection with the grant of stock options to non-employees, the Company recorded stock-based compensation of approximately $26,000, $0.1 million and $1.1 million for the years ended December 31, 2008, 2007 and 2006, respectively.

Total stock-based compensation expense was allocated to research and development and general and administrative as follows (in thousands):

	Year Ended December 31,		
	2008	2007	2006
Stock-based compensation expense:			
Research and development	$ 1,504	$ 2,413	$ 5,008
General and administrative	1,748	3,496	5,141
	$ 3,252	$ 5,909	$ 10,149

NOTE 10—INCOME TAXES

A reconciliation of income taxes at the statutory federal income tax rate to net income taxes included in the accompanying statements of operations is as follows (in thousands):

	2008	2007	2006
U.S. federal taxes (benefit) at statutory rate	$(6,219)	$(10,426)	$(18,933)
State federal income tax benefit	(1,132)	(1,840)	(3,642)
Unutilized (utilized) net operating losses	6,549	11,353	20,316
Stock-based compensation	602	582	1,068
Research and development credits	(347)	(726)	(1,702)
Tax assets not benefited	543	1,051	2,884
Other	4	6	9
Total	$ —	$ —	$ —

The tax effects of temporary differences that give rise to significant components of the net deferred tax assets are as follows (in thousands):

	December 31,		
	2008	2007	2006
Capitalized start-up costs	$ 330	$ 401	$ 408
Net operating loss carryforwards	48,545	51,248	40,729
Research and development credits	2,903	4,795	5,250
Deferred stock compensation	8,890	8,300	6,620
Other (accruals, reserves, depreciation)	1,238	1,597	1,983
Total deferred tax assets	61,906	66,341	54,990
Less: Valuation allowance	(61,906)	(66,341)	(54,990)
	$ —	$ —	$ —

At December 31, 2008 the Company had federal and state net operating loss carryforwards of approximately $128 million and $86 million, respectively, available to offset future taxable income. Approximately $1.1 million of the net operating loss carryforwards is attributable to employee stock option deductions, the benefit from which will be credited to additional paid-in capital if subsequently utilized in future years. The Company's federal and state net operating loss carryforwards will begin to expire in 2021 and 2013, respectively, if not used before such time to offset future taxable income or tax liabilities. For federal and state income tax purposes, a portion of the Company's net operating loss carryforward is subject to certain limitations on annual utilization in case of changes in ownership, as defined by federal and state tax laws. The annual limitation may result in the expiration of the net operating loss before utilization.

At December 31, 2008, the Company had federal research and development tax credits of approximately $1.2 million, which will expire in years 2021 through 2028, and state research and development tax credits of approximately $2.5 million, which have no expiration date.

The Company has established a valuation allowance against its deferred tax assets due to the uncertainty surrounding the realization of such assets. The valuation allowance decreased by $4.4 million for the year ended December 31, 2008 and increased by $11.4 million and $23.9 million for the years ended December 31, 2007 and 2006.

The Company adopted Financial Accounting Standards Board ("FASB") Interpretation 48, *Accounting for Uncertainty in Income Taxes* ("FIN 48"), on January 1, 2007. As a result of the implementation of FIN 48, the Company recorded a $1.5 million reduction to deferred tax assets for unrecognized tax benefits, all of which is

currently offset by a full valuation allowance and the Company therefore did not record any adjustment to the beginning balance of accumulated deficit on the balance sheet. The Company does not believe that its unrecognized tax benefits will change significantly over the next twelve months.

The following table summarizes the activity related to our gross unrecognized tax benefits:

(in thousands)	2008	2007
Gross unrecognized tax benefits at January 1,	$1,506	$1,506
Gross decrease related to prior year tax positions	(406)	—
Gross increases related to current year tax positions	—	—
Settlements	—	—
Expiration of the statute of limitations for the assessment of taxes	—	—
Gross unrecognized tax benefits at December 31,	$1,100	$1,506

The Company's practice is to recognize interest and/or penalties related to income tax matters in income tax expense. As of December 31, 2008 and 2007, the Company had no accrued interest or penalties due to the Company's net operating losses available to offset any tax adjustment. The Company currently has no federal or state tax examinations in progress nor has it had any federal or state tax examinations since its inception. As a result of the Company's net operating loss carryforwards, all of its tax years are subject to federal and state tax examination.

NOTE 11—EMPLOYEE BENEFIT PLAN

In November 2002, the Company implemented a 401(k) Plan to provide a retirement savings program for the employees of the Company. The 401(k) Plan is maintained for the exclusive purpose of benefiting the 401(k) Plan participants. The 401(k) Plan is intended to operate in accordance with all applicable state and federal laws and regulations and, to the extent applicable, the provisions of Department of Labor regulations issued pursuant to ERISA Section 404(c). As of December 31, 2008, the Company has not made any contributions to the 401(k) Plan.

