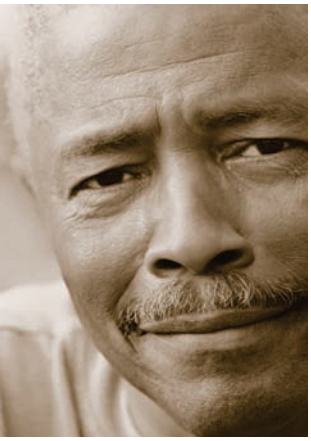
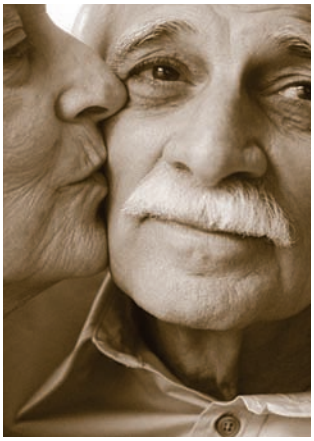
VION PHARMACEUTICALS, INC


Advancing New Cancer Therapies

Corporate Information

Vion Pharmaceuticals, Inc. is developing cancer therapeutics. Our lead compound Cloretazine® (VNP40101M), a novel cytotoxic agent, is being studied in two late-stage pivotal clinical trials, a Phase II single agent study in elderly *de novo* poor-risk acute myelogenous leukemia (AML), and a Phase III trial in combination with cytarabine in relapsed AML. A Phase II study of Cloretazine® (VNP40101M) is also underway in small cell lung cancer. Triapine®, a potent inhibitor of an enzyme important to DNA synthesis and repair, is being evaluated in trials sponsored by the National Cancer Institute. In preclinical studies, Vion is also evaluating VNP40541, a hypoxia-selective cytotoxic compound, and hydrazone compounds. For additional information on Vion and its product development programs, visit the Company's Internet web site at www.vionpharm.com.

VION
PHARMACEUTICALS, INC

Letter to Shareholders

In 2006, Vion continued to make progress towards its primary goal of advancing its lead product Cloretazine® (VNP40101M) to regulatory approval and commercialization in the United States.

Cloretazine® (VNP40101M) is now a late-stage clinical asset in two pivotal trials in acute myelogenous leukemia (AML). Regulatory approval in the U.S. of this novel anticancer agent will depend in no small measure on the success of these trials: CLI-043, an 85 patient Phase II single agent trial in elderly patients with *de novo* poor-risk AML and CLI-037, a 420 patient Phase III trial in combination with cytarabine in first relapse patients of any age.

We believe that if either of these two trials is successful we will have sufficient data to file for regulatory approval in the U.S. We also plan to present the data to European regulatory authorities.

At this exciting stage of clinical development, we are pleased to retain control of all of the commercialization rights worldwide for Cloretazine® (VNP40101M). In our industry, the value of a new product with positive data in a pivotal trial is significant, so we believe that we will be in a position to maximize shareholder value in any partnering arrangement resulting from successful completion of our leukemia trials.

Our position as one of the few companies with an unencumbered late-stage oncology asset was recently acknowledged through a successful financing. We can tell you that the financing was well-received in the marketplace. As we write to you, we have over $75 million in cash, and are funded to be able to see our two pivotal trials through to completion.

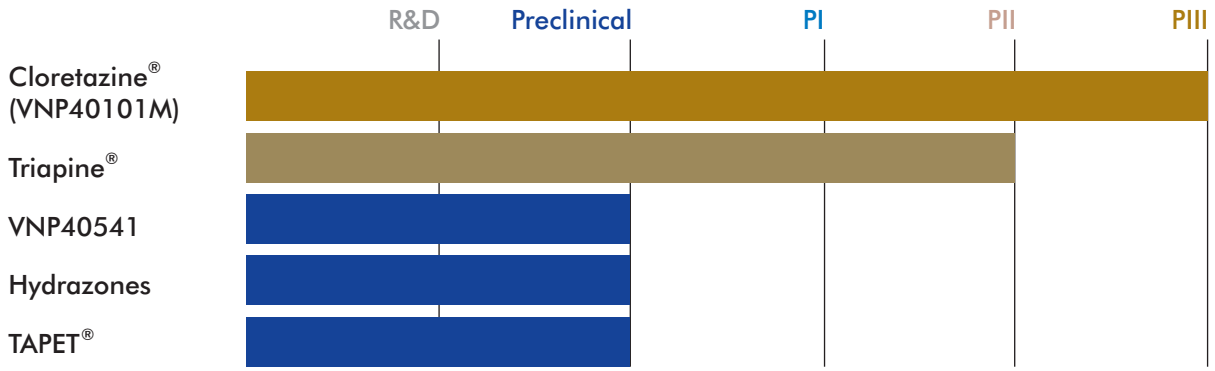
In addition to our clinical development efforts, we are preparing for the filing of a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) by completing all of the supporting preclinical and toxicology studies and establishing the infrastructure to produce and publish this sizeable document. We are also working to ensure that our manufacturing processes and sources meet commercial requirements, and we are doing all the planning necessary to a successful product launch so that we are prepared when the time comes.

Needless to say, these are significant tasks for a Company of 45 employees, but all of us at Vion are committed to keeping our

William R. Miller
Chairman of the Board

Alan Kessman
Chief Executive Officer

Product Pipeline



Company on track towards our ultimate goal. With that as an introduction, following is a more detailed update of our accomplishments for 2006.

Our single agent Phase II trial of Cloretazine® (VNP40101M) was initiated in 2006. We believe that this pivotal trial in elderly *de novo* poor-risk AML patients, combined with our previous Phase II trial in elderly patients with AML and high-risk myelodysplastic syndrome (MDS), represents a registration pathway for Cloretazine® (VNP40101M) in a patient population with an unmet medical need. We announced in January 2007 that we would proceed to the second stage of accrual to this trial and we continue to expect that the total accrual of 85 patients will be completed by the end of the second quarter of 2007. Based on this schedule, we expect to be able to present data from this trial at the American Society of Hematology (ASH) conference in December 2007.

We continue to advance our Phase III trial of Cloretazine® (VNP40101M) in combination with cytarabine (Ara-C) in relapsed AML. This Phase III trial, which is under Special Protocol Assessment with the FDA, is now up and running in nearly 70 sites in North America and Europe. We reached the midpoint of accrual, enrolling our 210th patient, in November 2006. We anticipate the planned interim analysis by our Data Safety Monitoring Board (DSMB) to be completed in the second quarter of 2007.

In addition to our clinical trials in AML, we are evaluating Cloretazine® (VNP40101M) in other cancer indications. We have a single agent trial underway in small cell lung cancer, and announced that we were moving to the second stage of that trial in the fall of 2006. We anticipate completion of accrual to this study in early 2008. A combination trial with temozolomide in advanced hematologic malignancies has also been

In 2006, Vion continued to make progress towards its primary goal of advancing its lead product Cloretazine® (VNP40101M) to regulatory approval and commercialization in the United States.

Cloretazine® (VNP40101M) Clinical Development

First Relapse AML
(in combination with cytarabine)

Elderly *de novo* Poor-Risk AML
(as a single agent)

Small Cell Lung Cancer
Relapsed/Refractory
(as a single agent)

PII PIII

CLI-037 A Phase III Randomized Study of Cloretazine® (VNP40101M) and Cytarabine (Ara-C) in Patients with Acute Myelogenous Leukemia in First Relapse
Currently enrolling in North America and Europe

CLI-043 A Phase II Study of Cloretazine® (VNP40101M) for Elderly Patients with *de novo* Poor-Risk Acute Myelogenous Leukemia
Currently enrolling in North America and Europe

CLI-039 A Phase II Trial of Cloretazine® (VNP40101M) for Patients with Relapsed or Refractory Small Cell Lung Cancer
Currently enrolling in the United States

Since the beginning of 2006, Vion has added key personnel to its senior management team in the areas of commercialization, regulatory affairs and manufacturing, with a combined 61 years of experience in pharmaceutical development.

completed, and early results from this proof-of-concept study were announced at the ASH conference in December 2006. Finally, a number of important investigator-initiated trials are planned for the coming year as excitement and interest for the potential of Cloretazine® (VNP40101M) grows in clinical research centers.

Trials of our second clinical compound, Triapine®, continued under our collaboration with the National Cancer Institute (NCI) in 2006. Some initial data from these trials was presented during scientific meetings in 2006, and based on abstracts we have seen filed by several investigators in our collaboration with the NCI, we expect there to be additional data on intravenous Triapine® available at various meetings this year. Our strongest signal to date with Triapine® has come from our Phase II data of Triapine® and gemcitabine in pancreatic cancer in which we saw a median survival of eight months for patients on that study. The NCI has been conducting an additional trial of Triapine® and gemcitabine which is now closed, and we will be looking for the data from that trial to see if it continues to support further development in this indication. Trials also continue under NCI sponsorship of Triapine® and radiation in gynecologic and pancreatic cancers, Triapine® and fludarabine in myeloproliferative disorders, chronic myelomonocytic leukemia (CML) and blastic phase CML, and two trials of Triapine® and gemcitabine in solid tumors and in lymphoma.

Finally, we also continued to make progress on the preclinical development of our third compound, VNP40541, which releases the same active agent as Cloretazine® (VNP40101M), but does so selectively in hypoxic (low oxygen) conditions. We plan to complete the preclinical studies and gather the other information requested by the FDA so that we can re-file our Investigational New Drug (IND) application.

As pleased as we are with the progress made in our clinical program in 2006, we are equally pleased with the success we've had recruiting experienced senior executives. Since the beginning of 2006, Vion has added key personnel to its senior management team in the areas of commercialization, regulatory affairs and manufacturing, with a combined 61 years of experience in pharmaceutical development.

In 2006, we hired Aileen Ryan as our Vice President of Regulatory Affairs to head our regulatory efforts. We are preparing to have pre-NDA meetings with the FDA in 2007 on the Cloretazine® (VNP40101M) program focusing on chemistry, manufacturing and controls, non-clinical matters such as toxicology and pharmacology, and the presentation of the clinical data. The objective of these meetings is to discuss all the issues with respect to each section of a potential NDA filing so that we are ready to make such a filing as early as possible if the data from our trials are positive. We look forward to the results of these discussions, and to updating our shareholders and the investment community on the timeline for registration.

In 2006, we also hired Meghan Fitzgerald as Chief Business Officer to lead our pre-launch marketing and business development efforts for Cloretazine® (VNP40101M). In 2006, we performed a thorough analysis of the opportunity for Vion to launch Cloretazine® (VNP40101M) for the treatment of AML in the U.S. using its own sales force. This remains an attractive and viable option for our Company. At the same time, we continue to engage in discussions with larger companies

We are preparing to have pre-NDA meetings with the FDA in 2007 on the Cloretazine® (VNP40101M) program focusing on chemistry, manufacturing and controls, non-clinical matters such as toxicology and pharmacology, and the presentation of the clinical data.

We are excited about the potential of our two pivotal trials of Cloretazine® (VNP40101M) in AML. We look forward to the planned completion of accrual to these trials, and believe that Cloretazine® (VNP40101M) can be a valuable agent in both front-line and second-line AML.

with existing infrastructure for oncology product development and commercialization, for potential partnering opportunities. Whether we partner Cloretazine® (VNP40101M) for U.S. and ex-U.S. commercialization, or retain the U.S. rights for Vion to launch the product itself, it remains our objective to maximize shareholder value in all our business development efforts.

In 2006, we conducted Cloretazine® (VNP40101M) advisory board meetings with top tier AML thought leaders in both the U.S. and Europe, and had a significant corporate presence at the 2006 ASH meeting and exhibition. In 2007, we plan to increase our pre-commercialization efforts by: (i) continuing to focus on recruiting key opinion leaders in the U.S. and Europe, (ii) conducting additional pricing and positioning studies as additional data from the trials becomes available, and (iii) planning to initiate our medical education activities as we get closer to launch. In 2007, Vion plans to have a corporate presence at more than a dozen hematology and oncology meetings in the U.S. and Europe, and will hold several advisory board meetings with key U.S. and international opinion leaders focusing on commercial launch and product lifecycle issues.

Over the last 12 months, we also strengthened our ability to manufacture Cloretazine® (VNP40101M). We entered into a five-year manufacturing agreement with Ben Venue Laboratories in December 2006 to manufacture Cloretazine® (VNP40101M) finished drug product. In March of 2007, we also extended our manufacturing agreement with Sigma-Aldrich Fine Chemical (SAFC) to manufacture Cloretazine® (VNP40101M) active pharmaceutical ingredient (API) through September 2009. In April 2007, we were pleased to announce that Dr. James Tanguay had joined Vion's senior management team as Vice President of Chemistry, Manufacturing and Control. Dr. Tanguay will lead our manufacturing operations in preparation for the commercial launch of Cloretazine® (VNP40101M).

We ended 2006 with $30.9 million in cash, and added to our financial position with net proceeds of $55.3 million from a private placement of 7.75% senior convertible notes and warrants in early 2007. We are confident that this financing positions the Company with the financial ability to execute on its goal of registering Cloretazine® (VNP40101M) for the treatment of AML in the United States in the next two years. As these efforts continue to advance, we remain committed to maintaining a strong financial position.

We are excited about the potential of our two pivotal trials of Cloretazine® (VNP40101M) in AML. We look forward to the planned completion of accrual to these trials, and believe that Cloretazine® (VNP40101M) can be a valuable agent in both front-line and second-line AML. We are now in the pre-launch phase for Cloretazine® (VNP40101M) and our regulatory and pre-commercial activities will therefore be receiving more focus and resources. With worldwide registration rights now controlled by the Company, we will continue to evaluate all commercialization opportunities in order to maximize shareholder value.

We thank you, our shareholders, for your continued support, and our employees for their hard work and dedication. We look forward to continuing our efforts in bringing innovative cancer treatments to market, and we remain committed to extending the lives and improving the quality of life of cancer patients worldwide.

William R. Miller
Chairman of the Board

Alan Kessman
Chief Executive Officer

We are now in the pre-launch phase for Cloretazine® (VNP40101M) and our regulatory and pre-commercial activities will therefore be receiving more focus and resources.

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, 2006

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission File Number 000-26534

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

Delaware	**13-3671221**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
4 Science Park **New Haven, Connecticut**	**06511**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(203) 498-4210**

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

Securities registered pursuant to Section 12(g) of the Act:
Title of Class
Common Stock, $0.01 par value (together with associated Common Stock Purchase Rights)

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

Indicate by check mark if 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 (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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

Large accelerated filer ☐ Accelerated filer ☒ Non-accelerated filer ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act.
Yes ☐ No ☒

The aggregate market value of the common stock held by non-affiliates of the registrant as of June 30, 2006 was $70,204,482 based on the last sale price for the common stock on that date as reported by the Nasdaq Capital Market[SM].

The number of shares outstanding of the registrant's common stock as of March 9, 2007 was 72,084,540.

DOCUMENTS INCORPORATED BY REFERENCE

None.

VION PHARMACEUTICALS, INC.

TABLE OF CONTENTS

In this report, unless the context otherwise requires, the terms "we," "us," "our," "the Company" and "Vion" refer to Vion Pharmaceuticals, Inc., a Delaware corporation.

All statements other than statements of historical fact included in this Annual Report on Form 10-K, including without limitation statements under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operation" and "Item 1. Business," regarding our financial position, business strategy, and plans and objectives of our management for future operations, are forward-looking statements. When used in this Annual Report on Form 10-K, words such as "may," "will," "should," "could," "potential," "seek," "project," "predict," "anticipate," "believe," "estimate," "expect," "intend" and similar expressions, as they relate to us or our management, identify forward-looking statements. Forward-looking statements are based on the beliefs of our management as well as assumptions made by and information currently available to our management. These statements are subject to risks and uncertainties that may cause actual results and events to differ significantly. A detailed discussion of risks attendant to the forward-looking statements is included under "Item 1A – Risk Factors". The information contained in this Annual Report on Form 10-K is believed to be current as of the date of filing with the Securities and Exchange Commission. We do not intend to update any of the forward-looking statements after the date of this filing to conform these statements to actual results or to changes in our expectations, except as required by law.

PART I

ITEM 1. *Business*

General

We are a development stage pharmaceutical company engaged in the development of products for the treatment of cancer. We were incorporated in March 1992 as a Delaware corporation and began operations on May 1, 1994. For the years ended December 31, 2006, 2005 and 2004, we spent $21.5 million, $16.6 million and $13.8 million, respectively, on research, development and clinical activities.

Our portfolio of product candidates consists of two distinct small molecule anticancer agents in clinical development, and additional small molecules in preclinical development. We also have developed a drug delivery technology for the treatment of cancer. 'Preclinical development' or 'preclinical studies' indicate that the product candidates selected for development are being evaluated for potency, specificity, manufacturability and pharmacologic activity *in vitro*, or cell culture, and *in vivo*, or animal models. Typically, clinical evaluation involves a three-phase process. In Phase I, clinical trials are conducted with a small number of subjects to determine the tolerated drug dose, early safety profile, proper scheduling and the pattern of drug distribution, absorption and metabolism. In Phase II, clinical trials are conducted with groups of patients afflicted with a specific disease in order to determine efficacy, dose-response relationships and expanded evidence of safety. In Phase III, large-scale, multi-center, controlled clinical trials are conducted in order to:

- provide enough data for statistical proof of safety and efficacy;
- compare the experimental therapy to existing therapies;
- uncover any unexpected safety problems, such as side-effects; and
- generate product labeling.

Our product development programs are based on technologies that we license from Yale University (Yale) and other cancer research centers. We have largely engaged in product development with respect to anticancer therapeutics through in-house preclinical and clinical development and through collaboration with academic, research and governmental institutions. As our product candidates advance through trials, depending on financial and pharmaceutical market conditions and required resources, we will determine the best method and/or partnership to develop, and eventually market, our products.

Products in Clinical Development

Our lead product candidate, Cloretazine® (VNP40101M), is an alkylating (DNA-damaging) agent. Our primary registration strategy for this compound is for the treatment of acute myelogenous leukemia (AML). Cloretazine® (VNP40101M) has received two fast track designations from the U.S. Food and Drug Administration (FDA) for the treatment of: (i) relapsed AML and (ii) elderly poor-risk AML. Cloretazine® (VNP40101M) has also received orphan drug designation for the treatment of AML in the United States and the European Union.

A Phase III trial of Cloretazine® (VNP40101M) in combination with cytosine arabinoside (Ara-C) in relapsed AML commenced in March 2005, and we reached the midpoint for patient accrual to this clinical trial (210 patients) in November 2006. The Phase III trial is designed to accrue 420 patients in total if it continues to full accrual. The planned interim evaluation of safety and efficacy for this trial based on 210 patients by its data safety monitoring board (DSMB) is presently anticipated to occur in the second quarter of 2007. Based on the evaluation of the first 210 patients accrued in the Phase III trial, the DSMB will determine whether to allow the trial to continue as currently designed, whether the trial design should be modified, or whether the trial should be terminated completely. There can be no assurance as to the results of the evaluation of these patients or the timing of completion of this evaluation and there should be no inference that the trial has achieved positive results to date or that the DSMB will allow the Phase III trial to continue.

In May 2006, we commenced a pivotal Phase II trial of Cloretazine® (VNP40101M) in previously untreated elderly patients with *de novo* poor-risk AML. The trial is designed to continue to the total accrual of 85 patients if there have been at least nine responses in the first 42 patients. On January 25, 2007, we announced that at least nine responses had been recorded in this trial, and accordingly, that we would proceed to the second stage of accrual.

In addition to these two trials in AML, Cloretazine® (VNP40101M) is being evaluated in a Phase II clinical trial as a single agent in small cell lung cancer.

Our second product candidate in clinical trials, Triapine®, is a small molecule that in preclinical models inhibits the enzyme ribonucleotide reductase, and therefore prevents the replication of tumor cells by blocking a critical step in DNA synthesis. Intravenous Triapine® is being evaluated in clinical trials sponsored by the National Cancer Institute (NCI). The NCI also commenced a Phase I clinical trial of an oral formulation of Triapine® in December 2006.

Products in Preclinical Development

VNP40541 is an additional cytotoxic (cell-damaging) compound. VNP40541 has been demonstrated in preclinical studies to be highly selective for hypoxic (poorly oxygenated) cells which are found in tumors and are often hard to treat with conventional anticancer agents. In the third quarter of 2006, we initiated additional preclinical studies on VNP40541 that were requested by the FDA after we submitted an Investigational New Drug (IND) application for this product in June 2006. We plan to resubmit the IND for VNP40541 with the new information by the end of 2007.

Hydrazones are anticancer compounds that have demonstrated potent anti-tumor effects in preclinical studies. The mechanisms of action for these compounds are unidentified at this time but appear to be unlike any known commercially available anticancer agents. In September 2005, we entered into an exclusive license for these compounds. We continued to evaluate these compounds in preclinical studies in 2006.

Drug Delivery Technology

TAPET® (Tumor Amplified Protein Expression Therapy), our drug delivery system using modified *Salmonella* bacteria, is designed to deliver anticancer agents directly to solid tumors. In 2007, we will continue to seek a development partner for TAPET®.

Overview of Cancer and Treatment Methods

Cancer is the second leading cause of death in the United States, exceeded only by heart disease. The American Cancer Society estimates that in 2007 about 1.4 million new cancer cases are expected to be diagnosed and 559,650 cancer deaths are expected to occur in the United States.

Cancer is a heterogeneous group of diseases characterized by uncontrolled cell division and growth resulting in the development of a mass of cells or tumor, as well as the invasion and spreading of these cells to other organs of the body (metastasis). Cancerous tumors can arise in any tissue or organ within the human body and generally cause clinical problems to the patient when the tumor affects the function of that organ or when the tumor spreads to other organs. Cancers which arise in the bone marrow (e.g. acute and chronic leukemias and multiple myeloma) or the lymph nodes (Hodgkin's disease and lymphomas) spread through the bone marrow and lymphatic systems, affecting the growth of normal blood and lymphatic cells. Cancer is believed to occur as a result of a number of factors, such as genetic predisposition, chemical agents, viruses and radiation. These factors result in genetic changes affecting the ability of cells to regulate their growth and differentiation.

The most common methods of treating patients with cancer are surgery, radiation and anticancer drugs (chemotherapy). A cancer patient often receives treatment with a combination of methods. Surgery and radiation therapy are particularly effective in patients where the disease is localized. The most common method of treating patients with cancer that has spread beyond the primary site is to administer systemic chemotherapy. Chemotherapy seeks to damage and kill cancer cells or to interfere with the molecular and cellular processes that control the development, growth and survival of malignant tumor cells. In many cases, chemotherapy consists of the administration of several different drugs in combination. Chemotherapy can cause a number of side effects in patients, including weakness, low blood count, loss of appetite, nausea and vomiting, and damage to various organs that can result in loss of normal body functions.

The effectiveness of current cancer treatments with respect to any particular patient varies greatly, depending upon the cancer diagnosis and the tolerance of the individual patient to treatment. Therefore, a significant need exists for new agents that can be used alone or in combination with existing drugs and treatment approaches and that will produce greater efficacy and less toxicity than current therapeutic options.

Our Product Development Programs

We are developing several potential products for the treatment of cancer. Two of our small molecule anticancer agents are in human clinical trials, and additional small molecules are in preclinical development. In addition, we are seeking a partner to develop a drug delivery technology. The discussion below sets forth the development status of our product candidates (except as otherwise specifically noted below) as of December 31, 2006.

Products in Clinical Development

Cloretazine® (VNP40101M)

Cloretazine® (VNP40101M) is a novel alkylating agent. Alkylating agents directly damage DNA to prevent cancer cells from reproducing, and work in all phases of the cell cycle, affecting both dividing and non-dividing cancer cells. Alkylating agents are among the most widely used class of anticancer drugs, displaying activity across a range of both hematologic and solid tumors, including acute and chronic leukemias, non-Hodgkin's lymphoma, Hodgkin's disease, multiple myeloma, and lung, breast, ovarian, brain, and certain other cancers.

There are a number of approved alkylating agents used in the treatment of cancer, including busulfan, cisplatin, carboplatin, chlorambucil, cyclophosphamide, ifosfamide, dacarbazine, mechlorethamine, melphalan, and temozolomide. Several of these drugs are known to be among the most effective agents in the treatment of cancer.

Preclinical data on Cloretazine® (VNP40101M) showed broad anti-tumor activity in *in vivo* models. It was curative in certain preclinical leukemia models, including mice bearing certain derivatives of a leukemia cell line that was resistant to standard alkylating agents. Cloretazine® (VNP40101M) was also active against solid tumor models, including lung, colon, and brain cancer, and melanoma. The drug was also not affected by mechanisms for multiple drug resistance which can limit

the effectiveness of current therapies. Cloretazine® (VNP40101M) has been shown in preclinical studies to be capable of crossing the blood-brain barrier. The blood-brain barrier has been a common obstacle in achieving active concentrations of many anticancer drugs within the brain.

Based on early indications of activity in the preclinical studies and completed clinical trials conducted to date, our primary registration strategy for Cloretazine® (VNP40101M) is for the treatment of AML, but we also have evaluated it in solid tumors. Below is a table with a list of all completed, closed and ongoing Cloretazine® (VNP40101M) clinical trials.

Trial	Indication	Sponsor	Commencement Date	Status
Phase III trial in combination with Ara-C	AML, relapsed	Vion	March 2005	Ongoing
Phase II single agent trial	AML, elderly poor-risk	Vion	May 2006	Ongoing
Phase II single agent trial	Small cell lung cancer	Vion	September 2005	Ongoing
Phase II single agent trial	Brain tumors, adult	Investigator-sponsored	June 2004	Completed
Phase II single agent trial	AML and high-risk myelodysplastic syndromes	Vion	March 2004	Completed
Phase I/II single agent trial	Chronic lymphocytic leukemia	Vion	July 2005	Closed
Phase I trial	Brain tumors, pediatric	Investigator-sponsored	April 2005	Completed
Phase I trial in combination with temozolomide	Hematologic malignancies	Vion	October 2004	Completed
Phase I trial in combination with Ara-C	Hematologic malignancies	Vion	July 2003	Completed
Phase I single agent trial	Solid tumors	Vion	February 2003	Completed
Phase I single agent trial	Hematologic malignancies	Vion	August 2002	Completed
Phase I single agent trial	Solid tumors	Vion	June 2001	Completed

As with all drug development, we would need to reevaluate Cloretazine® (VNP40101M) if it does not test favorably in any of the clinical trials listed above and either alter the drug or dose, or abandon the drug development project. In any such event, our business, operations, and prospects would be materially and adversely affected. In addition, in such circumstances, we would not be able to obtain regulatory approval on a timely basis, if ever. See "Item 1A. Risk Factors – We do not have products approved for sale. All of our proposed products are in trials. If our drug trials are delayed or achieve unfavorable results, we might not be able to obtain regulatory approvals for our product."

In March 2004, we received fast track designation from the FDA for Cloretazine® (VNP40101M) in relapsed or refractory AML. In October 2005, we received fast track designation for Cloretazine® (VNP40101M) in elderly poor-risk AML. The FDA's fast track programs are designed to facilitate the development of new drugs that are intended to treat serious or life-threatening conditions and demonstrate the potential to address unmet medical needs. Although fast track status may expedite development and FDA review of an application, there can be no assurance that Cloretazine® (VNP40101M) will be reviewed more expeditiously for its "fast track" indications than would otherwise have been the case or will be approved promptly, or at all.

In October 2004, we received orphan drug designation from the FDA for Cloretazine® (VNP40101M) in AML in the United States. Orphan drug designation may be granted to products that treat rare diseases or conditions that affect fewer than 200,000 people in the United States. Orphan drug designation does not convey any advantage or shorten the duration of the FDA review and approval process. The designation may provide eligibility for: (i) a seven-year period of market

exclusivity for the indication of AML; (ii) potential tax credits for research; (iii) grant funding for research and development; (iv) reduced filing fees for marketing applications; and (v) assistance with the review of clinical trial protocols.

In January 2006, we received orphan drug designation from the European Medicines Agency (EMEA) for Cloretazine® (VNP40101M) in AML in the European Union. Orphan drug status is granted by the European Commission to promote development of drugs to treat rare diseases or conditions. Orphan drug designation in Europe does not convey any advantage or shorten the duration of the EMEA review and approval process. Orphan drug designation in Europe may entitle Cloretazine® (VNP40101M) to: (i) ten-year period of market exclusivity for the indication of AML; (ii) protocol assistance from the EMEA to optimize drug development in preparing a dossier that will meet regulatory requirements; (iii) reduced fees associated with applying for market approval; and (iv) access to European Union research funding.

Cloretazine® (VNP40101M) in Hematologic Malignancies

Our Phase III trial of Cloretazine® (VNP40101M) in combination with Ara-C in relapsed AML referenced in the table above is being conducted in over 65 clinical sites in North America and Europe. In February 2005, we reached agreement with the FDA for this trial on a Special Protocol Assessment (SPA), a procedure by which the FDA provides official evaluation and guidance on proposed protocols for pivotal Phase III clinical trials. The trial started in March 2005 and is ongoing. The trial is designed to accrue 420 patients in total if it continues to full accrual. We reached the midpoint for patient accrual to this trial (210 patients) in November 2006. The planned interim evaluation of safety and efficacy for this trial based on 210 patients by its DSMB is presently anticipated to occur in the second quarter of 2007. Based on the evaluation of the first 210 patients accrued in the Phase III trial, the DSMB will determine whether to allow the trial to continue as currently designed, whether the trial design should be modified, or whether the trial should be terminated completely. There can be no assurance as to the results of the evaluation of these patients or the timing of completion of this evaluation and there should be no inference that the trial has achieved positive results to date or that the DSMB will allow the Phase III trial to continue.

In May 2006, we commenced a pivotal Phase II trial of Cloretazine® (VNP40101M) (VNP40101M) in previously untreated elderly patients with *de novo* poor-risk AML. Elderly *de novo* poor-risk AML patients are those elderly patients whose poor-risk AML has not evolved from a prior myelodysplastic syndrome or from prior treatment with chemotherapy. The trial is designed to continue to the total accrual of 85 patients if there have been at least nine responses in the first 42 patients. On January 25, 2007, we announced that at least nine responses had been recorded in this trial, and accordingly, that we would proceed to the second stage of accrual.

Cloretazine® (VNP40101M) in Solid Tumors

Our Phase II trial of Cloretazine® (VNP40101M) as a single agent in small cell lung cancer referenced in the table above started in September 2005 and is ongoing. Preliminary data from this trial was presented at two conferences in 2006. Data were presented on a total of 36 evaluable patients: (i) 19 patients in the sensitive relapsed arm and (ii) 17 patients in the refractory arm.

Patients on the trial initially received 125 mg/m^2 of Cloretazine® (VNP40101M) weekly for three weeks, every six weeks. This dose was later reduced by protocol amendment to 100 mg/m^2 weekly for three weeks every six weeks due to significant thrombocytopenia at the initial dose level.

Of the evaluable patients on the sensitive relapsed arm, there were five patients with partial response and one patient awaiting confirmation of response (overall, a 32% response rate), and two patients had stable disease. Of those patients with refractory disease treated with Cloretazine® (VNP40101M), 1 patient achieved a partial response and 3 patients demonstrated stable disease.

Grade 3 and 4 thrombocytopenia was reported as the most serious toxicity observed, and delayed additional treatment in several patients. Early results suggested that the reduced dose of Cloretazine® (VNP40101M) causes less thrombocytopenia (no grade 3 or 4 thromobocytopenia in the first four patients at this dose) but maintained disease activity.

The trial was designed as a two-stage trial. Both arms of the trial met the criteria for advancement to the second stage and continue to accrue patients. If both arms complete full accrual, there will be a total of 50 patients on the sensitive relapsed arm and 37 patients on the refractory arm of the trial.

Triapine®

Triapine® inhibits the enzyme ribonucleotide reductase in preclinical models. Ribonucleotide reductase inhibition is thought to arrest the growth of, or kill, cancer cell lines, by blocking a critical step in DNA synthesis in cancer cells. Inhibition of this enzyme has also been shown *in vitro* and *in vivo* to enhance the anti-tumor activity of several standard anticancer agents. Accordingly, Triapine® has potential to be used as a single agent, i.e., by itself, and in combination with anticancer drugs to prevent damaged anticancer cells from regenerating.

We have evaluated an intravenous formulation of Triapine® in five single agent Phase I trials, three single agent Phase II trials, four Phase I combination trials, and two Phase II combination trials. At this time, we are not sponsoring any additional trials of the intravenous formulation of Triapine®.

In November 2002, we announced that the NCI's Division of Cancer Treatment and Diagnosis had approved a collaboration for the clinical development of Triapine®. As part of this collaboration, the NCI's Cancer Therapy Evaluation Program has sponsored clinical trials of Triapine® to further explore its activity as a single agent or in combination with other agents in patients with cancer. We provide the product used in these trials. In early 2003, we announced that a Clinical Trials Agreement had been executed with the NCI and in January 2004, the first trial opened under NCI sponsorship.

An intravenous formulation of Triapine® is being evaluated in trials sponsored by the NCI. There are currently five trials underway: (i) two trials of Triapine in combination with gemcitabine; (ii) two trials of Triapine in combination with radiation; and (iii) a trial of Triapine in combination with fludarabine. An additional eleven trials are closed to accrual or completed.

Clinical testing of new single agent administration schedules may be possible with the oral form of Triapine®, which to date has been studied in a small number of patients to determine its absorption in the bloodstream following a single dose. A Phase I trial sponsored by the NCI of an oral formulation of Triapine® began in December 2006.

In October 2003, we entered into a license with Beijing Pason Pharmaceuticals, Inc. (Pason) whereby we granted Pason the exclusive rights to develop, manufacture and market Triapine® in the People's Republic of China, Taiwan, Hong Kong and Macao.

Products in Preclinical Development

VNP40541

VNP40541 is an additional cytotoxic (cell-damaging) compound. VNP40541 has been demonstrated in preclinical studies to be highly selective for hypoxic (poorly oxygenated) cells which are found in tumors and are often hard to treat with conventional anticancer agents. In the third quarter of 2006, we initiated additional preclinical studies on VNP40541 that were requested by the FDA after we submitted an Investigational New Drug (IND) application for this product in June 2006. We plan to resubmit the IND for VNP40541 with the new information by the end of 2007.

Hydrazones

Hydrazones are anticancer compounds that have demonstrated potent anti-tumor effects in preclinical studies. The mechanisms of action for these compounds are unidentified at this time but appear to be unlike any commercially available anticancer agents of which we know. In December 2003, we entered into an exclusive research collaboration and option agreement related to these compounds with a group of inventors from the Institute of Pharmacy and the Institute of Medicinal Chemistry and Biochemistry at the University of Innsbruck, and Austria Wirtschaftsservice Gesellschaft m.b.H. In September 2005, we entered into an exclusive license for these compounds. We continued to evaluate these compounds in preclinical studies in 2006.

Drug Delivery Technology

TAPET® (Tumor Amplified Protein Expression Therapy)

TAPET® is a proprietary technology that uses genetically-altered *Salmonella* bacteria to deliver cancer-fighting drugs preferentially to solid tumors. Extensive preclinical studies in *in vivo* models have shown that TAPET® bacteria migrate to and penetrate throughout solid tumors. Inside the tumors, TAPET® bacteria double in quantity every 30 to 45 minutes, achieving very high bacterial counts, reaching ratios in tumor versus normal tissues of 1000:1. In addition, TAPET® can be genetically engineered to deliver anticancer agents continuously within the tumor.

We conducted limited clinical trials of TAPET® in Europe from 1999 to 2002. In 2007, we will continue to seek a partner to assist with future development of TAPET® technology.

Other Products and Product Candidates for Conditions Other than Cancer

MELASYN®

MELASYN® is a patented, synthetic form of melanin that dissolves readily in water. Melanin is a pigment formed by cells in the skin that gives skin its color and protects it from sun damage by absorbing ultraviolet rays. MELASYN® is a water-soluble, synthetic version of melanin, making it a potentially useful ingredient for formulation of skin care products and cosmetics. Our MELASYN® patent and technology is licensed from Yale.

In March 2004, we entered into a non-exclusive sublicense agreement for MELASYN® with Johnson and Johnson Consumer Companies, Inc. In March 2005, we entered into a non-exclusive sublicense agreement for MELASYN® with B&P Company, Incorporated. The terms of these agreements do not include any upfront or milestone payments. When and if products including our technology are developed, we will receive a royalty based on sales in countries where we have issued patents.

Novel Nucleoside Analogs

We have licensed patents and patent applications related to a nucleoside analogue, or synthetic molecule, known as elvucitabine (ß-L-Fd4C) from Yale. In February 2000, we signed a sublicense agreement for elvucitabine with Achillion Pharmaceuticals, Inc. (Achillion), a publicly-held biopharmaceutical company developing and commercializing innovative antiviral therapies. Under the terms of the sublicense agreement, Achillion has funded the development of elvucitabine. In return, we received a small equity position in Achillion and could receive milestone payments and royalties based on product revenue.

Elvucitabine is under evaluation in Phase II clinical trials as an antiviral drug for the treatment of human immunodeficiency virus (HIV).

License and Research Agreements

Agreements with Yale University

Since 1988, we, or predecessors of our company, have entered into a series of agreements under which we have funded research at Yale and licensed inventions from Yale. Pursuant to our initial agreement with Yale, dated July 1, 1988, we funded research to investigate various aspects of the role of ultraviolet light and mammalian melanogenesis for purposes of melanoma treatment. This agreement expired in 2001. The remaining license agreements with Yale grant us exclusive licenses to make, use, sell and practice the inventions covered by various patents and patent applications relating to our primary product candidates as described below.

Subsequent to entering into a license agreement with Yale in August 1994 which covers Cloretazine® (VNP40101M) and other compounds and is described below, we have paid

approximately $10.5 million through December 31, 2006 to fund certain research at Yale, including research in the laboratories of Dr. Alan Sartorelli, one of our directors, and Dr. Yung-Chi Cheng, a member of our scientific advisory board. We have agreed to pay an additional $50,000 to support the research activities of Dr. Sartorelli through the first quarter of 2007. Yale has sole discretion to use these funds to conduct research relating to products that it desires to pursue. Additionally, to the extent that such research results in technologies not covered by our license agreements with Yale, we may be unable to utilize such technologies unless we negotiate additional license agreements.

Yale/Vion (formerly MelaRx Pharmaceuticals, Inc.) License Agreement – September 1990

Under a license agreement with Yale dated September 1990, as amended, we have an exclusive license to a synthetic form of melanin named MELASYN®. Yale has retained the right to make, use and practice the inventions for non-commercial purposes. Under the terms of the license agreement, we pay a license fee to Yale based on a percentage of net sales and sublicensing revenues. The term of the license is dictated by the expiration of patents relating to any invention and, with respect to non-patented inventions or research, 24 years from 1990 (i.e. through 2014). Under the license agreement we are required to exercise due diligence in commercializing the licensed technology. The license may be terminated by Yale in the event that we fail to make a payment when due, we commit a material breach of the license, we become insolvent or file a petition in bankruptcy, or we fail to exercise due diligence in commercializing the licensed products, subject to certain cure periods. We may terminate the license in the event of Yale's material breach of the license if such breach remains uncured for 30 days. Under the license agreement, we are also required to defend and indemnify Yale for any damages arising out of its use or sale of the licensed products by us or our sublicensees.

Yale/Vion (formerly OncoRx, Inc.) License Agreement – August 1994

We are a party to a license agreement with Yale entered into in August 1994 and subsequently amended five times. Under this amended license, Yale granted us a non-transferable worldwide exclusive license to make, have made, use, sell and practice inventions under certain patents and patent applications for therapeutic and diagnostic purposes. We also have a non-exclusive license to an additional patent under this amended license. The patents and patent applications under this amended license cover Cloretazine® (VNP40101M) and other sulfonylhydrazine compounds, Triapine®, and elvucitabine (ß-L-Fd4C). The term of the license is dictated by the expiration of any patents relating to any inventions or, with respect to non-patented inventions or research, 17 years from 1994 (i.e. through 2011). Yale has retained the right to make, use and practice the inventions for non-commercial purposes. This agreement, as amended, also provides that if Yale, as a result of its own research, identifies potential commercial opportunities for the licensed inventions, Yale will provide notice to us and give us a first option to negotiate a commercial license for the commercial opportunities. We have six months from the receipt of Yale's notice to inform Yale that we wish to negotiate a commercial license, in which case, Yale will use its good faith efforts to do so on commercially reasonable terms. Yale is entitled to royalties on sales, if any, of resulting products, sublicensing revenues and, with regard to several patents, milestone payments based on the status of clinical trials and/or regulatory approvals.

As required by the license agreement, we have planned and implemented appropriate research and development with respect to commercialization of products based on the licensed inventions. The license may be terminated by Yale, among other reasons, in the event that we fail to make a payment when due, we commit a material breach of the license, we become insolvent or file a petition in bankruptcy or we fail to exercise due diligence in commercializing the licensed products, subject to certain cure periods. In the event that the agreement is terminated for breach, all rights under licenses previously granted terminate. Accordingly, a default as to one product could affect our rights in other products. In addition, upon termination of the license, Yale, at its sole option, can terminate any sublicenses that we grant or have granted. Generally, we may terminate the license in the event of Yale's material breach of the license if such breach remains uncured for 30 days. Under the license, we are also required to defend and indemnify Yale for any damages arising out of its use or sale of the licensed products by us or sublicensees or other transferees.

Pursuant to the original agreement in 1994, we issued to Yale 159,304 shares of our common stock and made a payment of $50,000. In June 1997, this license agreement was amended pursuant to which Yale agreed to reduce certain amounts payable by us in exchange for 100,000 additional shares of our common stock issued to Yale.

In February 2000, we signed a sublicense agreement for elvucitabine (ß-L-Fd4C) with Achillion. Under the terms of the sublicense agreement, Achillion has funded the development of elvucitabine (ß-L-Fd4C). In return, we received a small equity position in Achillion and could receive milestone payments and royalties based on product revenue.

Yale/Vion (formerly OncoRx, Inc.) License Agreements – December 1995

In December 1995, we entered into a license agreement with Yale pursuant to which we received a non-transferable worldwide exclusive license, expiring over the lives of the patents, to three inventions relating to gene therapy for melanoma. Technology licensed by us under this agreement relates to TAPET®. Yale has retained the right to make, use and practice the inventions for non-commercial purposes. Under the terms of this license agreement we are required to exercise due diligence in the commercialization of the licensed technology and in the event we do not Yale may terminate the license. Pursuant to the license agreement, we paid Yale a $100,000 fee. In June 1997, pursuant to an amendment to this license agreement,Yale agreed to reduce certain royalties payable on sublicense income and make certain other changes in exchange for 50,000 shares of our common stock issued to Yale.

In December 1995, we entered into another license agreement with Yale pursuant to which we received a non-transferable worldwide exclusive license, expiring over the lives of the patents, to an invention relating to whitening skin. Yale has retained the right to make, use and practice the inventions for non-commercial purposes.

Under these licensing agreements, Yale is entitled to milestone payments based on the status of clinical trials and regulatory approvals. In addition, Yale is entitled to royalties on sales, if any, of resulting products and sublicense revenues. The license agreements may be terminated by Yale, among other reasons, in the event that we fail to make a payment when due, we commit a material breach of the license or we become insolvent or file a petition in bankruptcy, subject to certain cure periods. We may terminate each license in the event of Yale's material breach of such license if such breach remains uncured for 30 days. Under these licenses, we are also required to defend and indemnify Yale for any damages arising out of its use or sale of the licensed products by us or our transferees.

Other Agreements

License Agreement with Beijing Pason Pharmaceuticals, Inc.

Effective September 2003, we entered into a license with Pason providing them with the exclusive rights to develop, manufacture and market Triapine® in the People's Republic of China, Taiwan, Hong Kong and Macao (the Pason Territory). The terms of the agreement included an initial payment of $500,000 which we received in November 2003, $4.75 million in potential additional milestone payments, and potential royalty payments of 11% of any Triapine® revenues in the Pason Territory. Pason will fund the preclinical and clinical development necessary for regulatory approval of Triapine® in the Pason Territory.

License Agreement with Austrian Inventors and Austria Wirtschaftsservice Gesellschaft m.b.H.

In December 2003, we entered into a research collaboration and option agreement for certain novel compounds, hydrazones, with a group of inventors from the Institute of Pharmacy and the Institute of Medical Chemistry and Biochemistry at the University of Innsbruck, and Austria Wirtschaftsservice Gesellschaft m.b.H. In December 2003, we made an initial payment of $25,000 to enter into the agreement. In September 2005, we entered into an exclusive license for these compounds and made an additional payment of $37,500. Under this license agreement, we must make

milestone payments based on the progress of product development, and pay royalties based on product revenues. We continue to evaluate the hydrazone compounds in preclinical studies.

Competition

Competition in the biopharmaceutical industry is intense and based on scientific and technological factors, the availability of patent and other protection for technology and products, the ability to finance and commercialize technological developments, and the ability to obtain governmental approval for testing, manufacturing and marketing drugs. Numerous pharmaceutical and biotechnology companies have publicly announced their intention to develop anticancer drugs including, in some instances, agents to be used for the treatment of AML or alkylating agents like our compound Cloretazine® (VNP40101M), or agents that target ribonucleotide reductase like our compound Triapine®. These companies include, but are not limited to, Amgen Inc., AstraZeneca PLC, Bioenvision, Inc., Bristol-Myers Squibb Company, Chiron Corporation, Eli Lilly and Co., Genentech Inc., Genzyme Corporation, ImClone Systems Inc., Johnson & Johnson, Lorus Therapeutics Inc., MGI Pharma, Inc., OSI Pharmaceuticals, Inc., Pfizer Inc., Pharmion Corp., Schering-Plough Corporation, Wyeth, and Xanthus Pharmaceuticals, Inc. Our competitors may have substantially greater financial, technical and human resources than we have and may be better equipped to develop, manufacture and market products. In addition, many of these companies have extensive experience in preclinical testing and human clinical trials, and in obtaining regulatory approvals. Our competitors may succeed in obtaining approval for products more rapidly and in developing and commercializing products that are safer and more effective than those that we propose to develop. We expect Cloretazine® (VNP40101M), if approved for the treatment of AML, to compete with: cytarabine, a generic compound also known as Ara-C, which is also used with the anthracycline agents daunorubicin, idarubicin and mitoxanthrone; Mylotarg® marketed by Wyeth; and, if approved for AML, Clolar® or Evoltra® (clofarabine), under development for this indication by Genzyme (U.S.) and Bioenvision (Europe); Zarnestra® (tipifarnib), under development for this indication by Johnson & Johnson; Velcade® (bortezomib), under development for this indication by Millenium; Avastin® (bevacizumab), under development for this indication by Genentech; Vidaza® (azacitidine), under development for this indication by Pharmion; and Dacogen® (decitabine), under development for this indication by MGI Pharma, among others. The existence of these products, other products or treatments of which we are not aware, or products or treatments that may be developed in the future, may adversely affect the marketability of our products by rendering them less competitive or obsolete. These companies, as well as academic institutions, governmental agencies and private research organizations, also compete with us in acquiring rights to products or technologies from universities, and recruiting and retaining highly qualified scientific personnel and consultants.

The timing of market introduction of our potential products or of the products of others will be an important competitive factor. Accordingly, the relative speed with which we can develop products, complete preclinical testing, clinical trials and regulatory approval processes, and supply commercial quantities to market will influence our ability to bring a product to market.

Patents, Licenses and Trade Secrets

Our policy is to protect our technology by, among other means, filing patent applications for technology that we consider important to the development of our business. We intend to file additional patent applications, when appropriate, relating to new developments or improvements in our technology and other specific products that we develop. We also rely on trade secrets, know-how and continuing technological innovations, as well as patents we have licensed or may license from other parties to develop and maintain our competitive position.

In connection with our license agreement with Yale dated August 1994, we are the exclusive licensee, subject to certain rights retained by Yale, of a number of issued patents and pending U.S. and foreign patent applications relating to:

- Cloretazine® (VNP40101M), and other compounds in the sulfonylhydrazine class;
- Triapine® and other ribonucleotide reductase inhibitors; and

- Elvucitabine (ß-L-Fd4C), its composition and its use for the treatment of HIV and hepatitis B (HBV) infections, and its use in combination with other anti-viral drugs.

We are also the exclusive licensee from Yale of an issued U.S. patent and several foreign patents on KS119, a hypoxia-selective anticancer agent. Vion has also licensed from Yale one issued U.S. and several foreign patents and pending patent applications relating to synthetic melanin and methods for using synthetic melanin, such as for sunscreen or self-tanning agents, relevant to our MELASYN® technology.

Pursuant to our license agreement with Yale dated December 1995, we are the exclusive licensee of a number of issued patents and pending patent applications, U.S. and foreign, relating to our TAPET® technology, which include claims for methods of diagnosing and/or treating various solid tumor cancers, including melanoma, lung cancer, breast cancer and colon cancer. We also have rights, either by license and/or by assignment, to issued patents and pending patent applications, U.S. and foreign, relating to our TAPET® technology. In addition, we have filed a number of U.S. provisional and non-provisional patent applications, an international patent application and a number of foreign patent applications related to this technology.

We or our licensors are prosecuting the patent applications related to products we license both with the U.S. Patent and Trademark Office (PTO) and various foreign patent agencies, but we do not know whether any of our applications will result in the issuance of any patents or, whether any issued patent will provide significant proprietary protection or will be circumvented or invalidated. During the course of patent prosecution, patent applications are evaluated for, among other things, utility, novelty, non-obviousness, written description and enablement. The PTO may require that the claims of an initially filed patent application be amended if it is determined that the scope of the claims include subject matter that is not useful, novel, non-obvious, described adequately or enabled. Furthermore, in certain instances, the practice of a patentable invention may require a license from the holder of dominant patent rights.

We cannot predict whether our patent applications or our competitors' patent applications will result in valid patents being issued. An issued patent is entitled to a presumption of validity. The presumption may be challenged in litigation; a court could find any patent of ours or of our competitors invalid and/or unenforceable. Litigation, which could result in substantial cost to us, may also be necessary to enforce our patent and proprietary rights and/or to determine the scope and validity of the proprietary rights of others.

The patent position of biotechnology and pharmaceutical firms generally is highly uncertain and involves complex legal and factual questions. To date, no consistent policy has emerged regarding the breadth of claims allowed in biotechnology and pharmaceutical patents.

Government Regulation

Overview. Regulation by state and federal governmental authorities in the U.S. and foreign countries is a significant factor in the development of our anticancer products, and will be a significant factor in manufacturing and marketing of these products, if they are successfully developed and approved for sale. All of our products will require regulatory clearances or approvals prior to commercialization. In particular, drugs, biological agents and medical devices are subject to rigorous testing and other approval requirements by the FDA pursuant to the Federal Food, Drug, and Cosmetic Act and the Public Health Service Act and its regulations, as well as by similar health authorities in foreign countries. Various federal statutes and regulations also govern or influence the testing, manufacturing, safety, labeling, packaging, advertising, storage, registration, listing and recordkeeping related to marketing of such products. Regulatory approval often takes a number of years and involves the expenditure of substantial resources. Approval time also depends on a number of factors, including the severity of the disease in question, the availability of alternative treatments and the risks and benefits demonstrated in clinical trials. We cannot be certain that any required FDA or other regulatory approval will be granted or, if granted, will not be withdrawn.

The development of a therapeutic drug typically first requires preclinical testing. Preclinical development of therapeutic drugs and biological agents is generally conducted in the laboratory to

evaluate the safety and the potential efficacy of a compound by relevant *in vitro* and *in vivo* testing. When a product is tested prospectively to determine its safety for purposes of obtaining FDA approvals or clearances, such testing must be performed in accordance with good laboratory practices for non-clinical studies. The results of preclinical testing are submitted to the FDA as part of an IND. The IND must become effective, the study must be approved by an institutional review board, and informed consent must be obtained from the clinical subjects, before human clinical trials can begin.