NOTE 12—QUARTERLY FINANCIAL DATA (UNAUDITED)

The following table presents certain unaudited quarterly financial information for the eight quarters ended December 31, 2008. This information has been prepared on the same basis as the audited consolidated financial statements and includes all adjustments necessary to state fairly the unaudited quarterly results of operations.

2008	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
(in thousands, except per share data)				
Revenue	$ 359	$ 359	$ 362	$ 360
Net loss attributable to common stockholders	$(4,975)	$(3,965)	$(4,558)	$ (4,794)
Net loss per common share, basic and diluted	$ (0.80)	$ (0.64)	$ (0.49)	$ (0.32)
Weighted average number of shares used in basic and diluted net loss per common share calculations	6,219	6,232	9,392	15,213
2007				
(in thousands, except per share data)				
Revenue	$ 359	$ 359	$ 359	$ 359
Net loss attributable to common stockholders	$(9,059)	$(7,638)	$(6,559)	$ (7,408)
Net loss per common share, basic and diluted	$ (1.47)	$ (1.24)	$ (1.06)	$ (1.19)
Weighted average number of shares used in basic and diluted net loss per common share calculations	6,143	6,159	6,180	6,201

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We conducted an evaluation as of December 31, 2008, under the supervision and with the participation of our management, including our Chief Executive Officer and Senior Director, Finance and Controller, of the effectiveness of the design and operation of our disclosure controls and procedures, which are defined under SEC rules as controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files under the Securities Exchange Act of 1934 (Exchange Act) is recorded, processed, summarized and reported within required time periods and that the information accumulated and communicated to our management, including our Chief Executive Officer and Senior Director, Finance and Controller is appropriate, to allow timely decisions, regarding required disclosure. Based upon that evaluation, our Chief Executive Officer and Senior Director, Finance and Controller concluded that, as of such date, our disclosure controls and procedures were effective.

Management's report on internal control over financial reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rule 13a-15(f) of the Exchange Act. Internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that 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 the financial statements.

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Senior Director, Finance and Controller, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on criteria established in the *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Management's assessment included evaluation of such elements as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies, and our overall control environment. Based on this evaluation, our management concluded that our internal control over financial reporting was effective as of December 31, 2008.

This annual report does not include an attestation report of our registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation requirements by the our registered public accounting firm pursuant to temporary rules of the Securities and Exchange Commission that permit us to provide only management's report in this annual report.

Limitations on the Effectiveness of Controls

Our management, including our Chief Executive Officer and Senior Director, Finance and Controller, does not expect that our disclosure controls and procedures or our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefit of controls must be

considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within Threshold Pharmaceuticals, Inc. have been detected. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Changes in internal controls over financial reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) that occurred during the fourth quarter of the year ended December 31, 2008 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this Item will be contained in our Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed with the SEC within 120 days after December 31, 2008 and is hereby incorporated by reference.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item will be contained in our Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed with the SEC within 120 days after December 31, 2008 and is hereby incorporated by reference.

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

The information required by this item will be contained in our Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed with the SEC within 120 days after December 31, 2008 and is hereby incorporated by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item will be contained in our Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed with the SEC within 120 days after December 31, 2008 and is hereby incorporated by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item will be contained in our Proxy Statement for the 2009 Annual Meeting of Stockholders to be filed with the SEC within 120 days after December 31, 2008 and is hereby incorporated by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are being filed as part of this report:

(1) The following financial statements of the Company and the report of PricewaterhouseCoopers LLP are included in Part II, Item 8:

(2) All financial statement supporting schedules are omitted because the information is inapplicable or presented in the Notes to Consolidated Financial Statements.