Typically, clinical evaluation involves a three-phase process. In Phase I, clinical trials are conducted with a small number of subjects to determine the tolerated drug dose, early safety profile, proper scheduling and the pattern of drug distribution, absorption and metabolism. In Phase II, clinical trials are conducted with groups of patients afflicted with a specific disease in order to determine efficacy, dose-response relationships and expanded evidence of safety. In Phase III, large-scale, multi-center, controlled clinical trials are conducted in order to:

- provide enough data for statistical proof of safety and efficacy;
- compare the experimental therapy to existing therapies;
- uncover any unexpected safety problems, such as side-effects; and
- generate product labeling.

In the case of drugs for cancer and other life-threatening diseases, the initial human testing is generally conducted in patients rather than in healthy volunteers.

Tests of our product candidates and human clinical trials may be delayed or terminated due to factors such as unfavorable results or insufficient patient enrollment. Furthermore, the FDA may suspend clinical trials at any time on various grounds. Delays in tests and trials may have a material adverse effect on our business. The planned interim evaluation of safety and efficacy for our Phase III trial of Cloretazine® (VNP40101M) based on 210 patients by its data safety monitoring board (DSMB) is presently anticipated to occur in the second quarter of 2007. Based on the evaluation of the first 210 patients accrued in the Phase III trial, the DSMB will determine whether to allow the trial to continue as currently designed, whether the trial design should be modified, or whether the trial should be terminated completely. There can be no assurance as to the results of the evaluation of these patients or the timing of completion of this evaluation and there should be no inference that the trial has achieved positive results to date or that the DSMB will allow the Phase III trial to continue.

The results of the preclinical and clinical testing are submitted to the FDA either as part of a new drug application (NDA) for drugs, or a biologics license application (BLA) for biologics, for approval to commence commercial distribution. For a biologic drug, the manufacturer generally must also obtain approval of an establishment license application. In responding to an NDA or BLA, the FDA may grant marketing approval, request additional information or deny the application if it determines that the application does not satisfy its regulatory approval criteria. It may take several years to obtain approval after submission of an NDA or BLA, although approval is not assured. The FDA also normally conducts a pre-approval inspection and other occasional inspections of an applicant's facilities to ensure compliance with current good manufacturing practices. Further, stringent FDA regulatory requirements continue after a product is approved for marketing, and changes to products or labeling can require additional approvals. If any of our products is approved for marketing, we will be subject to stringent post-marketing requirements.

We also will be subject to widely varying foreign regulations governing clinical trials and pharmaceutical sales. Whether or not FDA approval has been obtained, approval of a product by the comparable regulatory authorities of foreign countries must be obtained before marketing 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. We intend, to the extent possible, to rely on foreign licensees to obtain regulatory approval to market our products in foreign countries.

In October 2004, we received orphan drug designation for Cloretazine® (VNP40101M) in AML. Under the Orphan Drug Act, a sponsor may obtain designation by the FDA of a drug or biologic as an 'orphan' drug for a particular indication. Orphan drug designation is granted to drugs for rare diseases or conditions, including many cancers, with a prevalence of less than 200,000 cases in the United States. The sponsor of a drug that has obtained orphan drug designation and which is the first to obtain approval of a marketing application for such drug, which approval cannot be assured, is entitled to marketing exclusivity for a period of seven years for the designated indication. This means that no other company can market the same orphan drug for the same indication approved by the FDA for seven years after approval unless such company proves its drug is clinically superior or the approved orphan drug marketer cannot supply demand for the drug. Legislation is periodically considered that could significantly affect the Orphan Drug law. We intend to seek additional orphan drug designations for our products where appropriate. There can be no assurance that future changes to the Orphan Drug Act would not diminish the value of any orphan drug designation obtained by us.

FDA regulatory procedures established in 1988 are intended to speed further the availability of new drugs intended to treat life-threatening and severely debilitating illnesses. These procedures provide for early and continuous consultation with the FDA regarding preclinical and clinical studies necessary to gain marketing approval. This regulatory framework also provides that if Phase I results demonstrate potential, Phase II clinical trials may be designed that obviate the need for lengthy, expensive Phase III testing. Notwithstanding the foregoing, approval may be denied by the FDA or traditional Phase III studies may be required. The FDA may also seek our agreement to perform post-approval Phase IV studies, which confirm product safety and efficacy.

In January 2006, we received orphan drug designation for Cloretazine® (VNP40101M) for the treatment of AML in Europe. Orphan drug status is granted by the European Commission to promote development of drugs to treat rare diseases or conditions. Orphan drug designation does not convey any advantage or shorten the duration of the EMEA review and approval process. Orphan drug designation may entitle Cloretazine® (VNP40101M) to: (i) ten years of market exclusivity for the indication of AML; (ii) protocol assistance from the European Medicines Agency to optimize drug development in preparing a dossier that will meet regulatory requirements; (iii) reduced fees associated with applying for market approval; and (iv) access to European Union research funding.

In addition to regulations relating to drug development, we are subject to federal, state and local environmental laws and regulations, including those promulgated by the Occupational Safety and Health Administration (OSHA), the Environmental Protection Agency (EPA) and the Nuclear Regulatory Commission (NRC), that govern activities or operations that may have adverse environmental effects, such as discharges to air and water, as well as handling and disposal practices for solid and hazardous wastes. These laws also impose strict liability for the costs of cleaning up, and for damages resulting from, sites of past spills, disposals or other releases of hazardous substances and materials for the investigation and remediation of environmental contamination at properties operated by us and at off-site locations where we have arranged for the disposal of hazardous substances.

We have made, and will continue to make, expenditures for our facilities to comply with current and future environmental laws. To date, we have not incurred significant costs and are not aware of any significant liabilities associated with our compliance with federal, state and local environmental laws and regulations. However, environmental laws have changed in recent years and we may become subject to stricter environmental standards in the future and may face large capital expenditures to comply with environmental laws. We have limited capital and are uncertain whether we will be able to pay for significantly large capital expenditures. Also, future developments, administrative actions or liabilities relating to environmental matters may have a material adverse effect on our financial condition or results of operations.

All of our operations are performed under strict environmental and health safety controls consistent with OSHA, EPA and NRC regulations. We cannot be certain that we will be able to control all health and safety problems. If we cannot control those problems, we may be held liable and may be required to pay the costs of remediation. These liabilities and costs could be material.

Manufacturing and Marketing

We do not have experience in manufacturing any products for commercial use, or in marketing, distributing or selling any products, and have not yet commercially introduced any products. We do not currently have the capability to manufacture or market, distribute or sell on a commercial scale any products that we develop.

We currently use third parties to manufacture limited quantities of our products for use in clinical activities. Since September 2003, we have manufactured our active pharmaceutical ingredient (API) at SAFC, Inc. (formerly Tetrionics, Inc.). Our contract with SAFC, Inc. expires in September 2007 but is automatically extended for a twelve-month period unless terminated with 120 days notice by either party. We are in discussions with SAFC, Inc. to extend the term of this agreement. In December 2006, we entered into a manufacturing agreement with Ben Venue Laboratories, a division of Boeringher Ingelheim. Under the terms of the manufacturing agreement, which expires on December 31, 2011, Ben Venue Laboratories will be our exclusive manufacturer of Cloretazine® (VNP40101M) finished drug product in the United States. We will need to validate our manufacturing processes for Cloretazine® (VNP40101M) and our other products before we can sell them commercially. We expect to validate the manufacturing process for Cloretazine® (VNP40101M) API and finished product at SAFC, Inc. and Ben Venue Laboratories, respectively, but will not be able to market any product until we complete these validations as part of the regulatory approval process.

If our products are approved for sale by regulatory authorities, we will need to develop our capabilities to market, distribute and sell our products or contract with third parties to do so. In the event we decide to establish a marketing and sales force, we will be required to hire and retain additional personnel.

In 2006, we spent $1.5 million on initial pre-launch marketing efforts for Cloretazine® (VNP40101M), including attendance at industry conferences, meetings with key opinion leaders, and initial medical education, pricing and epidemiology studies. During 2007, we plan to continue our pre-launch marketing efforts for Cloretazine® (VNP40101M), including attendance at industry conferences, meetings with key opinion leaders, and completion of certain marketing studies.

Employees

As of December 31, 2006, we had 39 full-time employees.

Executive Officers and Directors

The following table contains the names and positions of our executive officers and directors:

Name	Position
Alan Kessman	Chief Executive Officer and Director
Howard B. Johnson	President and Chief Financial Officer
Ann Lee Cahill	Vice President of Clinical Development
Meghan Fitzgerald	Vice President and Chief Business Officer
Ivan King, Ph.D.	Vice President of Research and Development
Aileen Ryan	Vice President of Regulatory Affairs
Karen Schmedlin	Vice President of Finance, Chief Accounting Officer and Secretary
William Miller[(1)]	Director
George Bickerstaff	Director
Stephen K. Carter, M.D.[(2)]	Director
Kevin Rakin[(1,3)]	Director
Alan C. Sartorelli, Ph.D.[(2)]	Director
Ian Williams, D. Phil.[(2,3)]	Director
Gary K. Willis[(1,3)]	Director

(1) Member of the Audit Committee of the Board of Directors.

(2) Member of the Nominating and Governance Committee of the Board of Directors.

(3) Member of the Compensation Committee of the Board of Directors.

Alan Kessman, age 60, has been our Chief Executive Officer since January 1999 and has served on our Board of Directors since October 1998. Mr. Kessman also served as our President from April 1999 to January 2004. Mr. Kessman is a partner of PS Capital LLC, an international investment and management advisor. From 1983 to 1998, Mr. Kessman was chairman, chief executive officer and president of Executone Information Systems, Inc., a developer and marketer of voice and data communications systems.

Howard B. Johnson, age 47, has been our President since January 2004 and our Chief Financial Officer since March 2002. Mr. Johnson was a vice president and a consultant for Nutrition 21, Inc., a nutri-ceutical company, from November 2001 until March 2002. From May 1999 until February 2001, Mr. Johnson was chief financial officer of IBS Interactive, Inc. (now Digital Fusion, Inc.), an information technology services company. Mr. Johnson founded and from 1996 to 1999 was chairman and chief executive officer of MedWorks Corporation, a privately held medical device company. From 1983 to 1993, Mr. Johnson was an investment banker at PaineWebber Group, Inc.

Ann Lee Cahill age 46, has been our Vice President of Clinical Development since October 2004. Ms. Cahill was our Senior Director of Clinical Affairs from October 2003 to October 2004 and Director of Clinical Affairs from January 2002 to October 2003. From 1997 to 2002, Ms. Cahill was a member of the project management group of Schering-Plough Corporation, including leadership roles in clinical affairs for hepatitis and medical oncology. From 1985 to 1997, Ms. Cahill was a physician associate in a medical oncology practice.

Meghan Fitzgerald, age 36, has been our Vice President and Chief Business Officer since January 2006. From 2005 to January 2006, Ms. Fitzgerald was Senior Director of Strategic Planning and Business Development and from 2001 to 2005 World Wide Marketing Director of Life Cycle Management for Pfizer Human Health. From 1997 to 2001 Ms. Fitzgerald held marketing positions at Merck, Forest Labs and Sanofi-Synthelabo. Prior to 1997, Ms. Fitzgerald was a registered nurse.

Ivan King, Ph.D., age 51, has been our Vice President of Research and Development since January 2004. Dr. King was our Vice President of Research from July 1998 to January 2004, Senior Director of Biology from April 1997 to July 1998 and Director of Biology from October 1995 to April 1997. From 1990 to 1995, Dr. King was a section leader in the department of tumor biology at

Schering-Plough Research Institute in charge of the cell biology and in vivo biology groups where he was responsible for identifying targets, developing high throughput assays, evaluating in vitro and in vivo activities of drug candidates and recommending candidates for clinical development. Dr. King's first industrial position was as a senior research scientist at Bristol-Myers Squibb Company.

Aileen Ryan, age 53, has been our Vice President of Regulatory Affairs since July 2006. Prior to joining Vion, she was the head of Global Regulatory Strategy, Oncology for Bayer Pharmaceuticals Corporation from January 2004 to July 2006. At Bayer, she was responsible for the global regulatory strategy for a portfolio of oncology compounds, including Nexavar® (sorafenib) Tablets, Bayer's multi-kinase inhibitor for the treatment of advanced renal cell carcinoma, which was approved by the FDA in December 2005 and EMEA in 2006. Prior to joining Bayer, Ms. Ryan was Vice President, Regulatory Affairs for Coley Pharmaceutical Group from 1999 to 2003.

Karen Schmedlin, age 44, has been our Vice President, Finance and Chief Accounting Officer since March 2006 and our Secretary since April 2001. Ms. Schmedlin was our Controller from October 2000 to March 2006. From 1990 to 2000, Ms. Schmedlin held various finance and marketing positions at Executone Information Systems, Inc., a developer and marketer of voice and data communications systems, including director of marketing operations, division controller and manager of financial reporting. From 1984 to 1990, Ms. Schmedlin was an auditor with Arthur Andersen & Co.

William R. Miller, age 78, has been Chairman of our Board since April 1995. From February 1995 until April 1995, Mr. Miller was Chairman of the Board of OncoRx, Inc., which merged into the Company (then known as MelaRx, Inc.) in April 1995. Mr. Miller is currently a director of ImClone Systems, Inc., a biotechnology company, and chairman of the board of MedaSorb Technologies, Inc., a medical device company. From 1964 until his retirement in 1991, Mr. Miller was employed by Bristol-Myers Squibb Company in various positions, including vice chairman of the board commencing in 1985.

George Bickerstaff, age 51, has been a director since June 2005. Mr. Bickerstaff is a director of Oracle Healthcare Acquisition Corp, a blank check company. Mr. Bickerstaff has been a managing director of CRT Capital Group LLC, an investment banking company, since June 2005. From October 2000 to May 2004, Mr. Bickerstaff held various positions with Novartis, including chief financial officer of Novartis Pharma AG. From 1998 to September 2000, Mr. Bickerstaff held senior finance and operating roles in venture-funded businesses and, prior to that, held various financial positions with the Dun and Bradstreet Corporation, including Chief Financial Officer of IMS Healthcare.

Stephen K. Carter, M.D., age 69, has been a director since April 2001. Dr. Carter is a director of Cytogen Corp., Alfacell Corp., Tapestry Pharmaceuticals, Inc. and Emisphere Technologies Inc. (each a biotechnology company). From 1998 to 2000, Dr. Carter was senior vice president, clinical and regulatory affairs of SUGEN, Inc. (subsequently acquired by Pharmacia & Upjohn, Inc.). From 1995 to 1996, Dr. Carter was senior vice president, research and development with Boehringer Ingelheim Pharmaceuticals, Inc. and from 1982 to 1995 held various positions with Bristol-Myers Squibb Company, including senior vice president, worldwide clinical research and development.

Kevin Rakin, age 46, has been a director since January 2007. He is also a director of Clinical Data, Inc. and Omrix Biopharmaceuticals, Inc. He has been an executive-in-residence at Canaan Partners since January 2006 and chief executive officer of Advanced BioHealing, Inc. since December 2005. From August 2002 to October 2005, he was president and chief executive officer of Genaissance Pharmaceuticals, Inc., a biotechnology company he co-founded. Mr. Rakin also served as a member of the board of directors of Genaissance until it was acquired by Clinical Data, Inc. in October 2005. He is also co-chairman of the board of directors of Connecticut United for Research Excellence (CURE), Connecticut's Bioscience Cluster and a member of the State of Connecticut's Stem Cell Research Advisory Committee.

Alan C. Sartorelli, Ph.D., age 75, has been a director since 1995. Dr. Sartorelli has been an Alfred Gilman Professor of Pharmacology at Yale University School of Medicine since 1967 and Chairman of our Scientific Advisory Board since April 1995. Dr. Sartorelli was Chairman of the OncoRx, Inc. Scientific Advisory Board from May 1993 to April 1995 and director of Yale Comprehensive Cancer Center from 1984 to 1993.

Ian Williams, D. Phil., age 52, has been a director since June 2006. From 1981 until his retirement in 2004, he was employed at Pfizer, Inc. in various leadership positions in pharmaceutical research and development and strategic planning. He retired as Executive Director of the Strategic Management Group where he was responsible for worldwide strategy for Pfizer Research and Development. He now heads his own consulting company.

Gary K. Willis, age 61, has been a director since June 2005. Mr. Willis is a director of Rofin-Sinar Technologies, Benthos Corporation and Plug Power Inc. From 1992 to 2000, Mr. Willis was chairman, president and chief executive officer of the Zygo Corporation, a developer and marketer of optical systems and components. From 1984 to 1990, Mr. Willis was chairman, president and chief executive officer of the Foxboro Company, a supplier of instruments, systems, and services for industrial process automation.

Our directors are elected annually to serve until the next annual meeting of stockholders and until their successors shall have been duly elected and shall qualify. Our executive officers are elected by the board annually and serve for such period or until their earlier resignation or removal by the board.

Available Information

The following information can be found on our website at http://www.vionpharm.com or may be obtained free of charge by contacting our Investor Relations Department at (203) 498-4210 or by sending an e-mail message to info@vionpharm.com:

- our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports, as soon as reasonably practicable after such material is electronically filed with the Securities and Exchange Commission;
- our policies related to corporate governance, including the charter for the Nominating and Governance Committee of our Board of Directors, our code of ethics and business conduct applying to our directors, officers and employees, and our code of ethics applying to our chief executive officer and senior financial officials; and
- the charters of the Audit Committee and the Compensation Committee of our Board of Directors.

ITEM 1A. *Risk Factors*

This Annual Report on Form 10-K contains, in addition to historical information, forward-looking statements that involve risks and uncertainties. Our actual results could differ materially. Factors that could cause or contribute to such differences include, but are not limited to, those discussed under "Risk Factors" below, as well as those discussed elsewhere in this Annual Report on Form 10-K.

An investment in our securities is risky. Prior to making a decision about investing in our securities, you should carefully consider the specific risks discussed below. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties not presently known to us, or that we currently see as immaterial, may also harm our business. If any of the risks or uncertainties described below or any such additional risks and uncertainties actually occur, our business, results of operations and financial condition could be materially and adversely affected. In this case, the trading price of our securities could decline and you might lose all or part of your investment.

We do not have any products approved for sale. All of our proposed products are in trials. If our drug trials are delayed or achieve unfavorable results, we might not be able to obtain regulatoryapproval for our products.

Our product candidates are all pharmaceutical products. We must conduct extensive testing of our product candidates, including in human clinical trials, before we can apply for or obtain regulatory approval to sell our products. These tests and trials may not achieve favorable results. We would need to reevaluate any drug that did not test favorably and either alter the drug or dose, modify the trial protocol or abandon the drug development project completely. In such circumstances, we would not be able to apply for or obtain regulatory approval for an extended period of time, if ever.

Factors that can cause delay or termination of our clinical trials include:

- slow patient enrollment;
- long treatment time required to demonstrate safety and effectiveness;
- lack of sufficient supplies of the product candidate;
- adverse medical events or side effects in treated patients;
- lack of effectiveness of the product candidate being tested;
- negative or equivocal findings of the data safety monitoring board, or DSMB, for a trial; and
- lack of sufficient funds.

If we do not obtain regulatory approval for our product candidates, we will not be able to sell our products and the value of our company and our financial results will be materially adversely affected.

We cannot sell or market our drugs without regulatory approval. If we cannot obtain regulatory approval for our products, the value of our company and our financial results will be materially adversely affected. In the United States, we must obtain approval from the U.S. Food and Drug Administration (FDA) for each drug that we intend to sell. The current status of our potential products is as follows:

- Cloretazine® (VNP40101M) is being evaluated in three clinical trials sponsored by us including a Phase III trial in relapsed acute myelogenous leukemia (AML) in combination with Ara-C, a pivotal Phase II trial as a single agent in elderly patients with *de novo* poor-risk AML, and a Phase II trial as a single agent in small-cell lung cancer;
- The National Cancer Institute is sponsoring clinical trials of Triapine® as a single agent and in combination with standard chemotherapies; and
- VNP40541 and hydrazones are being evaluated in preclinical studies.

If and when we complete the several phases of clinical testing for each drug candidate, we will submit our test results to the FDA. FDA review may generally take up to two years and approval is not assured. Foreign governments also regulate drugs distributed outside the United States. A delay in obtaining regulatory approvals for any of our drug candidates will also have a material adverse effect on our business.

In the near term, we are heavily dependant on the success of our lead product candidate Cloretazine® (VNP40101M) which is still under development. If Cloretazine® (VNP40101M) is not successful in clinical trials or we do not obtain FDA approval of Cloretazine® (VNP40101M), or if FDA delays approval or narrows the indications for which we may market Cloretazine® (VNP40101M), our business will be materially adversely affected.

We anticipate that our ability to generate revenues in the foreseeable future will depend on the successful development and commercialization of Cloretazine® (VNP40101M). The commercial success of Cloretazine® (VNP40101M) will depend on several factors, including successful completion of our ongoing Phase III and pivotal Phase II clinical trials for Cloretazine® (VNP40101M); receipt of

approvals from the FDA and similar foreign regulatory authorities; establishing commercial manufacturing capabilities through third party manufacturers; successfully launching commercial sales of the products, either ourselves or through third parties; and acceptance of the products in the medical community and by third party payers, none of which can be assured. If the data from our ongoing Phase III and pivotal Phase II clinical trials for Cloretazine® (VNP40101M) are not satisfactory, we may not proceed with the filing for regulatory approval or we may be forced to delay the filing. Even if the FDA and similar foreign regulatory authorities do grant approval for Cloretazine® (VNP40101M), they may narrow the indications for which we are permitted to market it, may pose other restrictions on the use or marketing of the product, or may require us to conduct additional post-marketing trials. A narrowed indication or other restrictions may limit the market potential for Cloretazine® (VNP40101M) and any obligation to conduct additional clinical trials would result in increased expenditures and lower revenues. If we are not successful in commercializing our lead product candidate Cloretazine® (VNP40101M), or are significantly delayed or limited in doing so, our business will be materially adversely affected and we may need to curtail or cease operations.

On November 13, 2006, we announced that we had accrued 210 patients to the Phase III trial of our lead anticancer agent Cloretazine® (VNP40101M). The trial is evaluating Cloretazine® (VNP40101M) in combination with Ara-C for the treatment of relapsed AML and is designed to accrue 420 patients if it continues to full accrual. The planned interim evaluation of safety and efficacy for this trial based on 210 patients by its DSMB is presently anticipated to occur in the second quarter of 2007, although we have limited control over the final timing. Based on the evaluation of the first 210 patients accrued in the Phase III trial, the DSMB will determine whether to allow the trial to continue as currently designed, whether the trial design should be modified or whether the trial should be terminated completely. Such a determination would be expected shortly after the data is presented to the DSMB for review. There can be no assurance as to the results of the evaluation of these patients, or the timing of completion of this evaluation or this trial, and there should be no inference that the trial has achieved favorable results to date or that the DSMB will allow the Phase III trial to continue.

On January 25, 2007, we announced that we had recorded at least nine responses in our pivotal Phase II trial of Cloretazine® (VNP40101M) in elderly patients with *de novo* poor-risk AML. The trial is designed to continue to a total accrual of 85 patients if there have been at least nine responses in the first 42 patients. Accordingly, we are proceeding to the second stage of accrual. There can be no assurance as to the results of this trial or the timing of completion of this trial, and there should be no inference that the trial has achieved favorable results to date.

As with all drug development, we would need to reevaluate Cloretazine® (VNP40101M) if it does not test favorably in either of these trials. In such event, we would either alter the drug or dose as used in the trial, modify the clinical trial protocol or abandon the drug development project. In any such event, our business, operations and prospects would be materially, adversely affected, and our ability to apply for or obtain regulatory approval might be delayed, or we might not be able to obtain regulatory approval at all.

If we continue to incur operating losses, we may be unable to continue our operations.

We have incurred losses since inception. As of December 31, 2006, we had an accumulated deficit of approximately $175.2 million. If we continue to incur operating losses and fail to become a profitable company, we may be unable to continue our operations. Since we began our business, we have focused on research, development and preclinical and clinical trials of product candidates. We expect to continue to operate at a net loss for at least the next several years as we continue our research and development efforts, continue to conduct drug trials and develop manufacturing, sales, marketing and distribution capabilities. Our future profitability depends on our receiving regulatory approval of our product candidates and our ability to successfully manufacture and market approved drugs. The extent of our future losses and the timing of our profitability are highly uncertain.

If we fail to obtain the capital necessary to fund our operations, we will be unable to continue or complete our product development.

We will need to raise substantial additional capital to fund operations and complete our product development. As of December 31, 2006, we had $30.9 million in cash and cash equivalents to fund our operations and continue our product development. In February 2007, we sold $60 million principal amount of our convertible senior notes, together with common stock purchase warrants, and received net proceeds of approximately $55.4 million. We will not have an approved and marketable product for the foreseeable future. Under our current operating plan, if we do not have an approved product for sale which is generating significant revenues, we will need to raise substantial additional capital to have sufficient capital to fund our operations beyond mid-2009.

We may not get funding when we need it or on favorable terms. If we cannot raise adequate funds to satisfy our capital requirements, we may have to delay, scale-back or eliminate our research and development activities, clinical studies or future operations. We might have to license our technology to others. This could result in sharing revenues which we might otherwise retain for ourselves. Any of these actions may harm our business, financial condition and results of operations.

The amount of capital we may need depends on many factors, including:

- the progress, timing and scope of our product development programs;
- the progress, timing and scope of our preclinical studies and clinical trials;
- the time and cost necessary to obtain regulatory approvals;
- the time and cost necessary to further develop manufacturing processes, arrange for contract manufacturing facilities and obtain the necessary regulatory approvals for those facilities;
- the time and cost necessary to develop sales, marketing and distribution capabilities;
- our ability to enter into and maintain collaborative, licensing and other commercial relationships; and
- our partners' commitment of time and resource to the development of our products.

We are significantly leveraged.

In February 2007, we issued $60 million principal amount of our convertible senior notes. The degree to which we are leveraged could, among other things:

- make it difficult for us to make payments on our notes;
- make it difficult for us to obtain financing for working capital, acquisitions or other purposes on favorable terms, if at all;
- make us more vulnerable to industry downturns and competitive pressures; and
- limit our flexibility in planning for, or reacting to changes in, our business.

Our ability to meet our debt service obligations on the notes will depend upon our future performance, which will be subject to financial, business and other factors affecting our operations, many of which are beyond our control.

If the testing or use of our potential products harms people, we could be subject to costly and damaging product liability claims.

Our business exposes us to potential product liability risks that are inherent in the testing, manufacturing and marketing of drug products. These risks are particularly inherent in human trials of our proposed products. Unacceptable side effects may be discovered during preclinical and clinical testing of one or more of our potential products. Side effects and other liability risks could give rise to viable product liability claims against us. While we have obtained insurance coverage for patients enrolled in clinical trials, we may not be able to maintain this insurance on acceptable terms;

insurance may not provide adequate coverage against potential liabilities, and we may need additional insurance coverage for expanded clinical trials and commercial activity. As a result, product liability claims, even if successfully defended, could have a material adverse effect on our business, financial condition and results of operations. If the side effects are determined to be unacceptable, we will not be able to commercialize our products.

If we are found to be infringing on patents or trade secrets owned by others, we may be forced to cease or alter our drug development efforts, obtain a license to continue the development or sale of our products, and/or pay damages.

Our manufacturing processes and potential products may conflict with patents that have been or may be granted to competitors, universities or others, or the trade secrets of those persons and entities. As the drug development industry expands and more patents are issued, the risk increases that our processes and potential products may give rise to claims that they infringe the patents or trade secrets of others. These other persons could bring legal actions against us claiming damages and seeking to enjoin clinical testing, manufacturing and marketing of the affected product or process. If any of these actions are successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to conduct clinical tests, manufacture or market the affected product or use the affected process. Required licenses may not be available on acceptable terms, if at all, and the results of litigation are uncertain. If we become involved in litigation or other proceedings, it could consume a substantial portion of our financial resources and the efforts of our personnel.

We rely on confidentiality agreements to protect our trade secrets. If these agreements are breached by our employees or other parties, our trade secrets may become known to our competitors.

We rely on trade secrets that we seek to protect through confidentiality agreements with our employees and other parties. If these agreements are breached, our competitors may obtain and use our trade secrets to gain a competitive advantage over us. We may not have any remedies against our competitors and any remedies that may be available to us may not be adequate to protect our business or compensate us for the damaging disclosure. In addition, we may have to expend resources to protect our interests from possible infringement by others.

A substantial portion of our technology is subject to limited retained rights of our licensors, and we may not be able to prevent the grant of similar rights to third parties.

A substantial portion of our technology is licensed from academic institutions which technology license agreements are subject to the federal Bayh Dole Act, pursuant to which the federal government has certain limited rights to use the technology and to even require us to grant a license to one or more third parties if we are not fully developing the technology.

In certain cases we also have the right to practice improvements on the licensed technology to the extent they are encompassed by the licensed patents and within our field of use. Our licensors may currently own and may in the future obtain additional patents and patent applications that are helpful for the development, manufacture and commercial sale of our anticipated products. We may be unable to agree with one or more academic institutions from which we have obtained licenses that certain intellectual property developed by researchers at these academic institutions is covered by our existing licenses. In the event that the new intellectual property is not covered by our existing licenses, we would be required to negotiate a new license agreement. We may not be able to reach agreement with current or future licensors on commercially reasonable terms, if at all, or the terms may not permit us to sell our products at a profit after payment of royalties, which could harm our business.

Our licenses generally also may be terminated by the licensor if we default in performance of our obligations. If any of our licenses are terminated, we may lose certain rights to manufacture, sell, market and distribute products which would significantly reduce our actual and potential revenues and have a material and negative impact on our operations.

Our proprietary rights may not adequately protect our technologies.

Our commercial success will depend in part on our obtaining and maintaining patent, trade secret, copyright and trademark protection of our technologies in the United States and other jurisdictions as well as successfully enforcing this intellectual property and defending this intellectual property against third-party challenges. We will only be able to protect our technologies from unauthorized use by third parties to the extent that valid and enforceable intellectual property protections, such as patents or trade secrets, cover them. In particular, we place considerable emphasis on obtaining patent and trade secret protection for significant new technologies, products and processes. Furthermore, the degree of future protection of 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. Moreover, the degree of future protection of our proprietary rights is uncertain for products that are currently in the early stages of development because we cannot predict which of these products will ultimately reach the commercial market or whether the commercial versions of these products will incorporate proprietary technologies.

Our patent position is highly uncertain and involves complex legal and factual questions. Accordingly, we cannot predict the breadth of claims that may be allowed or enforced in our patents or in third-party patents. For example:

- we or our licensors might not have been the first to make the inventions covered by each of our pending patent applications and issued patents;
- we or our licensors might not have been the first to file patent applications for these inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies;
- it is possible that none of our pending patent applications or the pending patent applications of our licensors will result in issued patents;
- our issued patents and issued patents of our licensors may not provide a basis for commercially viable technologies, or may not provide us with any competitive advantages, or may be challenged and invalidated by third parties; and
- we may not develop additional proprietary technologies that are patentable.

As a result, our owned and licensed patents may not be valid and we may not be able to obtain and enforce patents and to maintain trade secret protection for our technology. The extent to which we are unable to do so could materially harm our business.

We or our licensors have applied for and will continue to apply for patents for certain products. Such applications may not result in the issuance of any patents, and any patents now held or that may be issued may not provide us with adequate protection from competition. Furthermore, it is possible that patents issued or licensed to us may be challenged successfully. In that event, if we have a preferred competitive position because of such patents, any preferred position held by us would be lost. If we are unable to secure or to continue to maintain a preferred position, we could become subject to competition from the sale of generic products.

Patents issued or licensed to us may be infringed by the products or processes of others. The cost of enforcing our patent rights against infringers, if such enforcement is required, could be significant, and the time demands could interfere with our normal operations. There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical, biotechnology and medical technology industries. We may become a party to patent litigation and other proceedings. The cost to us of any patent litigation, even if resolved in our favor, could be substantial. Some of our competitors may be able to sustain the costs of such litigation more effectively than we can because of their substantially greater financial resources. Litigation may also absorb significant management time.

Unpatented trade secrets, improvements, confidential know-how and continuing technological innovation are important to our scientific and commercial success. Although we attempt to and will continue to attempt to protect our proprietary information through reliance on trade secret laws and the use of confidentiality agreements with our corporate partners, collaborators, employees and consultants and other appropriate means, these measures may not effectively prevent disclosure of our proprietary information, and, in any event, others may develop independently, or obtain access to, the same or similar information.

Certain of our patent rights are licensed to us by third parties. If we fail to comply with the terms of these license agreements, our rights to those patents may be terminated, and we will be unable to conduct our business.

If we fail to recruit and retain key personnel, our research and development programs may be delayed.

We are highly dependent upon the efforts of our senior management and scientific personnel, particularly, Alan Kessman, our chief executive officer and director; Howard B. Johnson, our president and chief financial officer; Ann Lee Cahill, our vice president, clinical development; Ivan King, Ph.D., our vice president, research and development; Meghan Fitzgerald, our vice president and chief business officer; and Aileen Ryan, our vice president, regulatory affairs. There is intense competition in the drug development industry for qualified scientific and technical personnel. Since our business is very technical and specialized, we need to continue to attract and retain such people. We may not be able to continue to attract and retain the qualified personnel necessary for developing our business, particularly in light of our need to raise substantial additional financing in order to continue our operations beyond mid-2009. We have no key man insurance policies on any of the officers listed above and we only have an employment agreement with Mr. Kessman. If we lose the services of our management and scientific personnel or fail to recruit other scientific and technical personnel, our research and product development programs will be significantly and detrimentally affected.

We face intense competition in the market for anticancer products, and if we are unable to compete successfully, our business will suffer.

Numerous pharmaceutical and biotechnology companies have publicly announced their intention to develop drugs for the treatment of cancer including, in some instances, the development of agents which treat AML and/or are alkylating agents similar to our compound Cloretazine® (VNP40101M) and agents which target ribonucleotide reductase similar to our compound Triapine®. These companies include, but are not limited to Amgen Inc., AstraZeneca PLC, Bioenvision, Inc., Bristol-Myers Squibb Company, Chiron Corporation, Eli Lilly and Co., Genentech Inc., Genzyme Corporation, ImClone Systems Inc., Johnson & Johnson, Lorus Therapeutics Inc., MGI Pharma, Inc., OSI Pharmaceuticals, Inc., Pfizer Inc., Pharmion Corp., Schering-Plough Corporation, Wyeth, and Xanthus Pharmaceuticals, Inc. These and other large pharmaceutical companies have substantially greater financial and other resources and development capabilities than we do and have substantially greater experience in undertaking preclinical and clinical testing of products, obtaining regulatory approvals, and manufacturing and marketing pharmaceutical products. In addition, our competitors may succeed in obtaining approval for products more rapidly than us and in developing and commercializing products that are safer and more effective than those that we propose to develop. The existence of these products, other products or treatments of which we are not aware or products or treatments that may be developed in the future may adversely affect the marketability of our products by rendering them less competitive or obsolete. In addition to competing with universities and other research institutions in the development of products, technologies and processes, we may compete with other companies in acquiring rights to products or technologies from universities.

If our corporate partners, licensors, licensees, collaborators at research institutions and others do not conduct activities in accordance with our arrangements, our research and development efforts may be delayed.

Our strategy for the research, development and commercialization of our products entails entering into various arrangements with corporate partners, licensors, licensees, collaborators at research institutions and others. We currently depend on the following third parties:

- The National Cancer Institute (NCI) with respect to clinical development of Triapine® in clinical trials;
- Yale University (Yale) for research and for technologies that are licensed by them to us;
- Beijing Pason Pharmaceuticals, Inc. for the development of Triapine® in the People's Republic of China, Hong Kong, Macao and Taiwan;
- Healthcare facilities in the United States and other countries to perform human clinical trials of our products;
- Clinical research organizations in the United States and other countries to monitor and collect data related to human clinical trials; and
- Contract manufacturers to produce our products for use in preclinical, clinical and potential commercial activities.

If the third parties do not conduct activities in accordance with the arrangements we have with them, or if these arrangements are terminated, our product development efforts may be delayed. We may also rely on other collaborative partners to obtain regulatory approvals and to manufacture and market our products. The amount and timing of resources to be devoted to these activities by these other parties may not be within our control.

If Yale does not conduct research relating to products we would like to pursue, we may never realize any benefits from our funding provided to Yale.

Through December 31, 2006, we have paid approximately $10.5 million to Yale for research funding. We have agreed to pay an additional $50,000 to support the research activities of one of our directors, an affiliate of Yale, through March 31, 2007. We may continue to support certain research projects at Yale. We generally do not have the right to control the research that Yale is conducting with our funding, and our funds may not be used to conduct research relating to products that we would like to pursue. Additionally, if the research being conducted by Yale results in technologies that Yale has not already licensed or agreed to license to us, we may need to negotiate additional license agreements or we may be unable to utilize those technologies.

If we are unable to establish sales, marketing and distribution capabilities, or to enter into agreements with third parties to do so, we will be unable to successfully market and sell future drug products.

We have no experience with marketing, sales and distribution of drug products and have only recently established pre-commercial capability in those areas. If we are unable to establish capabilities to sell, market and distribute our products, either by developing our own capabilities or entering into agreements with others, we will not be able to successfully sell our future drug products. In that event, we will not be able to generate significant revenues. We cannot guarantee that we will be able to hire the qualified sales and marketing personnel we need. We may not be able to enter into any marketing or distribution agreements with third-party providers on acceptable terms, if at all.

We rely on third-party manufacturers to manufacture our product candidates. If these third-party manufacturers fail to manufacture product candidates of satisfactory quality, in a timely manner, in sufficient quantities or at acceptable costs, development and commercialization of our products could be delayed.

We have no manufacturing facilities, and we have no experience in the commercial manufacturing of drugs or in validating drug manufacturing processes. We have contracted with third-party manufacturers to produce our product candidates for regulatory approvals clinical trials. We have

limited supplies of our product candidates for clinical trials. If our supplies are damaged or destroyed, either during storage or shipping or otherwise, our clinical trials may be delayed, which could have a material adverse effect on our business. We intend to rely on third-party contract manufacturers to manufacture, supply, store and distribute commercial quantities of our product candidates. We will also rely on our third-party manufacturing partners to work with us to complete the Chemistry, Manufacturing and Control, or CMC, section of any nondisclosure agreements or any marketing approval application we may file.

Contract manufacturers are obliged to operate in accordance with government mandated obligations, including FDA-mandated current good manufacturing practices (cGMPs). A failure of any of our contract manufacturers to establish and follow cGMPs or to document their adherence to such practices may lead to significant delays in the availability of material for clinical trials and may delay or prevent filing or approval of marketing applications for our products.

Changing contract manufacturers may be difficult, and the number of potential manufacturers is limited. Changing manufacturers requires validation of the manufacturing processes and procedures in accordance with government mandated obligations, including FDA-mandated cGMPs. Such validation may be costly and time-consuming. It may be difficult or impossible for us to find replacement manufacturers on acceptable terms quickly, if at all. Either of these factors could delay or prevent the completion of our clinical trials, the approval of our product candidates by the FDA or other regulatory agencies, or the commercialization of our products, result in higher costs, or cause a decline in potential product revenues.

Drug manufacturers are subject to on-going, periodic unannounced inspections by the FDA and corresponding state and foreign agencies to ensure strict compliance with cGMPs, other government regulations and corresponding foreign standards. While we are obligated to audit the performance of third-party contractors, we do not have control over our third-party manufacturers' compliance with these regulations and standards. Failure by our third-party manufacturers or us to comply with applicable regulations could result in sanctions being imposed on us, including fines, injunctions, civil penalties, failure of the government to grant market approval of drugs, delays, suspension of clinical trials, withdrawal of approvals, seizures, detentions or recalls of product, operating restrictions and criminal prosecution.

To date, our product candidates have been manufactured in small quantities by third-party manufacturers for preclinical and clinical trials. We have not validated the manufacturing process for Cloretazine® (VNP40101M) to date. In order to obtain marketing approval for any of these product candidates, we will need to enter into and maintain long-term supply agreements with our existing or new third-party manufacturers, such as our agreement with Ben Venue Laboratories, and demonstrate that we can manufacture sufficient quantities under a validated manufacturing process for commercial sale. Our third-party manufacturers may terminate our agreements, may not be able to successfully increase their manufacturing capacity, validate our manufacturing process, or apply at commercial scale the current manufacturing process for any of our product candidates in a timely or economic manner, or at all. This may require seeking out additional manufacturing partners who may have different equipment requiring additional validation studies, which the relevant government regulator must review and approve. If we are unable to successfully validate or 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 in the supply of the product candidate. Our product candidates require precise, high-quality manufacturing. The failure of our third-party manufacturers to achieve and maintain these high manufacturing standards, including the incidence of manufacturing errors, could result in patient injury or death, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could seriously harm our business.

If environmental laws become stricter in the future, we may face large capital expenditures in order to comply with environmental laws.

We cannot accurately predict the outcome or timing of future expenditures that we may be required to expend to comply with comprehensive federal, state and local environmental laws and

regulations. We must comply with environmental laws that govern, among other things, all emissions, waste water discharge and solid and hazardous waste disposal, and the remediation of contamination associated with generation, handling and disposal activities. To date, we have not incurred significant costs and are not aware of any significant liabilities associated with our compliance with federal, state and local laws and regulations. However, environmental laws have changed in recent years and we may become subject to stricter environmental standards in the future and may face large capital expenditures to comply with environmental laws. We have limited capital and are uncertain whether we will be able to pay for significantly large capital expenditures. Also, future developments, administrative actions or liabilities relating to environmental matters may have a material adverse effect on our financial condition or results of operations.

All of our operations are performed under strict environmental and health safety controls consistent with the Occupational Safety and Health Administration, the Environmental Protection Agency and the Nuclear Regulatory Commission regulations. We cannot be certain that we will be able to control all health and safety problems. If we cannot control those problems, we may be held liable and may be required to pay the costs of remediation. These liabilities and costs could be material.

We may expand our business through new acquisitions that could disrupt our business, harm our financial condition and may also dilute current stockholders' ownership interests in our company.

Our business strategy includes expanding our products and capabilities, and we may seek acquisitions to do so. Acquisitions involve numerous risks, including:

- substantial cash expenditures;
- potentially dilutive issuance of equity securities;
- incurrence of debt and contingent liabilities, some of which may be difficult or impossible to identify at the time of acquisition;
- difficulties in assimilating the operations of the acquired companies;
- diverting our management's attention away from other business concerns;
- risks of entering markets in which we have limited or no direct experience; and
- the potential loss of our key employees or key employees of the acquired companies.

We cannot assure you that any acquisition will result in short-term or long-term benefits to us. We may incorrectly judge the value or worth of an acquired company or business. In addition, our future success would depend in part on our ability to manage the rapid growth associated with some of these acquisitions. We cannot assure you that we will be able to make the combination of our business with that of acquired businesses or companies work or be successful. Furthermore, the development or expansion of our business or any acquired business or companies may require a substantial capital investment by us. We may not have these necessary funds or they might not be available to us on acceptable terms or at all. We may also seek to raise funds by selling shares of our common stock, which could dilute current stockholder's ownership interest in our company.

Our common stock could be delisted from the Nasdaq Capital Market[SM]. Among other things, delisting from the Nasdaq Capital Market[SM] would cause us to become ineligible to use Form S-3 for the registration of the resale of our securities held by certain of our security holders.

If the price of our common stock declines below $1.00 per share, we may fail to meet Nasdaq's maintenance criteria, which may result in the delisting of our common stock from the Nasdaq Capital Market[SM].

In the event of such delisting, trading, if any, in our common stock may then continue to be conducted in the non-Nasdaq over-the-counter market in what are commonly referred to as the electronic bulletin board and the "pink sheets." As a result, an investor may find it more difficult to dispose of or obtain accurate quotations as to the market value of our common stock. In addition, we would be subject to a Rule promulgated by the SEC that, if we fail to meet criteria set forth in such

Rule, imposes various practice requirements on broker-dealers who sell securities governed by the Rule to persons other than established customers and accredited investors. For these types of transactions, the broker-dealer must make a special suitability determination for the purchaser and have received the purchaser's written consent to the transactions prior to the sale. Consequently, the Rule may have a materially adverse effect on the ability of broker-dealers to sell our securities, which may materially affect the ability of stockholders to sell our securities in the secondary market.

A delisting from the Nasdaq Capital Market[SM] will also make us ineligible to use Form S-3 to register the sale of shares of our common stock or to register the resale of our securities held by certain of our security holders with the SEC, thereby making it more difficult and expensive for us to register our common stock or other securities and raise additional capital. We are a party to several registration rights agreements which require us to maintain the effectiveness of registration statements relating to the resale of shares of common stock issuable upon the exercise of outstanding warrants and upon conversion of our outstanding notes by holders of such warrants and notes. If we are ineligible to use Form S-3, we will need to file new registration statements on some other permitted Form and maintenance of the effectiveness of such registration statements will become extremely difficult. Under the applicable registration rights agreements, we could become subject to certain liquidated damages upon and during the continuance of any such failure. We would also incur additional costs under state blue-sky laws to sell equity if we are delisted.

The terms of our outstanding notes and warrants, as well as any additional funding we raise in the future could cause extreme dilution to our stockholders. Further, the large number of our shares that may be held in the market may depress the market price of our stock.

The conversion of some or all of our outstanding notes, our payment of interest or make-whole premiums on the notes under certain circumstances with shares of common stock, and the exercise of the warrants issued in connection with the sale of the notes, will dilute the ownership interests of existing stockholders. As of December 31, 2006, we also had outstanding warrants to purchase 9,198,971 shares of our common stock at exercise prices ranging from $2.20 to $3.25 per share. All such shares have been registered for resale on registration statements filed with the SEC and will be freely tradable when issued upon exercise of the warrants. In addition, as of December 31, 2006, there were 4,232,017 shares of common stock issuable upon exercise of options granted by us. We may also grant awards under our 2005 Stock Incentive Plan to purchase up to an additional 2,425,372 shares of common stock.

Further, to the extent we determine that we need additional financing and we encounter additional opportunities to raise cash, we would likely sell additional equity or debt securities. Depending on our stock price and market conditions at the time of any capital raise, and the amount of capital we need, such debt or equity securities may be sold at relatively low prices, including prices which are below the market price of our common stock, and may have substantial rights to control us. Stockholders would experience extreme dilution as well as subordination of their rights. Other than as set forth in the indenture governing the notes, we do not have any contractual restrictions on our ability to incur debt. Any indebtedness could contain covenants that restrict our operations.

Any sales in the public market of the common stock paid as interest or as a make-whole premium, issuable upon conversion of the notes or exercise of warrants, the exercise of outstanding options or the issuance of equity pursuant to our 2005 Stock Incentive Plan, could adversely affect prevailing market prices of our common stock. Future sales of substantial amounts of our common stock in the public market, or the perception that such sales are likely to occur, could also affect prevailing trading prices of our common stock.

The rights that have been and may in the future be granted to our stockholders may allow our Board of Directors and management to deter a potential acquisition in which the Board of Directors and management are to be replaced.

We have in place a stockholder rights plan, or "poison pill," which enables our Board of Directors to issue rights to purchase common stock when someone acquires 20% or more of the outstanding shares of our common stock. As a result of the plan, anyone wishing to take over the

company would most likely be forced to negotiate a transaction with our Board of Directors and management in order not to trigger the pill. The need to negotiate with the Board of Directors or management could frustrate a proposed takeover particularly where the Board of Directors and management wish to remain entrenched. This would prevent our stockholders from participating in a takeover or tender offer, which might be of substantial value to them.

Provisions of our outstanding convertible senior notes could discourage an acquisition of us by a third-party.

Certain provisions of our outstanding convertible senior notes could make it more difficult or more expensive for a third-party to acquire us, including a provision requiring an acquirer to assume all of our obligations under the notes and the indenture. Upon the occurrence of certain transactions constituting a fundamental change under the indenture relating to the notes, holders of the notes will have the right, at their option, to require us to repurchase all of their notes or any portion of the principal amount of such notes.

After giving effect to the sale of our convertible senior notes and warrants in February 2007 and the reservation of shares for potential issuance upon conversion or exercise, we have limited shares of common stock authorized and available for issuance.

As of March 1, 2007, we had 150,000,000 authorized shares of common stock under our certificate of incorporation, as amended, of which 72,084,540 were issued and outstanding. An aggregate of additional 23,257,328 shares of common stock were reserved for issuance upon the exercise of outstanding warrants and options, as well as for potential issuance under our 2005 Stock Incentive Plan and our 2000 Vion Employee Stock Purchase Plan. In addition, our 7.75% convertible notes are convertible into 31,249,980 shares of common stock. After reserving shares for potential issuance upon conversion of our convertible senior notes, the exercise of the warrants sold in connection with the sale of the notes, the potential payment of interest on the notes with shares of common stock and make-whole premiums on the notes with shares of common stock, we have limited shares of common stock authorized and available for other purposes, including potential acquisitions, potential issuances in connection with a strategic relationship, and potential issuance under our rights plan. Accordingly, unless and until we can amend out certificate of incorporation to authorize more shares of common stock, which would require stockholder approval, we may not be able to take advantage of corporate opportunities which might come to our attention which would require the issuance of common stock. In addition, in any situation where our shareholder rights may become exercisable, we will not be able to issue more than a *de minimus* number of shares upon the exercise of the shareholder rights, thereby frustrating the purpose of the rights plan.

ITEM 1B. *Unresolved Staff Comments*

Not applicable.

ITEM 2. *Properties*

Our principal facility consists of approximately 20,000 square feet of leased laboratory and office space in New Haven, Connecticut. The facility lease expires in December 2010. The current annual rental rate is approximately $217,000. We believe our existing facilities are adequate for our preclinical development, clinical and administrative activities.

ITEM 3. *Legal Proceedings*

In the normal course of business, we may be subject to proceedings, lawsuits and other claims. We are not a party to any legal proceedings that may have a material adverse effect on our business.

ITEM 4. *Submission of Matters to a Vote of Security Holders*

None.

PART II

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

Market Information for Common Stock

Our common stock is traded under the symbol "VION" on the Nasdaq Capital Market[SM]. The following table reflects for the periods shown the range of high and low sales prices of our common stock as reported by the Nasdaq Capital Market[SM].

	2006		2005	
	High	Low	High	Low
First Quarter	$2.59	$1.54	$4.77	$2.55
Second Quarter	2.29	1.20	3.09	2.03
Third Quarter	1.43	0.97	2.93	2.10
Fourth Quarter	1.84	1.04	2.29	1.52

Holders

At March 7, 2007, there were 454 holders of record of our common stock, one of which is Cede & Co., a nominee for Depository Trust Company (DTC). All of the shares of common stock held by brokerage firms, banks and other financial institutions as nominees for beneficial owners are deposited into participant accounts at DTC, and are therefore considered to be held of record by Cede & Co. as one stockholder.