EXHIBIT NUMBER	DESCRIPTION
3.1(1)	Amended and Restated Certificate of Incorporation of the Registrant
3.2(2)	Amended and Restated Bylaws of the Registration
3.3(10)	Certificate of Designations of Rights, Powers and Preferences of Series A Participating Preferred Stock of Registrant
3.4(30)	Certificate of Amendment of the Amended and Restated Certificate of Incorporation of the Registrant
4.1(3)	Specimen Certificate evidencing shares of common stock
4.3(3)	Amended and Restated Investor Rights Agreement dated as of November 17, 2003 among the Registrant and the parties listed therein
4.4(3)	Form of Amendment No. 1 to Amended and Restated Investor Rights Agreement among the Registrant and certain parties to the Amended and Restated Investor Rights Agreement
4.5(10)	Preferred Shares Rights Agreement, dated as of August 8, 2006, by and between Registrant and Mellon Investor Services LLC
4.6(10)	Form of Rights Certificate
4.6(26)	Form of Warrant
4.7(27)	Amendment to Preferred Shares Rights Agreement dated as of July 10, 2008 among the Registrant and Mellon Investor Services LLC
10.1(3)+	2001 Equity Incentive Plan
10.3(3)+	2004 Employee Stock Purchase Plan
10.6†(3)	Agreement between the Registrant, Baxter International Inc., a Delaware corporation, and Baxter Oncology GmbH, a German corporation, dated as of August 5, 2003
10.7†(3)	Exclusive License Agreement by and between the Registrant, Dr. Theodore Lampidis and Dr. Waldemar Priebe, dated as of November 11, 2002
10.8(3)	Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated March 27, 2003

EXHIBIT NUMBER	DESCRIPTION
10.9(3)+	Form of Indemnification Agreement by and between the Registrant and its officers and directors
10.10(11)†	Agreement by and between the Registrant and Aziende Chimiche Riunite Angelini Francesco - Acraf S.p.a. dated as of June 24, 2004
10.11(3)	Sublease by and between the Registrant and ArQule, Inc. dated as of August 31, 2004
10.12(3)	Offer Letter by and between the Registrant and William A. Halter dated as of September 3, 2004
10.13(3)	Offer Letter by and between the Registrant and George G.C. Parker dated as of September 3, 2004
10.14†(3)	Development Agreement by and between the Registrant and MediBIC Co. Ltd., dated as of November 30, 2004
10.15(3)+	Form of Change of Control Severance Agreement by and between the Registrant and each of Harold E. Selick, Janet I. Swearson, Mark G. Matteucci and Alan Colowick
10.18(3)	Letter Agreement amending Development Agreement by and between the Registrant and MediBIC Co. Ltd.
10.19(4)+	Employment Letter Agreement by and between the Registrant and Alan B. Colowick dated October 25, 2004
10.20(5)+	2004 Amended and Restated Equity Incentive Plan
10.21(6)+	Consulting Agreement and Amendment to Stock Vesting Agreement by and between the Registrant and Dr. George F. Tidmarsh dated August 18, 2005
10.22(7)+	Offer Letter by and between the Registrant and Michael S. Ostrach dated as of September 2, 2005
10.24(8)	Triple Net Space Lease by and between the Registrant and Pacific Shores Investors, LLC, dated January 31, 2006
10.25(9)	Form of Notice of Grant of Stock Options and Stock Option Agreement
10.26(12)	Amendment to Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated April 7, 2006
10.27(13)+	Agreement and Release by and between the Registrant and Janet I. Swearson dated August 9, 2006
10.29(14)	Advisory Board Agreement by and between the Registrant and Alan B. Colowick dated October 14, 2006
10.30(15)+	Change of Control Severance Agreement by and between the Registrant and Michael S. Ostrach
10.31(16)+	Change of Control and Severance Agreement by and between the Registrant and Michael K. Brawer dated November 3, 2007
10.32(17)+	Change of Control and Severance Agreement by and between the Registrant and Kevin R. Kaster dated April 2, 2007
10.33(18)+	Change of Control and Severance Agreement by and between the Registrant and Cathleen P. Davis dated April 2, 2007
10.34(19)+	Offer Letter by and between the Registrant and John G. Curd dated October 3, 2007.
10.35(20)+	Change of Control and Severance Agreement by and between the Registrant and John G. Curd dated October 19, 2007
10.36(21)+	Offer Letter by and between the Registrant and Joel A. Fernandes dated November 1, 2007.

EXHIBIT NUMBER	DESCRIPTION
10.37(22)+	Amended offer letter by and between the Registrant and Michael K. Brawer, M.D. dated August 1, 2007.
10.38(23)+	Agreement and Release by and between the Registrant and Cathleen P. Davis dated November 2, 2007.
10.39(24)+	Agreement and General Release dated November 3, 2007 by and between Threshold Pharmaceuticals, Inc. and Kevin Kaster.
10.40(25)+	Agreement and General Release dated November 16, 2007 by and between Threshold Pharmaceuticals, Inc. and Michael Brawer.
10.42(28)	Form of Securities Purchase Agreement dated July 9, 2008
10.41(29)+	Form of Amended and Restated Change of Control Severance Agreement dated November 19, 2008
23.1	Consent of PricewaterhouseCoopers LLP, Independent Registered Public Accounting Firm
31.1	Certification Pursuant to Rule 15d-14 of the Securities and Exchange Act of 1934, as amended, as Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification Pursuant to Rule 15d-14 of the Securities and Exchange Act of 1934, as amended, as Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

(1) Filed as Exhibit 3.2 to our Registration Statement on Form S-1, as amended (File No. 333-114376), filed on April 9, 2004, and incorporated herein by reference.