Dividends

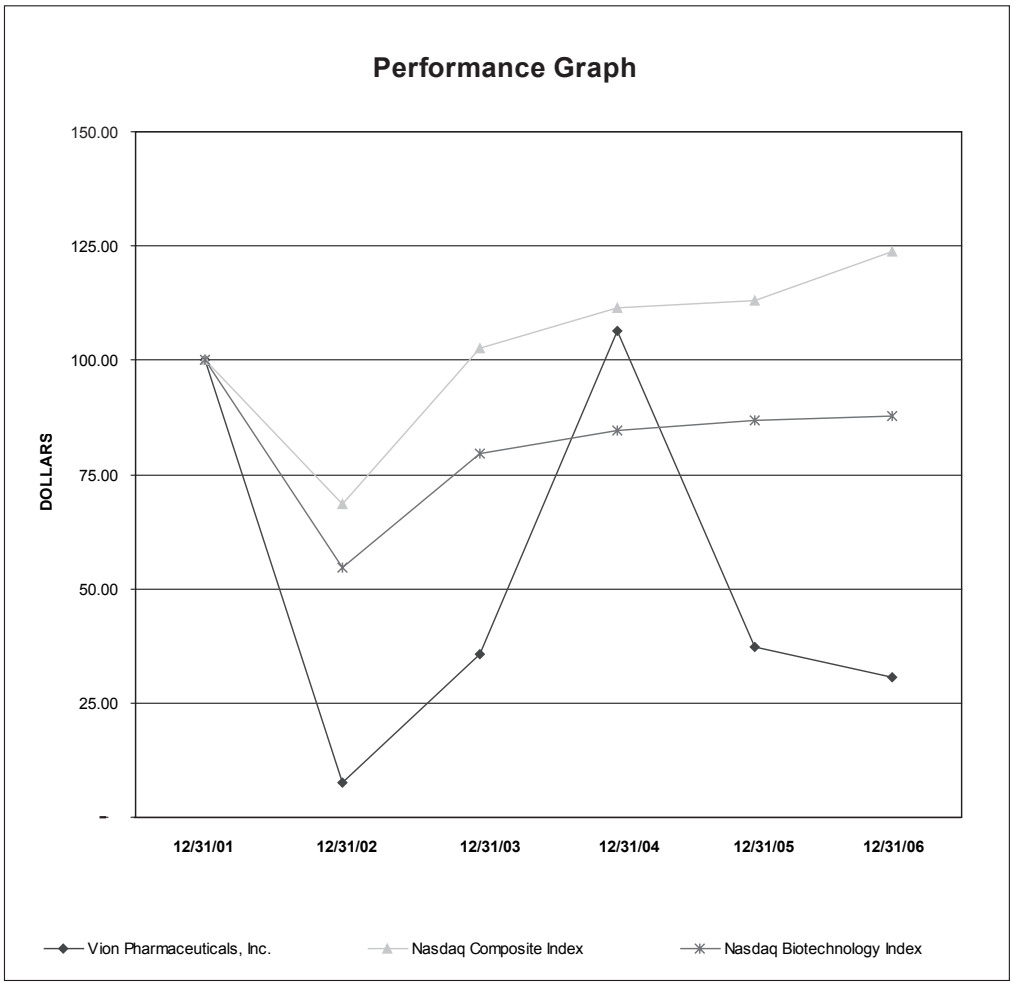
We have never paid cash dividends on our common stock. We currently intend to retain all future earnings for use in the operation of our business and do not anticipate paying cash dividends in the foreseeable future.

Securities Authorized for Issuance Under Equity Compensation Plans

This information is incorporated by reference to Part III, Item 12 of this Annual Report on Form 10-K.

Performance Graph

The following line graph compares the five-year cumulative total stockholder's return on our Common Stock to: (i) the change in the cumulative total return on the Nasdaq Composite Index for U.S. Companies and (ii) the change in the cumulative total return on the Nasdaq Biotechnology Index, which includes biotechnology companies, assuming an investment of $100 made in each and assuming the reinvestment of any dividends.



ITEM 6. *Selected Financial Data*

The following selected consolidated financial data for each of the five years in the period ended December 31, 2006, and for the period from May 1, 1994 (inception) through December 31, 2006, are derived from our audited consolidated financial statements. The selected financial data should be read in conjunction with the consolidated financial statements, related notes and "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere herein.

	2006	2005	2004	2003	2002	For the Period From May 1, 1994 (Inception) through December 31, 2006
Consolidated Statement of Operations Data:						
Total revenues	**$ 22**	$ 23	$ 275	$ 375	$ 238	$ 12,964
Loss from operations[1]	**(27,249)**	(19,821)	(16,501)	(11,923)	(13,021)	(165,378)
Net loss[1]	**(25,347)**	(18,041)	(16,055)	(11,838)	(12,310)	(156,409)
Preferred stock dividends and accretion	—	—	—	—	—	(18,489)
Loss applicable to common shareholders[1]	**(25,347)**	(18,041)	(16,055)	(11,838)	(12,310)	(174,898)
Basic and diluted loss applicable to common shareholders per share[1]	**(0.38)**	(0.28)	(0.30)	(0.36)	(0.43)	
Consolidated Balance Sheet Data:						
Cash, cash equivalents and short-term investments	**$ 31,014**	$ 52,762	$ 41,729	$ 15,719	$ 10,131	
Total assets	**31,856**	53,719	42,644	16,376	10,923	
Long-term obligations and redeemable preferred stock	—	—	—	—	—	
Cash dividends declared per common share	—	—	—	—	—	

(1) Our adoption of Statement of Financial Accounting Standard 123 (revised 2004), "*Share-Based Payment*", (SFAS 123R) on January 1, 2006 had the following impact on the operating results for the year ended December 31, 2006: net loss was increased by $1.9 million, and the basic and diluted loss per share was increased by $0.03. No employee stock-based compensation expense was recognized in reported amounts prior to January 1, 2006.

ITEM 7. *Management's Discussion and Analysis of Financial Condition and Results of Operation*

Overview

We are a development stage pharmaceutical company engaged in the development of therapeutics for the treatment of cancer. Our activities to date have consisted primarily of research and product development, preclinical trials of product candidates, obtaining regulatory approval for clinical trials, conducting clinical trials, negotiating and obtaining collaborative agreements, and obtaining financing in support of these activities. Historically, our revenues have primarily consisted of contract research grants, technology license fees, and research and laboratory support service fees. Since inception, we have generated minimal revenues and have incurred substantial operating losses from our activities. We expect to incur substantial operating losses for the next several years due to expenses associated with our activities.

We have five research and development projects, which include two product candidates in clinical trials (Cloretazine® (VNP40101M) and Triapine®), two product development programs in preclinical development (VNP40541 and the hydrazones) and one drug delivery technology (TAPET®) for which we are seeking a development partner.The following table provides information concerning the commencement dates of our clinical trials of Cloretazine® (VNP40101M) sponsored by us that remain open for patient accrual as of March 1, 2007.

Trial	Trial Commencement Date
Phase III trial in relapsed acute myelogenous leukemia in combination with Ara-C	March 2005
Phase II trial in small cell lung cancer	September 2005
Phase II trial in elderly *de novo* poor-risk acute myelogenous leukemia	May 2006

On November 13, 2006, we announced that we had accrued 210 patients to the Phase III trial of our lead anticancer agent Cloretazine® (VNP40101M). The trial is evaluating Cloretazine® (VNP40101M) in combination with Ara-C for the treatment of relapsed AML and is designed to accrue 420 patients if it continues to full accrual. The planned interim evaluation of safety and efficacy for this trial based on 210 patients by its DSMB is presently anticipated to occur in the second quarter of 2007, although we have limited control over the final timing. Based on the evaluation of the first 210 patients accrued in the Phase III trial, the DSMB will determine whether to allow the trial to continue as currently designed, whether the trial design should be modified or whether the trial should be terminated completely. Such a determination would be expected shortly after the data is presented to the DSMB for review. There can be no assurance as to the results of the evaluation of these patients, or the timing of completion of this evaluation or this trial, and there should be no inference that the trial has achieved favorable results to date or that the DSMB will allow the Phase III trial to continue.

On January 25, 2007, we announced that we had recorded at least nine responses in our pivotal Phase II trial of Cloretazine® (VNP40101M) in elderly patients with *de novo* poor-risk AML. The trial is designed to continue to a total accrual of 85 patients if there have been at least nine responses in the first 42 patients. Accordingly, we are proceeding to the second stage of accrual. There can be no assurance as to the results of this trial or the timing of completion of this trial, and there should be no inference that the trial has achieved favorable results to date.

The National Cancer Institute (NCI) is sponsoring clinical trials of Triapine®. We provide product for the NCI trials.

Completion of clinical trials may take several years or more and the length of time can vary substantially according to the type, complexity, novelty and intended use of a product candidate. Factors that can cause delay or termination of our clinical trials include:

- slow patient enrollment;
- long treatment time required to demonstrate safety and effectiveness;
- lack of sufficient supplies of the product candidate;
- adverse medical events or side effects in treated patients;
- lack of effectiveness of the product candidate being tested;
- negative or equivocal findings of the data safety monitoring board, or DSMB, for a trial; and
- lack of sufficient funds.

The amount and types of costs incurred during a clinical trial vary depending upon the type of product candidate, the disease treated and the nature of the study.

We budget and monitor our research and development costs by category, as opposed to by product or study. Significant categories of costs include personnel, clinical, third party research and development services, and laboratory supplies.The cost to take a product candidate through clinical trials is dependent upon, among other things, the targeted disease indication, the timing, size and dosing schedule of the clinical trials for such product candidate, the number of patients enrolled in each trial of the product candidate and the speed at which patients are enrolled and treated. We could

incur increased product development costs if we experience delays in trial enrollment, the evaluation of clinical trial results, or in applying for or obtaining regulatory approvals for any reason including the possible reasons for delay described above. These uncertainties and variability make it difficult to accurately predict the future cost of or timing to complete our product development projects.

We cannot be certain that any of our products will prove to be safe or effective, will achieve the safety and efficacy needed to proceed through Phase III or registrational clinical trials, will receive regulatory approvals, or will be successfully commercialized. Our clinical trials might prove that our product candidates may not be effective in treating disease or may have undesirable or unintended side effects, toxicities or other characteristics that require us to cease further development of the product.

We expect that we will need to enter into and complete Phase III or registrational clinical trials of our products in order to apply for regulatory approval. If we achieve successful completion of Phase III or registrational trials, which have commenced or which we may in the future commence, of which there can be no certainty, we intend to submit the results to the U.S. Food and Drug Administration (FDA) to support an application for regulatory approval of the product.

Given the uncertainties related to pharmaceutical product development, we are currently unable to reliably estimate when, if ever, our product candidates will generate revenue and cash flows. We do not expect to receive net cash inflows from any of our major research and development projects until and unless a product candidate becomes a profitable commercial product.

Critical Accounting Policies and Estimates

The accompanying discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements and the related disclosures, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the amounts reported in our consolidated financial statements and accompanying notes. These estimates form the basis for making judgments about the carrying values of assets and liabilities. We base our estimates and judgments on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results could differ materially from these estimates.

We believe the following policies to be the most critical to an understanding of our financial condition and results of operations because they require us to make estimates, assumptions and judgments about matters that are inherently uncertain.

Revenue Recognition

We record revenue under technology license agreements in accordance with the following:

- Nonrefundable upfront license fees for which no further performance obligations exist are recognized as revenue on the earlier of when payments are received or collection is assured;
- Nonrefundable upfront license fees including guaranteed, time-based payments that require continuing involvement in the form of development or other efforts by us are recognized as revenue ratably over the performance period; and
- Milestone payments are recognized as revenue when milestones, as defined in the applicable agreement, are achieved.

Actual license fees received may vary from recorded estimated revenues.

We record revenue from royalties, if any, based on licensees' sales of our products or technologies. Revenues are recognized as earned in accordance with the contract terms when royalties from licensees can be reliably measured and collectibility is reasonably assured. Royalty estimates are made in advance of amounts collected based on historical and forecasted trends.

The effect of any change in revenues from technology license agreements would be reflected in revenues in the period such determination was made. Historically, such adjustments have been insignificant.

Research and Development Expenses

We record research and development expenses as incurred. We disclose clinical trials expenses and other research and development expenses as separate components of research and development expense in our consolidated statements of operations to provide more meaningful information to our investors. These expenses are based, in part, on estimates of certain costs when incurred. The effect of any change in the clinical trials expenses and other research and development expenses would be reflected in the period such determination was made.

Income Taxes

We provide deferred income taxes for the future tax consequences of temporary differences between the financial statement carrying amounts and the tax basis of assets and liabilities, and on operating loss and tax credit carryforwards. Except for the provisions recorded for minimum state capital taxes and the sales recorded of certain research and development tax credits to the State of Connecticut, we have not recorded a provision or benefit for income taxes in the financial statements due to recurring historical losses. Accordingly, we have provided a full valuation allowance for our deferred income tax asset as of December 31, 2006. In the event we were to determine that we would be able to realize deferred income tax assets in the future, an adjustment to reduce the valuation allowance in the period of determination.

Stock-Based Compensation – Adoption of SFAS 123R

On January 1, 2006, we adopted Statement of Financial Accounting Standard 123 (revised 2004), "*Share-Based Payment*", (SFAS 123R), using the modified prospective application method. Employee stock-based compensation is estimated at the date of grant using the fair value of the stock awards as determined by the Black-Scholes option-pricing model and is recognized as expense ratably over the requisite service period. The Black-Scholes option-pricing model requires us to make several assumptions.

For the year ended December 31, 2006, we recognized $1.9 million of stock-based compensation expense as a result of the adoption of SFAS 123R. The adoption of SFAS 123R increased the basic and diluted loss applicable to common shareholders per share by $0.03 for the year ended December 31, 2006.

Prior to the adoption of SFAS 123R, we accounted for share-based payments to employees using APB Opinion No. 25's, "*Accounting for Stock Issued to Employees*", intrinsic value method and, as such, generally recognized no compensation cost for employee stock options. The adoption of SFAS 123R under the modified prospective application method required us to recognize compensation cost beginning on January 1, 2006 (i) based on the requirement of SFAS 123R for all share-based payments granted after January 1, 2006 and (ii) based on the requirements of SFAS 123 for all awards granted to employees prior to January 1, 2006 that remain unvested as of that date. Under the modified prospective application method, prior periods are not restated for the effect of SFAS 123R. We use the straight-line attribution method for all stock option grants.

As of December 31, 2006, the total compensation cost related to unvested awards of restricted stock and stock options not yet recognized in the statement of operations was approximately $6.9 million, which will be recognized throughout the period ending October 31, 2009.

See Notes 2 and 6 to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K for further information regarding stock-based compensation expense.

Recently Issued Accounting Standards

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements", (SFAS 157). This Statement is effective for financial statements issued for fiscal years beginning after November 15, 2007. SFAS 157 provides a common fair value hierarchy for companies to follow in determining fair value measurements in the preparation of financial statements and expands disclosure

requirements relating to how such fair value measurements were developed. SFAS 157 clarifies the principle that fair value should be based on the assumptions that the marketplace would use when pricing an asset or liability, rather than company specific data. We do not expect the adoption of SFAS 157 to have a material impact on our results of operations and financial position.

Results of Operations

Year Ended December 31, 2006 Compared to the Year Ended December 31, 2005

Revenues. Revenues for the year ended December 31, 2006 were $22,000 as compared to $23,000 for 2005. We have no material source of revenues.

Research and Development Expenses. Total research and development (R&D) expenses were $21.5 million for the year ended December 31, 2006, compared to $16.6 million for 2005 largely as a result of higher clinical trials expenses of $3.1 million and higher other R&D expenses of $1.8 million. The increase in clinical trials expenses was primarily comprised of increased costs for Cloretazine® (VNP40101M) trials of $2.4 million and higher compensation costs of $593,000 related to the addition of new employees in our clinical development group and stock-based compensation expense for employees of the clinical development group of $283,000 recorded in 2006 as a result of the adoption of SFAS 123R. A portion of the increase in clinical trials expense was due to a reduction recorded in the third quarter of 2005 of $683,000 to the accrual for clinical trial costs as actual expenses for two trials were less than original estimates. The increase in other R&D expenses was primarily due to development costs incurred in 2006 in support of a potential registration filing for Cloretazine® (VNP40101M), preclinical development costs related to our preclinical anticancer agent, VNP40541, and stock-based compensation expense for employees included in the other R&D group of $484,000 recorded in 2006 as a result of the adoption of SFAS 123R.

General and Administrative Expenses. General and administrative expenses were $4.3 million for the year ended December 31, 2006, compared to $3.2 million in 2005. The increase was primarily due to stock-based compensation expense for employees included in the general and administrative group of $977,000 recorded in 2006 as a result of the adoption of SFAS 123R.

Marketing Expenses. Marketing expenses were $1.5 million for the year ended December 31, 2006 which includes stock-based compensation expense of $203,000 recorded in 2006 as a result of the adoption of SFAS 123R for employees included in the marketing group. During 2006, we began initial pre-launch marketing activities for Cloretazine® (VNP40101M). There were no marketing expenses for the same period in 2005.

Interest Income. Interest income was $2.0 million for the year ended December 31, 2006, compared to $1.8 million for 2005. The increase was due to higher interest rates partially offset by lower invested balances in 2006.

Other Expense. Other expense related to foreign currency transaction losses was $50,000 for the year ended December 31, 2006, compared to $4,000 for 2005. The foreign currency transaction losses are related to contracts with a vendor outside the U.S. that are denominated in a foreign currency.

Income Tax Provision. Income tax provisions of $42,000 and $40,000 were recorded for the years ended December 31, 2006 and 2005, respectively, for minimum state capital taxes paid.

Net Loss. As a result of the foregoing increases in expenses, the net loss was $25.3 million, or $0.38 per share based on weighted-average shares outstanding of 66.2 million, for the year ended December 31, 2006, compared to $18.0 million, or $0.28 per share based on weighted-average shares outstanding of 65.2 million, for 2005.

Year Ended December 31, 2005 Compared to the Year Ended December 31, 2004

Revenues. Revenues for the year ended December 31, 2005 were $23,000 as compared to $275,000 for 2004. We have no material source of revenues.

Research and Development Expenses. Total research and development (R&D) expenses were $16.6 million for the year ended December 31, 2005, compared to $13.8 million for 2004 as a result of

higher other R&D expenses of $2.2 million and higher clinical trials expenses of $623,000. The increase in other R&D expenses resulted from late-stage clinical development of Cloretazine® (VNP40101M), including expenses not directly related to clinical trials, as well as preclinical development costs related to VNP40541. The increase in clinical trials expenses was due to higher spending for Cloretazine® (VNP40101M) trials of $2.5 million (primarily as a result of patient accrual to our Phase III trial which began in March 2005) partially offset by lower spending for Triapine® trials of $1.9 million due to fewer trials being open to patient accrual.

General and Administrative Expenses. General and administrative expenses were $3.2 million for the year ended December 31, 2005, compared to $3.0 million in 2004. The increase was primarily due to higher professional fees for recruiting and benefit consulting.

Interest Income. Interest income was $1.8 million for the year ended December 31, 2005, compared to $547,000 for 2004. The increase was due to higher interest rates and higher levels of invested funds in 2005 as a result of net proceeds received from a registered direct offering of our common stock in January 2005.

Other Expense. Other expense related to foreign currency transaction losses was $4,000 for the year ended December 31, 2005, compared to $73,000 for 2004. The foreign currency transaction losses are related to contracts with a vendor outside the U.S. that are denominated in a foreign currency.

Income Tax Provision. Income tax provisions of $40,000 and $28,000 were recorded for the years ended December 31, 2005 and 2004, respectively, for minimum state capital taxes paid.

Net Loss. As a result of the foregoing increases in expenses, the net loss was $18.0 million, or $0.28 per share based on weighted-average shares outstanding of 65.2 million, for the year ended December 31, 2005, compared to $16.1 million, or $0.30 per share based on weighted-average shares outstanding of 53.5 million, for 2004.

Liquidity and Capital Resources

At December 31, 2006, we had cash and cash equivalents of $30.9 million, compared to $52.8 million at December 31, 2005. The decrease in 2006 was due to cash used to fund operating activities of $21.9 million and acquisitions of capital equipment of $111,000, partially offset by proceeds of $115,000 from common stock issuances under employee stock plans. Cash used in operations was primarily to fund clinical and preclinical product development activities as well as for working capital and general corporate purposes.

On February 20, 2007, we completed the sale of $60 million aggregate principal amount of our 7.75% convertible senior notes due 2012 and warrants to purchase up to 7,800,000 shares of our common stock to an initial purchaser for resale in a private placement to qualified institutional buyers pursuant to Rule 144A promulgated under the Securities Act of 1933, as amended, or the Act, to persons outside the United States under Regulation S under the Act and to institutional investors that are accredited investors within the meaning of Rule 501 of Regulation D under the Act. We received net proceeds of approximately $55.4 million from the sale of the notes and warrants.

We are obligated to pay the principal amount of the notes in cash on the maturity date, February 15, 2012. On or after, but not prior to, February 15, 2010, we have the right to redeem some or all of the notes for cash at any time, at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest to, but not including, the redemption date. Upon certain fundamental changes (as described below), holders of notes will have the right, subject to various conditions and restrictions, to require us to repurchase their notes, in whole or in part, at 100% of the principal amount plus accrued and unpaid interest up to, but not including, the repurchase date.

The notes bear interest at 7.75% of the principal amount per year, payable on February 15 and August 15 of each year, beginning on August 15, 2007. Interest may be paid at the Company's option in cash or registered shares of common stock or some combination of cash and registered shares of common stock having a fair market value equal to the interest payment due, in each case at our option subject to compliance with Nasdaq shareholder approval rules, from the date of issuance until repayment in full or until an earlier conversion, redemption or repurchase.

The notes and the Indenture under which they were issued restrict us from incurring indebtedness or other obligations, including senior secured indebtedness or other secured obligations, in the future.

The notes shall automatically convert at any time prior to maturity if the closing price per share of the common stock has exceeded 150% of the conversion price then in effect for at least 20 trading days within any 30-consecutive trading day period, provided that only those notes as to which we are then able to make the make-whole payment (defined below) under Nasdaq shareholder approval rules shall be automatically converted; and further provided that only those notes (i) for which a shelf registration statement was in effect with respect to the resale of the shares of common stock issuable upon automatic conversion for each day during such 30-consecutive trading day period or (ii) for which the shares issuable upon automatic conversion may be freely transferred pursuant to Rule 144(k) under the Act, shall be automatically converted. Upon any automatic conversion of the notes, we shall pay to holders an amount equal to $232.50 per $1,000 principal amount of notes so converted, less the amount of any interest paid on such notes prior to the conversion date. This payment may be made at the Company's option in cash, registered shares of common stock or some combination of cash and registered shares of common stock having a fair market value equal to the make-whole payment due.

Upon certain fundamental changes, holders of notes will have the right, subject to various conditions and restrictions, to require us to repurchase the notes, in whole or in part, at 100% of the principal amount plus accrued and unpaid interest up to, but not including, the repurchase date. If a fundamental change occurs prior to February 15, 2010, we may be required to pay a make-whole premium on the notes converted and not repurchased in connection with the fundamental change by issuing additional shares of common stock upon conversion of such notes.

If there is an event of default on the notes, the principal amount of the notes, plus accrued and unpaid interest may be declared immediately due and payable, subject to certain conditions set forth in the Indenture.

The warrants are exercisable into shares of our common stock at the option of the holder of warrants at any time after the earlier of (i) the date a shelf registration statement with respect to the resale of the shares of common stock issuable upon exercise of the warrants becomes effective and (ii) August 19, 2007, and prior to the close of business on February 15, 2010, or earlier upon redemption, at an initial exercise price of $2.00 per share. The exercise price is subject to adjustment in accordance with the terms of the warrant. The Company may redeem the outstanding warrants in whole or in part for $0.01 per warrant at any time after the warrants become exercisable if, and only if, the last sales price of our common stock equals or exceeds 150% of the exercise price per share of the warrants then in effect for any 20 trading days within a 30-consecutive trading day period and at all times during such period there is an effective registration statement relating to the resale of all the shares of common stock issuable upon exercise of the warrants.

Cash Used in Operating Activities

Cash used in operating activities is primarily a result of our net loss. However, operating cash flows differ from net loss as a result of non-cash charges, changes in operating assets and liabilities, or differences in the timing of cash flows and earnings/expense recognition.

Significant components of cash used in operating activities are as follows:

Receivables and prepaid expenses decreased $14,000 during the year ended December 31, 2006 compared to a decrease of $149,000 for 2005. The decrease in 2006 was primarily due to the collection of a miscellaneous 2005 receivable. The decrease in 2005 was primarily due to a reduction in a deposit paid to a clinical research organization as well as a reduction of prepaid insurance expense as the timing of insurance premium payments differs from the recognition of insurance expense.

Current liabilities increased $1.3 million during the year ended December 31, 2006 compared to a decrease of $1.3 million for 2005. The increase in 2006 was primarily due to an increase in the accrual for clinical trial costs as the timing of payments to clinical vendors differs from the recognition of clinical trials expenses. The decrease in 2005 was primarily due to a reduction in the accrual for

clinical trial costs due to timing differences between payments and expense recognition as well as a reduction in the clinical trials accrual as actual expenses for two clinical trials were less than original estimates.

Cash Provided by or Used in Investing Activities

Cash provided by or used in investing activities primarily relates to acquisitions of capital equipment. Capital expenditures were $111,000 and $417,000 for the years ended December 31, 2006 and 2005, respectively. Capital expenditures for 2006 included purchases of computer software and hardware. Capital expenditures for 2005 included purchases of computer software and laboratory equipment. Capital expenditures for fiscal 2007 are not expected to exceed $750,000.

Cash Provided by Financing Activities

Cash provided by financing activities is primarily related to capital raised and proceeds from common stock issuances under our employee stock plans. For the year ended December 31, 2006, we received net proceeds of $115,000 from common stock issuances under employee stock plans. For the year ended December 31, 2005, we received net proceeds of $30.2 million from a registered direct offering of 10 million shares of our common stock in January 2005 at $3.25 per share and proceeds of $245,000 from common stock issuances under employee stock plans.

In addition to the warrants issued in connection with our sale of notes in February 2007, we have the following common stock purchase warrants outstanding as of December 31, 2006:

- warrants to purchase 1,192,349 shares of common stock at $2.20 per share, expiring on June 23, 2008;
- warrants to purchase 4,439,313 shares of common stock at $2.50 per share, expiring on September 19, 2008; and
- warrants to purchase 3,567,309 shares of common stock at $3.25 per share, expiring on February 11, 2009.

All proceeds are being and will be used to fund clinical and preclinical product development activities, and for working capital and general corporate purposes.

Future Cash Requirements

At December 31, 2006, we had cash and cash equivalents of $30.9 million. In February 2007, we received net proceeds of approximately $55.4 million in connection with a private placement of $60 million aggregate principal amount of our 7.75% convertible senior notes and warrants. Based on our current operating plan, we estimate that our existing cash and cash equivalents, including the proceeds from the 2007 private placement, will be sufficient to fund our operations through mid-2009, however, the amount of capital we may need may vary and depends on many factors, including:

- the progress, timing and scope of our product development programs;
- the progress, timing and scope of our preclinical studies and clinical trials;
- the time and cost necessary to obtain regulatory approvals;
- the time and cost necessary to further develop manufacturing processes, arrange for contract manufacturing facilities and obtain the necessary regulatory approvals for those facilities;
- the time and cost necessary to develop sales, marketing and distribution capabilities;
- our ability to enter into and maintain collaborative, licensing and other commercial relationships; and
- our partners' commitment of time and resource to the development of our products.

Under our current operating plan, if we do not have an approved product for sale which is generating revenues, we will need to raise additional capital to have sufficient capital to fund our operations beyond mid-2009.

Off-Balance Sheet Financing

We have no off-balance sheet arrangements that have a material current effect or are reasonably likely to have a material future effect on our financial position or results of operations.

Contractual Obligations

The following table summarizes our significant contractual obligations which are not recorded on the balance sheet at December 31, 2006 and the future periods in which such obligations are expected to be settled in cash. Additional details regarding these obligations are provided in footnotes to the consolidated financial statements, as referenced in the table:

	Payments Due by Period				
(In thousands)	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Employment agreement (see Note 9)	$ 824	$ 412	$ 412	$ —	$ —
Operating lease obligations (see Note 9)	893	235	441	217	—
Research and development commitment (see Note 10)	50	50	—	—	—
Purchase obligations[1]	2,391	2,129	262	—	—
Total	$4,158	$2,826	$1,115	$217	$ —

(1) Purchase obligations include commitments related to contract drug manufacturing, outside testing and other purchase commitments.

Under our license agreements (see Note 3 to Item 8 of this Annual Report on Form 10-K), we are obligated to make milestone payments totaling $2,625,000 upon achieving specified milestones and to pay royalties to our licensors. These contingent milestone and royalty payment obligations are not included in the above table.

Under various agreements with contract research organizations, clinical sites and contract drug manufacturers, we expect to incur costs relating to the progress of clinical trials. These costs are expensed as incurred and are based upon patient enrollment, services rendered or other expenses as incurred. The accrual for clinical trials costs expensed but not yet paid is included on our balance sheet. In the event of termination, certain agreements provide for cancellation fees to be paid by us and for reimbursement of noncancellable commitments that may have been entered into on our behalf. These potential cancellation fees are not included in the above table.

ITEM 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

We are exposed to market risk, including changes to interest rates associated with our cash equivalents and foreign currency exchange rates. The following describes the nature of these risks which we do not believe to be material to us.

Our cash equivalents are generally highly liquid investments in money market funds and U.S. government securities. These investments are subject to interest rate risk and, as such, our interest income is sensitive to changes in U.S. interest rates. However, the conservative nature of our investments mitigates our interest rate exposure. Our investments are held for purposes other than trading and we believe that we currently have no material adverse market risk exposure. The weighted-average interest rate on cash equivalents held at December 31, 2006 was approximately 5.172%.

We have contracts with a vendor outside the U.S. that are denominated in a foreign currency. To date, fluctuations in this currency have not materially impacted our results of operations. We have no derivative financial instruments. We do not believe we have material exposures to changes in foreign currency exchange rates.

ITEM 8. ***Financial Statements and Supplementary Data***

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Vion Pharmaceuticals, Inc.

We have audited the accompanying consolidated balance sheets of Vion Pharmaceuticals, Inc. and subsidiaries as of December 31, 2006 and 2005, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2006 and for the period from May 1, 1994 (inception) to December 31, 2006. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Vion Pharmaceuticals, Inc. and subsidiaries at December 31, 2006 and 2005, and the consolidated results of their operations and their cash flows for each of the three years in the period ended December 31, 2006 and the period from May 1, 1994 (inception) to December 31, 2006, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Vion Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2006, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 12, 2007 expressed an unqualified opinion thereon.

As discussed in Note 2 to the consolidated financial statements, in 2006 the Company adopted Statement of Financial Accounting Standards ("SFAS") No. 123(Revised 2004), "Share-Based Payment."

/s/ Ernst & Young LLP

Hartford, Connecticut
March 12, 2007

Report of Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Vion Pharmaceuticals, Inc.

We have audited management's assessment, included in the accompanying Form 10-K, that Vion Pharmaceuticals, Inc. maintained effective internal control over financial reporting as of December 31, 2006, based on criteria established in Internal Control – Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Vion Pharmaceuticals, Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management's assessment and an opinion on the effectiveness of the company's internal control over financial reporting based on our audit.

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

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

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

In our opinion, management's assessment that Vion Pharmaceuticals, Inc. maintained effective internal control over financial reporting as of December 31, 2006, is fairly stated, in all material respects, based on the COSO criteria. Also, in our opinion, Vion Pharmaceuticals, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2006, based on the COSO criteria**.**

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Vion Pharmaceuticals, Inc. and subsidiaries as of December 31, 2006 and 2005, and the related consolidated statements of operations, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 2006 and the period from May 1, 1994 (inception) to December 31, 2006 and our report dated March 12, 2007 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

Hartford, Connecticut
March 12, 2007

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Balance Sheets

(In thousands, except share and per share data)	December 31, 2006	December 31, 2005
ASSETS		
Current assets:		
Cash and cash equivalents	**$ 30,914**	$ 52,762
Available-for-sale securities	**100**	—
Accounts receivable	**9**	31
Prepaid expenses	**203**	195
Total current assets	**31,226**	52,988
Property and equipment, net	**605**	706
Security deposits	**25**	25
Total assets	**$ 31,856**	$ 53,719
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accrued expenses	**$ 4,263**	$ 3,305
Accounts payable	**1,057**	855
Accrued payroll and payroll-related expenses	**740**	560
Deferred revenue	**18**	18
Total current liabilities	**6,078**	4,738
Deferred revenue	**324**	342
Total liabilities	**6,402**	5,080
Shareholders' equity:		
Preferred stock, $0.01 par value, authorized: 5,000,000 shares; issued and outstanding: none	**—**	—
Common stock, $0.01 par value, authorized: 150,000,000 shares; issued and outstanding: 71,366,506 and 66,177,892 shares at December 31, 2006 and 2005, respectively	**714**	662
Additional paid-in capital	**199,793**	197,916
Deferred compensation	**—**	(133)
Accumulated other comprehensive income	**100**	—
Deficit accumulated during the development stage	**(175,153)**	(149,806)
	25,454	48,639
Total liabilities and shareholders' equity	**$ 31,856**	$ 53,719

See Notes to Consolidated Financial Statements

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Statements of Operations

(In thousands, except share and per share data)	For the Year Ended December 31, 2006	2005	2004	For the Period from May 1, 1994 (Inception) through December 31, 2006
Revenues:				
Technology license fees	**$ 22**	$ 22	$ 26	$ 4,531
Research and laboratory support fees	**—**	1	149	5,932
Contract research grants	**—**	—	100	2,501
Total revenues	**22**	23	275	12,964
Operating expenses:				
Clinical trials	**13,070**	9,996	9,373	59,578
Other research and development	**8,414**	6,609	4,434	82,029
Total research and development	**21,484**	16,605	13,807	141,607
General and administrative	**4,262**	3,239	2,969	35,210
Marketing	**1,525**	—	—	1,525
Total operating expenses	**27,271**	19,844	16,776	178,342
Loss from operations	**(27,249)**	(19,821)	(16,501)	(165,378)
Interest income	**1,994**	1,828	547	9,242
Interest expense	**—**	(4)	—	(214)
Other expense	**(50)**	(4)	(73)	(172)
Loss before income taxes	**(25,305)**	(18,001)	(16,027)	(156,522)
Income tax provision (benefit)	**42**	40	28	(113)
Net loss	**(25,347)**	(18,041)	(16,055)	(156,409)
Preferred stock dividends and accretion	**—**	—	—	(18,489)
Loss applicable to common shareholders	**$ (25,347)**	$ (18,041)	$ (16,055)	$(174,898)
Basic and diluted loss applicable to common shareholders per share	**$ (0.38)**	$ (0.28)	$ (0.30)	
Weighted-average number of shares of common stock outstanding	**66,196,195**	65,161,176	53,464,140	

See Notes to Consolidated Financial Statements

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Statement of Changes in Shareholders' Equity

(In thousands, except share data)	Class A Convertible Preferred Stock		Class B Convertible Preferred Stock		Common Stock		Treasury Stock	Additional Paid-in Capital	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount						
Issuance of common stock — July and August 1994					2,852,548	$29					$ (21)	$ 8
Net loss											(476)	(476)
Balance at December 31, 1994	—	$—	—	$—	2,852,548	$29	$—	$ —	$ —	$—	$ (497)	$ (468)
Stock options issued for compensation — February 1995								540				540
Reverse acquisition of MelaRx Pharmaceuticals, Inc. — April 1995					2,000,000	20		4,300				4,320
Shares repurchased pursuant to employment agreements — April 1995					(274,859)	(3)					2	(1)
Private placement of common stock — April 1995					76,349	—		205				205
Warrants issued with bridge notes — April 1995								200				200
Initial public offering of Unit Purchase Options — August 1995 and September 1995					2,875,000	29		9,667				9,696
Issuance of common stock					1,250	—		1				1
Net loss											(9,531)	(9,531)
BALANCE AT DECEMBER 31, 1995	—	$—	—	$—	7,530,288	$75	$—	$14,913	$ —	$—	$(10,026)	$ 4,962
Issuance of Class A convertible preferred stock	1,250,000	13						22,890			(11,371)	11,532
Conversion of Class A convertible preferred stock	(164,970)	(1)			458,255	5		(4)				—
Class A convertible preferred stock dividend	21,998	—						256			(256)	—
Issuance of common stock					29,418	—		104				104
Compensation associated with stock option grants								190	(190)			—
Amortization of deferred compensation									83			83
Net loss											(7,609)	(7,609)
BALANCE AT DECEMBER 31, 1996	1,107,028	$12	—	$—	8,017,961	$80	$—	$38,349	$(107)	$—	$(29,262)	$ 9,072

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Statement of Changes in Shareholders' Equity (continued)

(In thousands, except share data)	Class A Convertible Preferred Stock		Class B Convertible Preferred Stock		Common Stock		Treasury Stock	Additional Paid-in Capital	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount						
Conversion of Class A convertible preferred stock	(396,988)	$(4)			1,102,757	$11		$ (7)				$ —
Class A convertible preferred stock dividend	47,592	—						623			(623)	—
Issuance of Class B convertible preferred stock			4,850	—				4,852			(370)	4,482
Conversion of Class B convertible preferred stock			(258)	—	64,642	1		(1)				—
Accretion of dividend payable on Class B convertible preferred stock								138			(138)	—
Extension/reissuance of underwriter warrants								168				168
Exercise of warrants					238	—		—				—
Issuance of common stock					598,336	6		3,464				3,470
Exercise of stock options					50,000	—		20				20
Compensation associated with stock option grants								56				56
Amortization of deferred compensation									35			35
Net loss											(5,344)	(5,344)
BALANCE AT DECEMBER 31, 1997	757,632	$ 8	4,592	$—	9,833,934	$98	$—	$47,662	$(72)	$—	$(35,737)	$11,959

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Statement of Changes in Shareholders' Equity (continued)

(In thousands, except share data)	Class A Convertible Preferred Stock		Class B Convertible Preferred Stock		Common Stock		Treasury Stock	Additional Paid-in Capital	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount						
Accretion of dividend payable on Class B convertible preferred stock								$ 287			$ (287)	$ —
Conversion of Class B convertible preferred stock			(4,592)	$—	1,205,178	$ 12		(12)				—
Premium on conversion dividend on Class B convertible preferred stock					585,898	6		2,044			(2,049)	1
Conversion of Class A convertible preferred stock	(174,981)	$(2)			486,062	5		(3)				—
Class A convertible preferred stock dividend	34,005	—						329			(329)	—
Discount on Series 1998 convertible preferred stock								1,597			(1,597)	—
Series 1998 convertible preferred stock accretion											(151)	(151)
Common stock issued in exchange for cancellation of outstanding warrants					1,792,952	18		(61)				(43)
Exercise of stock options					32,750	—		120				120
Exercise of warrants					16,272	—		11				11
Compensation associated with stock option grants								51				51
Amortization of deferred compensation									$ 35			35
Net loss											(10,478)	(10,478)
BALANCE AT DECEMBER 31, 1998	616,656	$ 6	—	$—	13,953,046	$139	$—	$52,025	$(37)	$ —	$(50,628)	$ 1,505

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Statement of Changes in Shareholders' Equity (continued)

(In thousands, except share data)	Class A Convertible Preferred Stock		Class B Convertible Preferred Stock		Common Stock		Treasury Stock	Additional Paid-in Capital	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
	Shares	Amount	Shares	Amount	Shares	Amount						
Conversion of Class A convertible preferred stock	(144,612)	$(1)			401,707	$ 4		$ (3)				$ —
Class A convertible preferred stock dividend	26,150	—						385			(385)	—
Series 1998 convertible preferred stock accretion											(325)	(325)
Common stock issued in exchange for cancellation of outstanding warrants					102	—						—
Exercise of stock options					470,886	5	(196)	650			(40)	419
Retirement of treasury stock					(35,659)	—	196				(196)	—
Exercise of warrants					26,296	—						—
Issuance of common stock					3,425,741	34		14,955				14,989
Amortization of deferred compensation									34			34
Net loss											(10,769)	(10,769)
BALANCE AT DECEMBER 31, 1999	498,194	$ 5	—	$—	18,242,119	$ 182	$ —	$ 68,012	$(3)	$ —	$(62,343)	$ 5,853
Conversion of Class A convertible preferred stock	(502,928)	(5)			1,397,035	14		(9)				—
Redemption of Class A convertible preferred stock	(545)	—						(5)				(5)
Class A convertible preferred stock dividend	5,279	—						248			(248)	—
Series 1998 convertible preferred stock accretion											(358)	(358)
Conversion of Series 1998 convertible preferred stock					1,507,024	15		5,523				5,538
Exercise of stock options					650,409	7		2,868				2,875
Exercise of warrants					4,371,055	44		23,270				23,314
Compensation associated with stock option grants								120				120
Amortization of deferred compensation									3			3
Change in net unrealized gains and losses										120		120
Net loss											(14,803)	(14,803)
Comprehensive loss												(14,683)
BALANCE AT DECEMBER 31, 2000	—	$—	—	$—	26,167,642	$ 262	$ —	$100,027	$—	$120	$(77,752)	$ 22,657

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Statement of Changes in Shareholders' Equity (continued)

(In thousands, except share data)	Class A Convertible Preferred Stock Shares	Class A Convertible Preferred Stock Amount	Class B Convertible Preferred Stock Shares	Class B Convertible Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Treasury Stock	Additional Paid-in Capital	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
Public offering of common stock — August 2001					2,500,000	$ 25		$ 11,386				$ 11,411
Exercise of stock options					191,527	2		777				779
Exercise of warrants					4,015	—		14				14
Compensation associated with stock option grants								111				111
Issuances under employee benefit plans					10,189	—		62				62
Change in net unrealized gains and losses										$(126)		(126)
Net loss											$ (13,810)	(13,810)
Comprehensive loss												(13,936)
BALANCE AT DECEMBER 31, 2001	—	$—	—	$—	28,873,373	$289	$—	$112,377	$—	$ (6)	$ (91,562)	$ 21,098
Exercise of stock options					10,395	—		32				32
Issuances under employee benefit plan					25,104	—		38				38
Change in net unrealized gains and losses										6		6
Net loss											(12,310)	(12,310)
Comprehensive loss												(12,304)
BALANCE AT DECEMBER 31, 2002	—	$—	—	$—	28,908,872	$289	$—	$112,447	$—	$ —	$(103,872)	$ 8,864
Private placement — June 2003					3,846,150	38		4,436				4,474
Private placement — September 2003					6,475,000	65		10,340				10,405
Exercise of stock options					5,552	—		3				3
Issuances under employee benefit plan					41,181	1		13				14
Net loss and comprehensive loss											(11,838)	(11,838)
BALANCE AT DECEMBER 31, 2003	—	$—	—	$—	39,276,755	$393	$—	$127,239	$—	$ —	$(115,710)	$ 11,922
Private placement — February 2004					13,553,845	136		32,791				32,927
Exercise of stock options					35,454	—		71				71
Exercise of warrants					2,987,567	30		7,311				7,341
Issuances under employee benefit plan					6,692	—		9				9
Net loss and comprehensive loss											(16,055)	(16,055)
BALANCE AT DECEMBER 31, 2004	—	$—	—	$—	55,860,313	$559	$—	$167,421	$—	$ —	$(131,765)	$ 36,215

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Statement of Changes in Shareholders' Equity (continued)

(In thousands, except share data)	Class A Convertible Preferred Stock Shares	Class A Convertible Preferred Stock Amount	Class B Convertible Preferred Stock Shares	Class B Convertible Preferred Stock Amount	Common Stock Shares	Common Stock Amount	Treasury Stock	Additional Paid-in Capital	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Shareholders' Equity
Direct offering — January 2005					10,000,000	$100		$ 30,094				$ 30,194
Restricted stock awards					77,610	1		158	(159)			—
Amortization of deferred compensation									26			26
Exercise of stock options					217,798	2		202				204
Issuances under employee benefit plan					22,171	—		41				41
Net loss and comprehensive loss											(18,041)	(18,041)
BALANCE AT DECEMBER 31, 2005	—	$—	—	$—	66,177,892	$662	$—	$197,916	$(133)	$ —	$(149,806)	$ 48,639
Stock-based compensation expense								**1,947**				**1,947**
Restricted stock awards, net					**5,024,536**	**51**		**(51)**				—
Reversal of deferred compensation								**(133)**	**133**			—
Exercise of stock options					**125,275**	**1**		**68**				**69**
Issuances under employee benefit plan					**38,803**			**46**				**46**
Change in net unrealized gains and losses										**100**		**100**
Net loss											**(25,347)**	**(25,347)**
Comprehensive loss												**(25,247)**
BALANCE AT DECEMBER 31, 2006	**—**	**$—**	**—**	**$—**	**71,366,506**	**$714**	**$—**	**$199,793**	**$ —**	**$100**	**$(175,153)**	**$ 25,454**

See Notes to Consolidated Financial Statements

Vion Pharmaceuticals, Inc.
(A Development Stage Company)
Consolidated Statements of Cash Flows

(In thousands)	For the Year Ended December 31, 2006	2005	2004	For the Period From May 1, 1994 (Inception) through December 31, 2006
Cash flows from operating activities:				
Net loss	**$(25,347)**	$(18,041)	$(16,055)	$(156,409)
Adjustments to reconcile net loss to net cash used in operating activities—				
Non-cash compensation	**1,947**	26	—	3,041
Depreciation and amortization	**212**	226	213	3,266
Loss on equipment disposals	**—**	—	—	12
Purchased research and development	**—**	—	—	4,481
Stock issued for services	**—**	—	—	600
Amortization of financing costs	**—**	—	—	346
Extension/re-issuance of placement agent warrants	**—**	—	—	168
Changes in operating assets and liabilities —				
Receivables and prepaid expenses	**14**	149	(113)	(211)
Other assets	**—**	—	—	(22)
Current liabilities	**1,340**	(1,331)	1,992	6,025
Deferred revenue	**(18)**	(18)	(17)	342
Net cash used in operating activities	**(21,852)**	(18,989)	(13,980)	(138,361)
Cash flows from investing activities:				
Acquisition of equipment	**(111)**	(417)	(358)	(2,939)
Purchases of marketable securities	—	—	(61,901)	(321,052)
Maturities of marketable securities	**—**	—	76,401	321,052
Net cash provided by (used in) investing activities	**(111)**	(417)	14,142	(2,939)
Cash flows from financing activities:				
Net proceeds from issuance of common stock	**115**	30,439	33,007	112,346
Net proceeds from initial public offering	**—**	—	—	9,696
Net proceeds from issuance of preferred stock	**—**	—	—	20,716
Net proceeds from exercise of Class A Warrants	**—**	—	—	5,675
Net proceeds from exercise of Class B Warrants	**—**	—	—	17,538
Net proceeds from exercise of other warrants	**—**	—	7,341	7,456
Repayment of equipment capital leases	**—**	—	—	(927)
Other financing activities, net	**—**	—	—	(286)
Net cash provided by financing activities	**115**	30,439	40,348	172,214
Change in cash and cash equivalents	**(21,848)**	11,033	40,510	30,914
Cash and cash equivalents, beginning of period	**52,762**	41,729	1,219	—
Cash and cash equivalents, end of period	**$ 30,914**	$ 52,762	$ 41,729	$ 30,914
Supplemental disclosure of cash flow information:				
Cash paid for interest	**$ —**	$ 4	$ —	$ 214
Cash paid for taxes	**$ 69**	$ 43	$ 7	$ 136

See Notes to Consolidated Financial Statements

1. The Company

Vion Pharmaceuticals, Inc. (the "Company") is a development stage company engaged in the development of therapeutics for the treatment of cancer. The Company was incorporated in March 1992 as a Delaware corporation and began operations on May 1, 1994.

In April 1995, the Company merged into OncoRx Research Corp., a wholly-owned subsidiary of MelaRx Pharmaceuticals Inc. ("MelaRx"), and the Company's name was changed to OncoRx, Inc. The stockholders of the Company were issued 2,654,038 common shares and 23,859 preferred shares of MelaRx in exchange for all 2,000,000 outstanding shares of common stock of the Company valued at $2.16 per share (fair value). As the shareholders of the Company obtained a majority interest in the merged company, for accounting purposes the Company was treated as the acquirer. Therefore, the transaction was recorded as a purchase in the Company's financial statements, which include the results of operations of the Company from inception and MelaRx from the date of acquisition. The $4.5 million excess of cost over the fair value of MelaRx's net tangible assets was treated as purchased research and development and expensed immediately.

In August 1995, the Company completed an initial public offering (refer to Note 5) resulting in net proceeds to the Company of $9.7 million and in April 1996 the Company's name was changed to Vion Pharmaceuticals, Inc.

In November 2004, the Company established a wholly-owned subsidiary in the United Kingdom to act as the Company's legal representative for clinical trials sponsored by the Company in the european economic area.

In October 2006, the Company established a wholly-owned subsidiary in Australia to act as the Company's legal representative for clinical trials sponsored by the Company in Australia.

2. Summary of Significant Accounting Policies

Principals of Consolidation

The consolidated financial statements of the Company include the accounts of Vion Pharmaceuticals, Inc. and its subsidiaries after elimination of intercompany accounts and transactions.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and notes thereto. Actual results may differ materially from those estimates.

Cash Equivalents

Cash equivalents include investments with maturities of three months or less when purchased. Cash equivalents are carried at cost which approximated market value.

Fair Value of Financial Instruments

The estimated fair value of amounts reported in the consolidated financial statements has been determined by using available market information and appropriate valuation methodologies. Carrying values for all financial instruments included in current assets and current liabilities approximate fair value, because of their short-term nature.

Available-for-Sale Securities

Available-for sales securities consist of equity securities received in connection with sublicense of technology which are classified as available-for-sale and are carried at fair value. Unrealized holding

gains and losses, net of the related income taxes, are reported as a separate component of shareholders' equity until realized. As of December 31, 2006, the Company's available-for-sale securities had a cost of $0 and gross unrealized holding gains of $100,000. There have been no realized investment gains or losses incurred through December 31, 2006.

Property and Equipment

Property and equipment are stated at cost. Depreciation of equipment is computed under the straight-line method over the estimated useful lives of the assets ranging from three to seven years. Leasehold improvements are carried at cost and amortized on a straight-line basis over the shorter of the lease term or the estimated useful lives of the assets.

The following is a summary of property and equipment as of December 31 (in thousands):

	2006	2005
Office and computer equipment	**$ 728**	$ 631
Furniture and fixtures	**210**	208
Laboratory equipment	**2,190**	2,212
Leasehold improvements	**403**	403
	3,531	3,454
Accumulated depreciation and amortization	**(2,926)**	(2,748)
Property and equipment, net	**$ 605**	$ 706

Depreciation expense was approximately $212,000, $226,000 and $213,000 for the years ended December 31, 2006, 2005 and 2004, respectively, and $3.3 million for the period from May 1, 1994 (inception) through December 31, 2006.

Income Taxes

Deferred income taxes are recognized for the future tax consequences of temporary differences between the financial statement carrying amounts and the tax basis of assets and liabilities, and for net operating loss and tax credit carryforwards. A valuation allowance is provided to reduce deferred income tax assets to an estimated realizable value.

Revenue Recognition

Technology License Fees. The Company has recognized revenue from fees, including non-refundable upfront fees, under license agreements (refer to Note 3) totaling $22,000, $22,000, $26,000 and $4.5 million for the years ended December 31, 2006, 2005 and 2004, and for the period from May 1, 1994 (inception) through December 31, 2006, respectively. Non-refundable upfront fees are recognized as revenue ratably over the performance period.

Research and Laboratory Support Fees. The Company recognizes revenue from research and laboratory support as the services are performed. Since 2005, the Company has not received any research and laboratory support fees.

Contract Research Grants. The Company has received grants in prior years from the National Cancer Institute for various research projects. The grants provide for reimbursement of project costs. Revenues from these grants of $100,000 and $2.5 million have been recognized as the costs were incurred for the year ended December 31, 2004, and for the period from May 1, 1994 (inception) to December 31, 2006, respectively. Since 2004, the Company has not received any contract research grants.

Research and Development Expenses

The Company records research and development expenses as incurred. The Company discloses clinical trials expenses and other research and development expenses as separate components of research and development expense in its statements of operations to provide more meaningful information to

investors. The classification of expenses into these components of research and development expense are based, in part, on estimates of certain costs when incurred. The effect of any change in the clinical trials expenses and other research and development expenses would be reflected in the period such determination was made.

Stock-Based Compensation

On January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123 (revised 2004), "*Share-Based Payment*" (SFAS 123R) that requires the recognition of expense related to the fair value of stock-based compensation in the Company's consolidated financial statements. Prior to the adoption of SFAS 123R, the Company accounted for stock-based compensation arrangements in accordance with the provisions of Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees* (APB 25), and provided pro forma disclosures required by Statement of Financial Accounting Standards No. 123, *Accounting for Stock-Based Compensation* (SFAS 123), as amended by Statement of Financial Accounting Standards No. 148, *Accounting for Stock-Based Compensation – Transition and Disclosure*" (SFAS 148). Under APB 25, no stock-based employee compensation cost is reflected in reported net loss when options granted to employees have an exercise price at least equal to the market value of the underlying common stock at the date of grant.