(2) Filed as Exhibit 3.4 to our Registration Statement on Form S-1, as amended (File No. 333-114376), filed on April 9, 2004, and incorporated herein by reference.

(3) Filed as the like number exhibit to our Registration Statement on Form S-1, as amended (File No. 333-114376), filed on April 9, 2004, and incorporated herein by reference.

(4) Filed as the like number exhibit to our Quarterly Report on Form 10-Q filed on May 13, 2005, and incorporated herein by reference.

(5) Filed as the like number exhibit to our Current Report on Form 8-K filed on May 24, 2005, and incorporated herein by reference.

(6) Filed as Exhibit 10.20 to our Current Report on Form 8-K filed on August 19, 2005, and incorporated herein by reference.

(7) Filed as the like number exhibit to our Current Report on Form 8-K filed on September 16, 2005, and incorporated herein by reference.

(8) Filed as the like number exhibit to our Current Report on Form 8-K filed on February 9, 2006, and incorporated herein by reference.

(9) Filed as the like number exhibit to our Current Report on Form 8-K filed on March 17, 2006, and incorporated herein by reference.

(10) Filed as the like number exhibit to our Current Report on Form 8-K filed on August 9, 2006, and incorporated herein by reference.

(11) Filed as the like number exhibit to our Annual Report on Form 10-K filed on March 28, 2006, and incorporated herein by reference.

(12) Filed as the like number exhibit to our Quarterly Report on Form 10-Q filed on May 15, 2006, and incorporated herein by reference.

(13) Filed as the like number exhibit to our Quarterly Report on Form 10-Q filed on November 9, 2006, and incorporated herein by reference.

(14) Filed as Exhibit 10.29 to our Current Report on Form 10-K filed on March 15, 2007, and incorporated herein by reference.

(15) Filed as Exhibit 10.27 to our Current Report on Form 8-K filed on August 9, 2006, and incorporated herein by reference.

(16) Filed as Exhibit 10.31 to our Annual Report on Form 10-K filed on March 15, 2007, and incorporated herein by reference.

(17) Filed as Exhibit 10.32 to our Current Report on Form 8-K filed on April 4, 2007, and incorporated herein by reference.

(18) Filed as exhibit 10.33 to our Current Report on Form 8-K filed on April 4, 2007, and incorporated herein by reference.

(19) Filed as Exhibit 10.34 to our Current Report on Form 8-K filed on October 25, 2007, and incorporated herein by reference.

(20) Filed as Exhibit 10.35 to our Current Report on Form 8-K filed on October 25, 2007, and incorporated herein by reference.

(21) Filed as Exhibit 10.36 to our Current Report on Form 8-K filed on November 2, 2007, and incorporated herein by reference.

(22) Filed as exhibit 10.34 to our Current Report on Form 8-K filed on August 6, 2007, and incorporated herein by reference.

(23) Filed as Exhibit 10.37 to our Quarterly Report on Form 10-Q filed on November 7, 2007, and incorporated herein by reference.

(24) Filed as Exhibit 10.38 to our Current Report on Form 8-K filed on November 26, 2007, and incorporated herein by reference.

(25) Filed as Exhibit 10.39 to our Current Report on Form 8-K filed on November 26, 2007, and incorporated herein by reference.

(26) Filed as Exhibit 4.1 to our Current Report on Form 8-K filed on July 14, 2008, and incorporated herein by reference.

(27) Filed as Exhibit 4.2 to our Current Report on Form 8-K filed on July 14, 2008, and incorporated herein by reference.

(28) Filed as Exhibit 10.1 to our Current Report on Form 8-K filed on July 14, 2008, and incorporated herein by reference.

(29) Filed as Exhibit 10.41 to our Current Report on Form 8-K filed on November 21, 2008, and incorporated herein by reference.

(30) Filed herewith.

† Confidential treatment granted as to certain portions, which portions have been omitted and filed separately with the SEC.

+ Indicates a management contract or compensatory plan or arrangement.

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SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

THRESHOLD PHARMACEUTICALS, INC.