The Company adopted SFAS 123R using the modified prospective method. The Company's consolidated financial statements as of and for the year ended December 31, 2006 reflect the impact of adopting SFAS 123R. In accordance with the modified prospective method, the consolidated financial statements for prior periods have not been restated to reflect, and do not include, the impact of SFAS 123R.

For additional disclosures regarding stock-based compensation, refer to Note 6.

Other Expense

Other expense of $50,000, $4,000, $73,000, and $172,000 for the years ended December 31, 2006, 2005 and 2004, and for the period from May 1, 1994 (inception) through December 31, 2006, respectively, represents foreign currency transaction losses related to contracts that are denominated in a foreign currency with a vendor outside the U.S.

Per Share Data

The following table sets forth the computation of basic and diluted loss per share (in thousands, except per share data):

	2006	2005	2004
Net loss	**$(25,347)**	$(18,041)	$(16,055)
Weighted-average number of shares of common stock outstanding	**66,196**	65,161	53,464
Basic and diluted loss per share	**$ (0.38)**	$ (0.28)	$ (0.30)

For additional disclosures regarding warrants and preferred stock, refer to Note 5. For additional disclosures regarding stock options and restricted stock, refer to Note 6. As the Company has not generated net income in the periods presented, there is no dilutive per share calculation and therefore, options outstanding, warrants outstanding and unvested restricted stock have been excluded from the per share computations presented.

Comprehensive Loss

Comprehensive loss is comprised of net loss and other comprehensive income (OCI). OCI includes certain changes in stockholders' equity that are excluded from net income. Specifically, the Company includes in OCI unrealized gains and losses on our available-for-sale securities. Comprehensive loss for the years ended December 31, 2006, 2005 and 2004 has been reflected in the Consolidated Statements of Changes in Shareholders' Equity.

Recently Issued Accounting Standards

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements", (SFAS 157). This Statement is effective for financial statements issued for fiscal years beginning after November 15, 2007. SFAS 157 provides a common fair value hierarchy for companies to follow in determining fair value measurements in the preparation of financial statements and expands disclosure requirements relating to how such fair value measurements were developed. SFAS 157 clarifies the principle that fair value should be based on the assumptions that the marketplace would use when pricing an asset or liability, rather than company specific data. The Company does not expect the adoption of SFAS 157 to have a material impact on its results of operations and financial position.

3. License Agreements

License Agreements with Yale University

Since 1988, the Company, or predecessors of the Company, have entered into a series of agreements under which the Company has funded research at Yale University ("Yale") and licensed inventions from Yale. Pursuant to its initial agreement with Yale dated July 1, 1998, the Company funded research to investigate various aspects of the role of ultraviolet light and mammalian melanogenesis for purposes of melanoma treatment. This agreement expired in 2001. The remaining license agreements with Yale grant the Company exclusive licenses to make, use, sell and practice the inventions covered by various patents and patent applications relating to its primary product candidates as described below. Each license agreement requires the Company to pay royalties and, in some cases, milestone payments to Yale. Certain licenses are terminable in the event the Company does not exercise due diligence in commercializing the licensed technology.

Subsequent to entering into a license agreement with Yale in August 1994 which covers Cloretazine® (VNP40101M) and other compounds and is described below, the Company has paid approximately $10.5 million through December 31, 2006 to fund certain research at Yale, including research in the laboratories of Dr. Alan Sartorelli, one of the Company's directors, and Dr. Yung-Chi Cheng, a member of its scientific advisory board. The Company has agreed to pay an additional $50,000 to support the research activities of Dr. Sartorelli through the first quarter of 2007. Yale has sole discretion to use these funds to conduct research relating to products that it desires to pursue. Additionally, to the extent that such research results in technologies not covered by the its license agreements with Yale, the Company may be unable to utilize such technologies unless it negotiates additional license agreements.

License Agreement with Yale University – September 1990. Under a license agreement with Yale dated September 1990, as amended, the Company has an exclusive license to a synthetic form of melanin named MELASYN®. The term of the license is dictated by the expiration of any patents relating to any inventions or, with respect to non-patented inventions or research, 24 years from 1990 (i.e. through 2014). Under the terms of the amended license agreement, the Company pays a license fee to Yale based on a percentage of net sales and sublicensing revenues. Through December 31, 2006, the Company has paid royalties to Yale of $81,000 on sublicensing revenues under this agreement.

In March 2004, the Company entered into non-exclusive sublicense agreements for MELASYN® with Johnson and Johnson Consumer Companies, Inc. and with another sublicensor. The terms of these agreements do not include any upfront or milestone payments. If products including the Company's technology are developed, the Company will receive a royalty based on sales in countries where it has issued patents.

License Agreement with Yale University – August 1994. The Company is a party to a license agreement, as amended, with Yale entered into in August 1994. Under this amended license, Yale granted to the Company a non-transferable worldwide exclusive license to make, have made, use, sell and practice inventions under certain patents and patent applications for therapeutic and diagnostic purposes. The Company also has a non-exclusive license to an additional patent under this amended license. The patents and patent applications under this license and its amendments cover Cloretazine®

(VNP40101M) and other sulfonylhydrazine compounds, Triapine® and ß-L-Fd4C. The term of the license is dictated by the expiration of any patents relating to any inventions or, with respect to non-patented inventions or research, 17 years from 1994 (i.e. through 2011). Yale is entitled to royalties on sales, if any, of resulting products, sublicensing revenues and, with regard to several patents, potential milestone payments totaling $850,000 based on the status of clinical trials and/or regulatory approvals. There are no amounts due under the amended license agreement as of December 31, 2006.

Pursuant to the original agreement in 1994, the Company issued to Yale 159,304 shares of the Company's common stock and made a payment of $50,000. In June 1997, this license agreement was amended pursuant to which Yale agreed to reduce certain amounts payable by the Company in exchange for 100,000 additional shares of its common stock issued to Yale valued at $600,000. Through December 31, 2006, the Company has paid royalties to Yale of $107,000 on sublicensing revenues under this agreement.

License Agreements with Yale University – December 1995. In December 1995, the Company entered into a license agreement with Yale pursuant to which the Company received a non-transferable worldwide exclusive license, expiring over the lives of the patents, to three inventions relating to gene therapy for melanoma. Technology licensed by the Company under this agreement relates to TAPET®. Pursuant to the license agreement, the Company paid Yale a $100,000 fee. In June 1997, pursuant to an amendment to this license agreement, Yale agreed to reduce certain royalties payable on sublicense income and make certain other changes in exchange for 50,000 shares of the Company's common stock issued to Yale.

In December 1995, the Company entered into another license agreement with Yale pursuant to which the Company received a non-transferable worldwide exclusive license, expiring over the lives of the patents, to an invention relating to whitening skin.

Under these licensing agreements, Yale is entitled to potential milestone payments totaling $1,000,000 based on the status of clinical trials and regulatory approvals. In addition, Yale is entitled to royalties on sales, if any, of resulting products and sublicense revenues. There are no amounts due under these amended license agreements as of December 31, 2006.

Other License Agreements

License Agreement with Beijing Pason Pharmaceuticals, Inc. – October 2003. In October 2003, the Company entered into a license agreement with Beijing Pason Pharmaceuticals, Inc. ("Pason") providing them with the exclusive rights to develop, manufacture and market Triapine® in the People's Republic of China, Taiwan, Hong Kong and Macao (the "Territory"). The terms of the agreement included an initial payment of $500,000 which the Company received in November 2003, $4.75 million in potential additional milestone payments, and potential royalty payments of 11% of any Triapine® revenues in the Pason Territory. In accordance with the Securities and Exchange Commission's Staff Accounting Bulletin No. 104, *Revenue Recognition*, the Company will recognize revenue of approximately $400,000, which represents the initial payment received from Pason net of royalties paid to Yale, over the life of the agreement. The Company recognized revenue related to this agreement of approximately $18,000, $18,000, $18,000 and $58,000 for the years ended December 31, 2006, 2005 and 2004, and for the period from May 1, 1994 (inception) through December 31, 2006, respectively.

License Agreement with Austrian Inventors and Austria Wirtschaftsservice Gesellschaft m.b.H. – June 2005. In December 2003, the Company entered into a research collaboration and option agreement for certain novel compounds, hydrazones, with a group of inventors from the Institute of Pharmacy and the Institute of Medical Chemistry and Biochemistry at the University of Innsbruck, and Austria Wirtschaftsservice Gesellschaft m.b.H. In December 2003, the Company made an initial payment of $25,000 recorded as research and development expense to enter into the agreement. In September 2005, the Company entered into an exclusive license for these compounds and made an additional payment of $37,500 recorded as research and development expense. Under this license agreement, the Company must make milestone payments totaling $775,000 based on the progress of product development, and pay royalties based on product revenues.

4. Accrued Expenses

The following is a summary of accrued expenses as of December 31 (in thousands):

	2006	2005
Clinical trials	**$3,633**	$2,553
Professional fees	**247**	217
Gifts	**50**	250
Other	**333**	285
Total Accrued Expenses	**$4,263**	$3,305

5. Shareholders' Equity

In April 1995, two million shares of common stock valued at $2.16 per share were issued in conjunction with the merger with MelaRx resulting in net proceeds to the Company of $4.3 million (refer to Note 1). Shortly prior to the consummation of the merger, the Company issued 76,349 shares of common stock for net proceeds of $0.2 million.

In August 1995, the Company completed an initial public offering ("IPO") of 2,875,000 Unit Purchase Options ("UPOs"), consisting of an aggregate of 2,875,000 shares of common stock, 2,875,000 redeemable Class A Warrants and 2,875,000 redeemable Class B Warrants at $4.00 per UPO. The net proceeds to the Company from the IPO were $9.7 million before repayment of certain bridge financing. In addition, the Company granted to the underwriter an option to purchase up to 250,000 UPOs at $5.20 per UPO, subsequently adjusted due to antidilution provisions. Each Class A Warrant entitled the holder to purchase one share of common stock and one Class B Warrant. Each Class B Warrant entitled the holder to purchase one share of common stock. The Class A and Class B Warrants were exercisable through August 14, 2000, and were exchanged, exercised or redeemed prior to that date, resulting in aggregate net proceeds to the Company of $23.2 million.

Commencing with its IPO through December 31, 2006, the Company has raised gross proceeds of $171.2 million through the issuance of common stock, preferred stock and warrants.

Issuance and Extension of Placement Agent Warrants

In connection with two private financings of the Company's predecessor, MelaRx, Inc., the placement agent was issued warrants to purchase 202,486 shares of common stock at prices ranging from $3.56 to $4.44 per share, expiring on July 5, 1998 (the "Expiration Date"). Through the Expiration Date, holders of warrants to purchase 94,336 shares elected a cashless exercise into 13,949 shares of common stock and the remaining warrants to purchase 108,150 shares of common stock expired.

Class A Convertible Preferred Stock

In May 1996, the Company completed a private placement of 1,250,000 shares of Class A Convertible Preferred Stock ("Class A Stock"), at $10.00 per share, resulting in net proceeds to the Company of $11.5 million. Each share of Class A Stock was convertible at the option of the holder into 2.777777 shares of the Company's common stock. The Company recorded an imputed one-time non-cash dividend of approximately $11.4 million as a result of the difference between the conversion price and the quoted market price of the Company's common stock as of the date of issuance as required by the Financial Accounting Standards Board Emerging Issues Task Force D-60, *Accounting for the Issuance of Convertible Preferred Stock and Debt Securities with a Nondetachable Conversion Feature* (EITF D-60). The shares of Class A Stock paid semi-annual dividends of 5% per annum, payable in additional shares of Class A Stock. The Company recorded non-cash dividends from 1996 through 2000 totaling $1.8 million based on the quoted market price of the common stock as of the dividend date. All non-cash dividends have been recognized as a charge against the accumulated deficit with a corresponding increase in additional paid-in capital. The non-cash dividends have been included in the loss applicable to common shareholders.

In connection with the foregoing transaction, the Company issued warrants to the placement agent, expiring May 22, 2001 (the "Expiration Date"), to purchase an aggregate of 546,875 shares of the

Company's common stock at prices ranging from $3.96 to $12.00. As of the Expiration Date, holders of warrants to purchase 257,321 shares elected cash or cashless exercises into 174,572 shares of common stock and the remaining warrants to purchase 289,554 shares expired. The issuance of the Class A Stock at closing also triggered certain antidilution adjustment provisions of the Company's other outstanding warrants, resulting in the issuance of additional warrants.

In accordance with the terms of the Class A Stock, the Company notified the holders of outstanding shares of its intention to redeem their Class A stock on December 26, 2000 (the "Redemption Date") at a redemption price of $10.00 per share. All outstanding shares of Class A Stock were converted by the holders into shares of common stock with the exception of 545 shares of Class A Stock that were redeemed for an aggregate of $5,450 and cancelled as of the Redemption Date.

Class B Convertible Preferred Stock

In August 1997, the Company completed a private placement of 4,850 shares of non-voting Class B Convertible Preferred Stock ("Class B Stock") at $1,000 per share, resulting in net proceeds to the Company of $4.5 million. Shares of Class B Stock were immediately convertible into shares of common stock including an accretion of 8% per annum. The Company recorded an imputed one-time charge of $0.4 million as a result of the difference between the conversion price and the quoted market price of the Company's common stock at the date of issuance. Shares of the Class B Stock were eligible to receive dividends paid in Class C Convertible Preferred Stock ("Class C Stock") which were immediately convertible into shares of the Company's common stock. Conversions of Class B Stock in 1998 resulted in the issuance of 180,141 shares of common stock valued at $0.6 million. In addition, the Company recorded accretion of 37,168 shares of common stock valued at $0.1 million in 1997 and 61,078 shares of common stock valued at $0.3 million in 1998. All non-cash dividends were recorded as a charge against the accumulated deficit with a corresponding increase in additional paid-in capital. The non-cash dividends have been included in the loss applicable to common shareholders.

In August 1998, the Company reached agreement with the holders of its Class B Stock to convert an aggregate of 2,892 shares of Class B Stock, constituting all of the outstanding Class B Stock, into an aggregate of 1,070,423 shares of common stock. The conversions of Class B Stock resulted in the issuance of 304,188 shares of common stock valued at $1.1 million, and accretion of 6,553 shares of common stock valued at $23,000. As part of this agreement, an additional 101,569 common shares were issued to holders of the Class B Stock. In accordance with Financial Accounting Standards Board Emerging Issues Task Force D-42, *The Effect on the Calculation of Earnings Per Share for the Redemption or Induced Conversion of Preferred Stock*, the excess of $0.4 million of the fair value of the common stock issued upon conversion over the fair value of the common stock issuable pursuant to the original conversion terms was included in the loss applicable to common shareholders. Holders of the Class B Stock waived their antidilution rights arising from the issuance of the 5% Redeemable Convertible Preferred Stock Series 1998.

5% Redeemable Convertible Preferred Stock Series 1998

In June 1998, the Company completed a private placement of 5,000 shares of non-voting 5% Redeemable Convertible Preferred Stock Series 1998 ("Series 1998 Preferred Stock"). The Series 1998 Preferred Stock was issued at $1,000 per share, resulting in net proceeds to the Company of $4.7 million. The shares of Series 1998 Preferred Stock accrued dividends of 5% per annum payable in-kind. Each share of Series 1998 Preferred Stock was convertible into common stock based on the formula of issued price plus accrued dividends divided by $3.60. In connection with the sale of the Series 1998 Preferred Stock, the Company imputed a one-time non-cash dividend of approximately $1.6 million as a result of the difference between the conversion price and the quoted market price of the Company's common stock at the date of issuance as required by EITF D-60. Such amount was recognized upon issuance of the Series 1998 Preferred Stock as a charge against the accumulated deficit with a corresponding increase to additional paid-in capital. The imputed non-cash dividend was included in the loss applicable to common shareholders. The dividend requirement on Preferred Stock

also reflects the amortization of the costs of completing the offering and the accretion of the 5% per annum dividend. The 5% accretion resulted in a charge against the accumulated deficit with a corresponding increase to additional paid-in-capital from 1998 through 2000 of $0.8 million. The issuance of the Series 1998 Preferred Stock at closing also triggered certain antidilution adjustment provisions of the Company's outstanding warrants, resulting in the issuance of additional warrants.

In accordance with the terms of the Series 1998 Preferred Stock, all of the outstanding preferred shares having a redemption value of $5.4 million were automatically converted into 1,507,024 common shares at the $3.60 conversion price, effective February 22, 2000.

Antidilution Adjustment to Class A and Class B Warrants

As a result of the sale in May 1996 of Class A Stock, an antidilution adjustment was made to the exercise price of the Class A Warrants and the Class B Warrants and there was a corresponding distribution of additional Class A Warrants and Class B Warrants. Each holder of a Class A Warrant was issued an additional 0.1 Class A Warrant and the exercise price of the Class A Warrants was reduced from $5.20 to $4.73. Each holder of a Class B Warrant was issued an additional 0.1 Class B Warrant and the exercise price of the Class B Warrants was reduced from $7.00 to $6.37.

Subsequently, as a result of the sale in June 1998 of Series 1998 Preferred Stock, an additional antidilution adjustment was made to the exercise price of the Class A Warrants and the Class B Warrants with a corresponding distribution of additional Class A Warrants and Class B Warrants. Each holder of a Class A Warrant was issued an additional 0.02 Class A Warrant and the exercise price of the Class A Warrants was reduced from $4.73 to $4.63. Each holder of a Class B Warrant was issued an additional 0.02 Class B Warrant and the exercise price of the Class B Warrant was reduced from $6.37 to $6.23.

Class A and Class B Warrant Exchange Offers

In 1998, the Company offered to exchange each outstanding Class A Warrant, at the holder's option, for either 0.438 shares of common stock or 0.254 shares of common stock and $0.66 in cash. The Company simultaneously offered to exchange each outstanding Class B Warrant, at the holder's option, for either 0.212 shares of common stock or 0.123 shares of common stock and $0.32 in cash. As a result of the exchange offers, 3,209,806 Class A Warrants and 1,881,835 Class B Warrants were exchanged for 1,395,027 and 397,925 shares of the Company's common stock, and $39,000 and $3,700 in cash, respectively.

Redemption of Class A Warrants

The Class A Warrants entitled the holder to purchase one share of common stock and one Class B Warrant for an exercise price of $4.63. In February 2000, the Company notified holders of its outstanding Class A Warrants of its intention to redeem the warrants on March 13, 2000 (the "Redemption Date"). The Company received net proceeds of $5.7 million from the exercise of 1.3 million Class A Warrants.

Redemption of Class B Warrants

The Class B Warrants entitled the holder to purchase one share of common stock at an exercise price of $6.23. In March 2000, the Company notified holders of its outstanding Class B Warrants of its intention to redeem the warrants on April 27, 2000 (the "Redemption Date"). The Company received net proceeds of $17.5 million from the exercise of 2.9 million Class B Warrants.

Private Placement of Common Stock – April 1999

In April 1999, the Company completed a private placement of 893,915 shares of its common stock at $4.47 per share resulting in net proceeds of approximately $4 million.

Public Offering of Common Stock – October 1999

In October and November 1999, the Company completed the sale of 2,530,000 shares of common stock at $5.00 per share, in an underwritten public offering. The net proceeds from this offering were

approximately $11.1 million. In conjunction with the offering, the underwriter was granted warrants to purchase 220,000 shares of common stock at $6.00 per share, expiring October 25, 2004. Through the expiration date, holders of warrants to purchase 12,000 shares elected cashless exercises into 6,786 shares of common stock and the remaining warrants to purchase 208,000 shares of common stock expired.

Public Offering of Common Stock – August 2001

In August 2001, the Company completed the sale of 2,500,000 shares of common stock at $5.00 per share, in an underwritten public offering. The net proceeds from this offering were approximately $11.4 million.

Private Placement of Common Stock – June 2003

In June 2003, the Company completed a private placement of 3,846,150 shares of its common stock at $1.30 per share and warrants to purchase 1,923,075 shares of common stock at $2.20 per share. The warrants expire on June 23, 2008. The net proceeds from this offering were approximately $4.5 million.

Private Placement of Common Stock – September 2003

In September 2003, the Company completed a private placement of 6,475,000 shares of its common stock at $1.75 per share and warrants to purchase 6,475,000 shares of common stock at $2.50 per share. A warrant to purchase an additional 100,000 shares of common stock at $2.50 per share was issued to the placement agent and valued at approximately $172,000. All of these warrants expire on September 19, 2008. After April 8, 2005, if the volume weighted average price of the common stock is at or above $3.50 per share for 20 consecutive trading days, then the warrants shall become callable by the Company upon written notice within three trading days of such period. The net proceeds, after consideration of cash offering costs, were approximately $10.4 million.

Private Placement of Common Stock – February 2004

In February 2004, the Company completed a private placement of 13,553,845 shares of its common stock at $2.60 per share and warrants to purchase 3,388,463 shares of common stock at $3.25 per share. A warrant to purchase an additional 300,000 shares of common stock at $3.25 per share was issued to the placement agent and valued at approximately $667,000. All of these warrants expire on February 11, 2009. After May 26, 2005, if the volume weighted average price of the common stock is at or above $4.875 per share for 20 consecutive trading days, then the warrants shall become callable by the Company upon written notice within 10 trading days of such period. The net proceeds, after consideration of cash offering costs, were approximately $33 million.

Registered Direct Offering of Common Stock – January 2005

In January 2005, the Company received net proceeds of $30.2 million from a registered direct offering of 10 million shares of its common stock at $3.25 per share.

Reserved Shares

As of December 31, 2006, the Company had 150 million authorized shares of common stock of which 71,366,506 were issued and outstanding. An aggregate of additional 16,194,537 shares of its common stock were reserved for issuance upon the exercise of outstanding warrants and options, as well as for potential issuance under the Company's 2005 Stock Incentive Plan and 2000 Vion Employee Stock Purchase Plan (see Note 6). In addition, the Company may from time to time sell up to an aggregate of $75 million of its common stock or warrants under an effective Form S-3 shelf registration statement including a registered direct offering in January 2005 of 10 million shares of common stock at $3.25 per share. The Company also has a stockholder rights plan whereby each share of its outstanding common stock has the right to purchase one share of common stock as set forth in the rights agreement, as amended.

Warrants Outstanding

A summary of the outstanding warrants to purchase shares of the Company's common stock, as described above, as of December 31, 2006 is as follows:

Warrants issued in connection with	Number of Shares of Common Stock to be Issued Upon Exercise of Outstanding Warrants	Exercise Price Per Share of Outstanding Warrants	Expiration Date
Private placement – June 2003	1,192,349	$2.20	6/23/2008
Private placement – September 2003	4,439,313	$2.50	9/19/2008
Private placement – February 2004	3,567,309	$3.25	2/11/2009
Total	9,198,971		

6. Stock-Based Compensation

On January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123 (revised 2004), "*Share-Based Payment*" (SFAS 123R) that requires the recognition of expense related to the fair value of stock-based compensation in the Company's consolidated financial statements. The Company adopted SFAS 123R using the modified prospective method. The Company's consolidated financial statements as of and for the year ended December 31, 2006 reflect the impact of adopting SFAS 123R. Stock-based compensation expense recognized for the year ended December 31, 2006 included: (i) compensation expense for all share-based payments granted prior to, but not yet vested, as of December 31, 2005, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123, and (ii) compensation expense for share-based payments granted subsequent to December 31, 2005, based on the grant-date fair value estimated in accordance with SFAS 123R. Upon adoption of SFAS 123R, on January 1, 2006 the Company reversed the unrecognized deferred compensation costs associated with 2005 restricted stock awards of $133,000 with a corresponding reduction to the Company's additional paid-in capital. In accordance with the modified prospective method, the consolidated financial statements for prior periods have not been restated to reflect, and do not include, the impact of SFAS 123R.

Equity Compensation Plans

2005 Stock Incentive Plan (2005 Plan) – The 2005 Plan provides for the issuance of up to 7,527,518 shares of common stock for a range of awards, including restricted stock, stock appreciation rights, deferred stock, other awards based on shares of common stock and performance awards. No award may be made under the 2005 Plan after October 25, 2015.

Stock Option Plans – As of December 31, 2006, the Company had stock options outstanding to purchase 4,232,017 shares of common stock under the following stock option plans: (i) the 2003 Stock Option Plan; (ii) the Amended and Restated 1993 Stock Option Plan; and (iii) the Senior Executive Stock Option Plan. There are no additional shares available for issuance under these plans. The options outstanding will continue to vest in annual installments of 25% on each of the first, second, third and fourth anniversaries of the date of grant, or earlier on a change of control. Incentive options expire the earlier of: (i) ten years after the date of grant, or (ii) three months after termination of service, if vested. Incentive options which are not vested expire immediately upon termination of service.

Employee Stock Purchase Plan (ESPP) – A total of 450,000 shares of common stock are authorized for issuance under the ESPP. The ESPP permits eligible employees to purchase up to 2,000 shares of common stock at the lower of 85% of the fair market value of the common stock at the beginning or at the end of each six-month offering period.

Stock-Based Compensation Expense

Beginning January 1, 2006, the Company has recognized compensation expense using the straight-line attribution method for awards of restricted stock, grants of stock options and purchases under its

employee stock purchase plan based on the grant-date fair value of the portion of stock-based payment awards that is ultimately expected to vest. Stock-based compensation expense recognized for the year ended December 31, 2006 included: (i) compensation expense for all share-based payments granted prior to, but not yet vested, as of December 31, 2005, based on the grant-date fair value estimated in accordance with the provisions of SFAS 123, and (ii) compensation expense for share-based payments granted subsequent to December 31, 2005. The adoption of SFAS 123R on January 1, 2006 had the following impact on the operating results for the year ended December 31, 2006: net loss was increased by $1.9 million, and the basic and diluted loss per share was increased by $0.03.

As stock-based compensation expense recognized is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. SFAS 123R requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. In the pro forma information required under SFAS 123 for the periods prior to 2006, the Company accounted for forfeitures as they occurred. The impact on previously reported pro forma disclosures under SFAS 123 is not material.