March 13, 2009

By: /s/ HAROLD E. SELICK, PH.D.
Harold E. Selick, Ph.D.
Chief Executive Officer

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

Signature	Title	Date
/s/ HAROLD E. SELICK, PH.D. **Harold E. Selick, Ph.D.**	Chief Executive Officer (principal executive officer)	March 13, 2009
/s/ JOEL A. FERNANDES **Joel A. Fernandes**	Senior Director, Finance and Controller (principal financial and accounting officer)	March 13 2009
/s/ JEFFREY W. BIRD, M.D. **Jeffrey W. Bird, M.D.**	Director	March 13, 2009
/s/ BRUCE C. COZADD **Bruce C. Cozadd**	Director	March 13, 2009
/s/ WILLIAM A. HALTER **William A. Halter**	Director	March 13, 2009
/s/ DAVID R. HOFFMANN **David R. Hoffmann**	Director	March 13, 2009
/s/ WILFRED E. JAEGER, M.D. **Wilfred E. Jaeger, M.D.**	Director	March 13, 2009
/s/ GEORGE G. C. PARKER, PH.D. **George G. C. Parker, Ph.D.**	Director	March 13, 2009

Exhibit 3.4

CERTIFICATE OF AMENDMENT
OF THE
AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
THRESHOLD PHARMACEUTICALS, INC.

The undersigned, Dr. Harold E. Selick, hereby certifies that:

1. He is the Chief Executive Officer of Threshold Pharmaceuticals, Inc., a Delaware corporation (the "Corporation").

2. The original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on October 17, 2001.

3. Article Fourth, Paragraph A of the Corporation's Amended and Restated Certificate of Incorporation is amended and restated in its entirety to read as follows:

"A. The total number of shares of all classes of stock which the Corporation shall have authority to issue is 52,000,000, consisting of 50,000,000 shares of Common Stock, par value $0.001 per share (the "Common Stock") and 2,000,000 shares of Preferred Stock, par value $0.001 per share (the "Preferred Stock").

On August 20, 2008, at 12:01 a.m. EST (the "Effective Time"), each six shares of the Corporation's Common Stock issued and outstanding immediately prior to the Effective Time shall be reclassified and combined into one share of the Corporation's Common Stock, automatically and without any action on the part of the respective holders thereof (the "Reverse Stock Split"). No fractional shares shall be issued in the Reverse Stock Split. In lieu of issuing fractional shares, the aggregate of all fractional shares otherwise issuable in the Reverse Stock Split shall be issued to the Corporation's transfer agent, as agent for the accounts of all holders of such fractional shares. The transfer agent shall sell all of the fractional interests as soon as practicable after the Effective Time on the basis of the prevailing market prices on the open market on behalf of such holders, and then pay each such holder his, her or its pro rata portion of the sale proceeds."

4. This Certificate of Amendment of the Corporation's Amended and Restated Certificate of Incorporation has been duly adopted by this Corporation's Board of Directors and stockholders in accordance with the provisions of the Corporation's Amended and Restated Certificate of Incorporation and with Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Amendment of Amended and Restated Certificate of Incorporation at Redwood City, California on August 18, 2008.

/s/ Dr. Harold E. Selick
Dr. Harold E. Selick
Chief Executive Officer

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement on Form S-3 (No. 333-153475) and Registration Statement on Form S-8 (No. 333-156733, No. 333-126276, No. 333-134598, and No. 333-143130) of Threshold Pharmaceuticals, Inc. of our report dated March 13, 2009 relating to the consolidated financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

San Jose, California
March 13, 2009

Exhibit 31.1

Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Harold E. Selick, certify that:

1. I have reviewed this Form 10-K of Threshold Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 13, 2009

/s/ HAROLD E. SELICK, PH.D.
Harold E. Selick, Ph.D.
Chief Executive Officer

Exhibit 31.2

Certification of Principal Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Joel A. Fernandes, certify that:

1. I have reviewed this Form 10-K of Threshold Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 13, 2009

/s/ JOEL A. FERNANDES
Joel A. Fernandes
Senior Director, Finance and Controller
(Principal Accounting Officer)

Exhibit 32.1

Threshold Pharmaceuticals, Inc

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Threshold Pharmaceuticals, Inc (the "Company") on Form 10-K for the year ended December 31, 2008, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Harold E. Selick, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 13, 2009

/s/ Harold E. Selick, Ph.D.
Harold E. Selick, Ph.D.
Chief Executive Officer

Exhibit 32.2

Threshold Pharmaceuticals, Inc

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of Threshold Pharmaceuticals, Inc (the "Company") on Form 10-K for the year ended December 31, 2008, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joel A. Fernandes, Senior Director, Finance and Controller of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 13, 2009

/s/ Joel A. Fernandes
Joel A. Fernandes
Senior Director, Finance and Controller
(Principal Accounting Officer)