The following table shows the pro forma impact on net loss and loss applicable to common shareholders per share if the Company had applied the fair-value method under SFAS 123 to stock-based compensation for the years ended December 31, 2005 and 2004, and the period from inception through December 31, 2005 (in thousands, except per share amounts):

	2005	2004	From Inception (May 1, 1994) to December 31, 2005
Reported net loss	$(18,041)	$(16,055)	$(131,062)
Add: Stock-based employee compensation expense included in reported net loss	27	—	795
Deduct: Stock-based employee compensation expense determined under the fair value based method for all awards	(1,705)	(1,888)	(22,707)
Pro forma net loss	(19,719)	(17,943)	(152,974)
Pro forma preferred stock dividend and accretion	—	—	(18,489)
Pro forma loss applicable to common shareholders	$(19,719)	$(17,943)	$(171,463)
Reported basic and diluted loss applicable to common shareholders per share	$ (0.28)	$ (0.30)	
Pro forma basic and diluted loss applicable to common shareholders per share	$ (0.30)	$ (0.34)	

Option Grant-Date Fair Value

The Company used the Black-Scholes option pricing model to calculate the grant-date fair value of option awards using the following estimated weighted-average assumptions for the years ended December 31, 2005 and 2004. There have been no options granted since October 2005.

	2005	2004
Options granted	82,000	745,700
Weighted-average exercise price	$ 2.24	$ 4.53
Weighted-average grant date fair value	$ 1.22	$ 2.97
Assumptions:		
Risk-free interest rate	3.91%	3.75%
Expected volatility	54%	72%
Expected term (in years)	5.80	5.95
Expected dividend yield	—	—

Risk-free interest rate – The yield on the zero-coupon U.S. Treasury securities for a period that is commensurate with the expected term assumption is used as the risk-free interest rate.

Expected volatility – The Company is responsible for estimating volatility and has considered a number of factors when estimating volatility. The Company has used historical volatility to estimate the grant-date fair value of stock options. The Company believes that past stock price volatility is likely to be indicative of future stock price behavior.

Expected term – The Company uses historical employee exercise and option expiration data to estimate the expected term assumption for the Black-Scholes grant-date valuation. The Company believes that this historical data is currently the best estimate of the expected term of a new option and that generally all groups of employees exhibit similar exercise behavior.

Expected dividend yield – The Company has never paid dividends on its common stock. The Company currently intends to retain all future earnings for use in the operation of its business and does not anticipate paying cash dividends in the foreseeable future. Accordingly, the expected dividend yield assumption is 0%.

Forfeitures – The amount of stock-based compensation recognized during a period is based on the value of the portion of the awards that vests during the period. SFAS 123R requires forfeitures to be considered in determining fair value and to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ significantly from those estimates. Forfeitures represent only the unvested portion of a surrendered option. The Company has applied an annual forfeiture rate of 0.44% to all unvested options as of December 31, 2006 based on an analysis of the Company's historical forfeitures. This forfeiture rate will be re-evaluated quarterly and adjusted as necessary. The actual expense recognized over the vesting period will only be for those shares that vest.

Stock Option Activity

A summary of the activity under the Company's stock option plans is as follows:

	2006			2005		2004	
	Options (in 000's)	Weighted-Average Exercise Price	Weighted-Average Fair Value	Options (in 000's)	Weighted-Average Exercise Price	Options (in 000's)	Weighted-Average Exercise Price
Outstanding at beginning of year	**4,932**	**$4.81**	**$3.75**	5,174	$4.68	4,497	$4.68
Granted	**—**	**—**	**—**	82	2.24	746	4.53
Exercised	**(125)**	**0.55**	**0.55**	(218)	0.94	(35)	2.21
Forfeited	**(21)**	**3.34**	**2.39**	(17)	3.91	(24)	2.85
Expired	**(554)**	**6.40**	**4.70**	(89)	4.76	(10)	6.03
Outstanding at end of year	**4,232**	**$4.73**	**$3.73**	4,932	$4.81	5,174	$4.68
Exercisable at end of year	**3,977**	**$4.76**	**$3.79**	4,306	$4.97	3,955	$4.93
Vested or expected to vest at December 31, 2006[1]	**4,231**	**$4.73**	**$3.73**				

(1) In addition to the vested options, the Company expects a portion of the options not yet vested to vest at some point in the future. Options expected to vest are calculated by applying an estimated forfeiture rate to the options not yet vested.

The following table presents weighted-average price and life information about significant option groups outstanding as of December 31, 2006:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding (in 000's)	Weighted-Average Remaining Life (Years)	Weighted-Average Exercise Price	Number Exercisable (in 000's)	Weighted-Average Exercise Price
$0.36 – $1.79	948	6.1	$ 0.97	948	$ 0.97
$1.80 – $3.57	142	5.1	2.44	116	2.47
$3.58 – $5.36	1,815	5.4	4.58	1,586	4.58
$5.37 – $7.15	812	2.1	5.81	812	5.81
$7.16 – $8.94	240	4.0	7.40	240	7.40
$8.95 – $10.72	10	3.4	9.88	10	9.88
$10.73 – $14.30	35	3.8	12.25	35	12.25
$14.31 – $16.09	220	3.2	14.88	220	14.88
$16.10 – $17.88	10	3.8	17.88	10	17.88
	4,232	4.7	$ 4.73	3,977	$ 4.76

During the year ended December 31, 2006, the total intrinsic value of options exercised (i.e. the difference between the market price at exercise and the price paid by the option holder to exercise the options) was $194,000 and the total amount of cash received from exercise of these options was $69,000. The total grant-date fair value of stock options that vested during the year ended December 31, 2006 was $898,000.

For the year ended December 31, 2006, the Company recorded compensation expense related to stock options of $611,000. As of December 31, 2006, there was $647,000 of total unrecognized compensation cost related to unvested stock option awards. That cost is expected to be recognized throughout the period ending October 31, 2009.

The Option Plans provided for the automatic grant of non-qualified stock options to purchase shares of common stock to directors of the Company who are not employees or principal stockholders. The exercise price for each share subject to a director option was equal to the fair market value of the common stock on the date of grant. Director options vested after one year under the 2003 Plan and two years under the 1993 Plan, or earlier on a change of control. Generally, director options will

expire the earlier of: (i) 10 years after the date of grant, or (i) one year after termination of service as a director under the 2003 Plan or 90 days after termination of service as a director under the 1993 Plan. Options granted to directors totaled 0, 40,000 and 115,000 in 2006, 2005 and 2004, respectively.

Restricted Stock Activity

For the years ended December 31, 2006 and 2005, the Company issued 5,107,869 shares and 77,610 shares of restricted stock, respectively, at a weighted-average fair value of $1.50 per share and $2.05 per share, respectively. In September 2006, the Company canceled 83,333 shares of restricted stock which resulted in the reversal of previously recorded compensation expense of $37,000 as the conditions for vesting were not met. The Company recorded net compensation expense for restricted stock of $1.3 million and $27,000 for the years ended December 31, 2006 and 2005, respectively. As of December 31, 2006, there was $6.3 million of total unrecognized compensation cost related to unvested restricted stock awards. That cost is expected to be recognized throughout the period ending May 2009.

An initial restricted stock grant is made to non-employee director upon initial appointment or election to the board which shares will vest in three equal annual installments on the anniversary of the grant date or upon a change in control. Further, on the first trading day following each annual meeting, each eligible director will receive an automatic grant of restricted stock which shares will fully vest one year after the date of each grant or upon a change in control. Restricted stock grants to directors totaled 91,200 shares and 77,610 shares in 2006 and 2005, respectively.

Employee Stock Purchase Plan

A total of 450,000 shares of common stock are authorized for issuance under the Company's employee stock purchase plan (the "Stock Purchase Plan"). The Stock Purchase Plan permits eligible employees to purchase up to 2,000 shares of common stock at the lower of 85% of the fair market value of the common stock at the beginning or at the end of each six-month offering period. 38,803, 22,171 shares and 6,692 shares were issued in 2006, 2005 and 2004, respectively, under the Stock Purchase Plan. For the year ended December 31, 2006, the Company recorded compensation expense of $8,000 for issuances under the Stock Purchase Plan.

7. 401(k) Savings Plan

The Company makes matching contributions in cash under a 401(k) Savings Plan up to an annual maximum match of $1,000 per employee . The expense for the matching contribution was $33,000, $24,000 and $23,000 for the years ended December 31, 2006, 2005 and 2004, respectively, and $254,000 for the period from May 1, 1994 (inception) through December 31, 2006.

8. Income Taxes

At December 31, 2006, the Company has available for federal income tax purposes net operating loss carryforwards, subject to review by the Internal Revenue Service, totaling $138.4 million and a general business tax credit of $11.4 million expiring in 2010 through 2026. The difference between the deficit accumulated during the development stage for financial reporting purposes and the net operating loss carryforwards for tax purposes is primarily due to certain costs which are not currently deductible for tax purposes and differences in accounting and tax basis resulting from the merger described in Note 1. The ability of the Company to realize a future tax benefit from a portion of its net operating loss carryforwards and general business credits may be limited due to changes in ownership of the Company.

Significant components of the deferred income taxes are as follows (in thousands):

	December 31, 2006	December 31, 2005
Operating loss carryforwards	**$ 55,280**	$ 44,845
General business tax credit carryforwards	**11,404**	3,662
AMT tax credit carryforwards	**10**	10
Contributions	**434**	786
Compensation related	**730**	243
Other	**328**	311
Total deferred income tax asset	**68,186**	49,857
Valuation allowance	**(68,186)**	(49,857)
Deferred income tax asset, net	**$ —**	$ —

The valuation allowance increased by $18.3 million and $5.9 million during 2006 and 2005, respectively.

For the years ended December 31, 2006, 2005 and 2004, the Company recorded approximately $42,000, $40,000 and $28,000, respectively, related to state capital taxes paid.

9. Commitments and Contingencies

Leases

The Company has non-cancelable operating leases for its facility and its laboratory and office equipment expiring through 2010. Rental expense for the facility lease is recognized on a straight-line basis. Rental expense for operating leases was approximately $261,000, $344,000 and $298,000 for the years ended December 31, 2006, 2005 and 2004, respectively, and $3.0 million for the period from May 1, 1994 (inception) through December 31, 2006. As of December 31, 2006, future minimum lease payments due under non-cancelable operating lease agreements with initial terms in excess of one year are $235,000 for 2007, $224,000 for 2008, $217,000 for 2009, and $217,000 for 2010.

Agreements

Under the terms of an employment agreement, the Company is obligated to pay its Chief Executive Officer (“CEO”) a minimum annual salary of $412,000 through December 31, 2008. The CEO is also eligible for a bonus of up to 50% of his base salary based on the achievement of specified objectives. In the event the CEO’s employment is terminated by the Company for any reason other than cause or disability, or if the CEO terminates for good reason as defined in the agreement, the Company is obligated to pay him two times the sum of his base salary plus his average annual bonus for the prior two years and to continue payment of certain insurance costs on his behalf.

The Company has entered into severance agreements with its officers pursuant to which each of these officers would be entitled to certain payments in the event such officer loses his employment during the twelve-month period following a “change of control”, as defined in the agreement, and additionally, in the case of the Company’s President, following a change in the Company’s CEO. Specifically, the officer would be entitled to a lump sum severance payment equal to the sum of twelve months of the officer’s monthly base salary plus the average of the last two cash bonus payments made to the officer, and to the continuation of group health insurance benefits for up to eighteen months. The foregoing amounts are not payable if termination of the officer is because of his death, by the Company for cause, or by the officer other than for good reason.

A former director of the Company is a party to a Consulting and Finder’s Agreement with the Company dated June 4, 1992, and amended February 17, 1995. This agreement entitles him to receive an annual fee equal to 10% of the net after-tax profits of the Company attributable to the sale or licensing of products or technology related to TAPET® licensed pursuant to the Company’s

December 1995 license agreement with Yale (refer to Note 3), until the cumulative total of such fees equals $3 million. Such fee continues to be payable notwithstanding the director's death until the $3 million has been paid. Through December 31, 2006, no amounts are due or have been paid under this agreement.

The Company has various commitments relating to its research and license agreements (refer to Note 3).

The Company enters into indemnification provisions under its agreements with other companies in the ordinary course of business, typically clinical sites, suppliers and business partners. Pursuant to these agreements, we generally indemnify, hold harmless and agree to reimburse the indemnified parties for losses suffered or incurred by the indemnified parties in connection with use or testing of our product candidates, or with any U.S patent or any copyright or other intellectual property infringement claim by any third party with respect to products. The term of these indemnification agreements is generally perpetual. The potential amount of future payments we could be required to make under these indemnification agreements is unlimited. We have not incurred any costs to defend lawsuits or settle claims related to these indemnification agreements. We have no liabilities recorded for costs associated with these agreements as of December 31, 2006.

10. Related Party Transactions

The Company recorded research and development expense of $0, $200,000 and $200,000 for each of the years ended December 31, 2006, 2005 and 2004, respectively, related to gifts to fund research through March 31, 2007 at the laboratory headed by one of its directors, an affiliate of Yale. Included in the Company's current liabilities at December 31, 2006 and 2005, is $50,000 and $100,000, respectively, for the balance of the gift to be paid in the first quarter of 2007.

11. Selected Quarterly Financial Data (Unaudited)

The following is a summary of unaudited selected quarterly financial data for the years ended December 31, 2006 and 2005 (in thousands, except per share amounts):

	Quarter				Year
2006	**First**	**Second**	**Third**	**Fourth**	**2006**
Revenues	**$ 9**	**$ 1**	**$ 6**	**$ 6**	**$ 22**
Net loss	**(5,971)**	**(6,933)**	**(6,342)**	**(6,101)**	**(25,347)**
Basic and diluted loss per share	**(0.09)**	**(0.10)**	**(0.10)**	**(0.09)**	**(0.38)**
	Quarter				**Year**
2005	**First**	**Second**	**Third**	**Fourth**	**2005**
Revenues	$ 5	$ 7	$ 6	$ 5	$ 23
Net loss	(4,552)	(5,107)	(3,727)	(4,655)	(18,041)
Basic and diluted loss per share	(0.07)	(0.08)	(0.06)	(0.07)	(0.28)

12. Subsequent Event (Unaudited)

In February 2007, the Company completed a private placement of $60 million principal amount of 7.75% convertible senior notes and warrants to purchase an aggregate of up to 7.8 million shares of common stock. The Company will pay interest on the notes on February 15 and August 15 of each year, beginning on August 15, 2007. The Company may pay interest on the principal amount of the notes in at its option in cash or registered shares of its common stock having a fair value equal to the interest payment due, subject to certain limitations.

The Company received net proceeds after debt discount and issuance costs of approximately $55.4 million. The notes will be recorded in the Company's financial statements for the quarter ended March 31, 2007 as a long-term liability at an initial carrying value of approximately $53.4 million which represents the principal amount of the notes of $60 million less the original issue discount (OID). The OID is comprised of (i) the discount of $3.6 million given to the initial purchaser of the

notes and (ii) the proceeds of $3 million allocated to the warrants based on their relative fair value. Prepaid issuance costs of approximately $1 million will be recorded. The OID and prepaid issuance costs will be amortized as interest expense using the effective interest method over the five year life of the notes.

The holders may convert the notes into shares of common stock at any time after the earlier of (i) the date a shelf registration with respect to the resale of the shares of common stock issuable upon conversion of the notes becomes effective and (ii) August 19, 2007, and before their maturity on February 12, 2012 unless the Company has previously repurchased or redeemed the notes. The notes are convertible into the Company's common stock at an initial conversion rate of 520.833 shares of common stock per each $1,000 principal amount of notes, subject to adjustment in certain circumstances, which is equal to an initial conversion price of $1.92 per share. For each $1,000 principal amount of the notes, investors received warrants to purchase 130 shares of Vion common stock at an initial exercise price of $2.00 per share, subject to adjustment. The holders may exercise the warrants for shares of common stock at any time after the earlier of (i) the date a shelf registration with respect to the resale of the shares of common stock issuable upon exercise of the warrants becomes effective and (ii) August 19, 2007, and prior to their expiration on February 15, 2010, or earlier upon redemption.

Subject to certain conditions, the notes shall automatically convert if, at any time after February 20, 2007 and before February 15, 2012, the closing price per share of the Company's common stock has exceeded 150% of the conversion price then in effect for at least 20 trading days within any 30-consecutive trading day period. Upon any automatic conversion of notes, the Company will pay an amount equal to $232.50 per each $1,000 principal amount of notes so converted, less the amount of any interest paid on such notes prior to the conversion date. This payment may be made at the Company's option in cash, registered shares of its common stock or some combination of cash and registered shares of its common stock having a fair value equal to the payment due.

On or after February 15, 2010, the Company will have the right to redeem some or all of the notes for cash at any time, at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest to, but not including, the redemption date.

In the event of a fundamental change prior to February 15, 2010, the holder may require the Company to repurchase in cash any notes held or the Company shall pay a make-whole premium on the notes converted in connection with a fundamental change by issuing additional shares of common stock upon conversion of such notes, subject to certain limitations.

The Company may redeem the outstanding warrants at any time after the warrants become exercisable in whole and not in part at a price of $0.01 per warrant upon a minimum of 30 days prior written notice of redemption if the last sales price of the Company's common stock equals or exceeds 150% of the exercise price per share then in effect for at least 20 trading days within any 30-consecutive trading day period ending three business days before the Company sends the notice of redemption and there is an effective registration statement relating to the resale of all the shares of common stock issuable to warrant holders upon exercise of the warrants. If the Company calls the warrants for redemption, each warrant holder will be entitled to exercise his or her warrant prior to the date scheduled for redemption.

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

Based on their review and evaluation as of December 31, 2006, our Chief Executive Officer and Chief Financial Officer, have concluded that our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) were effective

to ensure that the information required to be disclosed in the reports that we file or submit under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission rules and forms.

Management's Annual 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) under the Securities Exchange Act of 1934, as amended). Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2006. In making this assessment, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in *Internal Control-Integrated Framework*. Based on the assessment using those criteria, our management concluded that, as of December 31, 2006, our internal control over financial reporting was effective. Our independent registered public accounting firm, Ernst & Young LLP, audited the consolidated financial statements included in this Annual Report on Form 10-K and have issued an audit report on our management's assessment of our internal control over financial reporting as well as on the effectiveness of our internal control over financial reporting, which is included herein.

There was no change in our internal control over financial reporting during the quarter ended December 31, 2006 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

Item 9B. ***Other Information***

None.

PART III

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

Executive Officers and Directors

Information concerning our executive officers and directors is set forth in Part I of this Annual Report on Form 10-K.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act of 1934 requires our executive officers and directors, and persons who beneficially own more than ten percent of our Common Stock to file initial reports of ownership and reports of changes in ownership with the SEC and the Nasdaq Stock Market. Executive officers, directors and beneficial owners of more than ten percent of our Common Stock are required by the SEC to furnish us with copies of all Section 16(a) forms they file.

Based upon a review of the forms furnished to us and written representations from our executive officers and directors, we believe that during fiscal 2006 all Section 16(a) filing requirements applicable to our executive officers, directors and beneficial owners of more than ten percent of our Common Stock were complied with.

Code of Ethics

We have adopted a Code of Ethics and Business Conduct applying to our directors, officers and employees, as well as a Code of Ethics that applies to our chief executive officer and senior financial officers. The codes have been posted on our website, www.vionpharm.com.

Audit Committee Financial Expert

Our Board of Directors has a separately-designated standing Audit Committee established in accordance with Section 3(a)(58)A of the Securities Exchange Act of 1934. In 2006, the Audit Committee consisted of three non-employee directors, Mr. Bickerstaff, as Chairman, Mr. Miller and Mr. Willis. On January 15, 2007, upon the appointment of Mr. Rakin to our Board of Directors, the Board of Directors made membership changes to its various committees and as such the Audit Committee now consists of Mr. Rakin, as Chairman, Mr. Miller and Mr. Willis. The Board of Directors has determined that all members of the Audit Committee are "independent", as that term is used in Item 7(d)(3)(iv) of Schedule 14A under the Securities Exchange Act of 1934. Our Board of Directors has determined that Mr. Bickerstaff, who served on its Audit Committee through January 15, 2007, and Mr. Rakin, who has served on its Audit Committee since January 15, 2007, qualify as "audit committee financial expert" (as that term is defined in the rules promulgated by the United States Securities and Exchange Commission (SEC) pursuant to the Sarbanes-Oxley Act of 2002).

ITEM 11. *Executive Compensation*

Compensation Discussion and Analysis

Overview

Our executive compensation program for our Chief Executive Officer, our President and Chief Financial Officer and our three most highly compensated executive officers, whom we collectively refer to as our named executive officers, consists of (i) base salary and (ii) incentive compensation in the form of non-equity incentive compensation bonus awards tied to the achievement of corporate objectives and equity-based incentive compensation awards by the Company under the Company's 2005 Stock Incentive Plan. Our executive compensation program has historically included very few perquisites. The Company's Compensation Committee is responsible for reviewing and approving the compensation paid by us to the named executive officers.

In February 2005, the Compensation Committee retained Buck Consultants, Inc. (f/k/a Mellon Consultants, LLC), an executive compensation consulting firm, to assist it in conducting an evaluation of our compensation arrangements for our senior executives, including our named executive officers, with the goal of bringing our compensation arrangements in line with those offered by similarly situated public companies in the pharmaceutical development industry. Our current compensation program reflects in large part the recommendations of Buck Consultants, Inc. in particular our emphasis on the use of incentive-based compensation to reward the named executive officers and members of senior management for contributions to the achievement of the Company's business, research and product development objectives, and the use of stock-based awards under our 2005 Stock Incentive Plan to provide an additional incentive for our officers and employees, including the named executive officers, and the vesting schedule we established for such awards.

Prior to the adoption of our 2005 Stock Incentive Plan, we issued options to purchase our common stock to our named executive officers and others under our 2003 Stock Option Plan, which was, together with all of our previous option plans, superseded by our 2005 Stock Incentive Plan. Our last option grant under the 2003 Stock Option Plan was on October 25, 2005. To date, we have not granted any options under the 2005 Stock Incentive Plan, though we are permitted to do so.

Compensation Objectives

The Compensation Committee's philosophy is to establish executive compensation policies linked to the creation of shareholder value. Our compensation program is designed to:

- Adequately and fairly compensate executive officers in relation to their responsibilities, capabilities and contributions to the Company and in a manner that is commensurate with compensation paid by companies of comparable size and at a comparable stage of development within our industry;
- Align the interests of the executive officers with those of the stockholders with respect to short-term operating goals and long-term increases in the value of our common stock;
- Reward executive officers for the achievement of short-term goals and for the enhancement of the long-term value of the Company; and
- Provide a strong emphasis on equity-based compensation and equity ownership, creating a direct link between shareholder and management interests.

These objectives serve as the guiding principles for all the decisions the Compensation Committee makes with respect to the amount and type of compensation payable to our named executive officers.

Components of Compensation

Elements of Executive Compensation. Except with respect to the non-equity (*i.e.*, cash) incentive compensation bonus percentage targets set for each named executive officer as described below, the Compensation Committee does not have a specific mix of compensation components that it tries to achieve, but the intent is to make each component of total direct compensation (including base salary, annual cash bonus incentive, and long-term equity incentives) competitive with other companies of similar size and stage of development operating in our industry, while taking into account our relative performance and our own strategic goals. In making determinations on the mix and amount of executive compensation, the Compensation Committee reviews all components of the executive's compensation, including base salary, annual cash bonuses, equity-based compensation and any other form of compensation received from the Company to ensure such compensation meets the goals of the program. As we have done in the past, we have used the Radford Biotechnology Survey as a basis for comparison of compensation. The Compensation Committee's philosophy, in general, has been to set base salary and bonus levels between the 50th and 75th percentiles of compensation as reported in the Radford Biotechnology Survey. The primary components of compensation paid by the Company to its executive officers and senior management personnel, and the relationship of such components of compensation to the Company's performance, are discussed below:

Base Salary. The base salaries for the Company's named executive officers for the year ended December 31, 2006 were generally established in January 2006. The Compensation Committee approved salary increases for 2006 for Mr. Kessman, Mr. Johnson, Ms. Cahill and Dr. King of 4%, 4%, 20% and 7.2%, respectively. Adjustments to base salaries are generally determined based upon a number of factors, including the Company's performance (to the extent such can fairly be attributed or related to each executive's performance), as well as the nature of each executive's responsibilities, capabilities and contributions, and whether their salary fairly reflect job responsibilities and prevailing market conditions and rates of pay. The Compensation Committee considered each of these factors but did not assign a specific value to each factor in raising base salaries for 2006. One of our named executive officers, Meghan Fitzgerald, began employment in January 2006 and thus her salary was set by the Compensation Committee at the time of employment based upon her experience, responsibilities and comparable market data for her position. The Compensation Committee believes that base salaries for the Company's named executive officers have historically been reasonable in relation to the Company's size and performance in comparison with the compensation paid by similarly sized companies or companies within the Company's industry.

Incentive Compensation. At the beginning of each year, Mr. Kessman, our Chief Executive Officer, recommends, and the Compensation Committee considers and adopts, performance criteria for the Company's executive officers on which to base non-equity bonus compensation for the year. For 2006, the Compensation Committee adopted performance targets tied to clinical, research and development, business development, administrative and financial goals. We generally do not adjust or alter these criteria after they have been adopted. With the assistance of Mr. Kessman the Compensation Committee determined the level of corporate attainment resulting in the following annual non-equity incentive compensation bonus payments. The targeted cash bonus to be paid based upon the achievement of all of the performance criteria will generally be between 25% and 50% of the named executive officer's salary, as shown in the table below, with the actual amount paid as a non-equity incentive compensation cash bonus being such maximum amount prorated to reflect attainment of the performance targets.

Name	Target Percentage	Non-Equity Incentive Compensation Paid
Alan Kessman	50%	$95,000[1]
Howard B. Johnson	30%	$61,150
Ann Lee Cahill	25%	$52,000[2]
Meghan Fitzgerald	25%	$48,000[2]
Ivan King, Ph.D.	25%	$42,762

(1) Though the Compensation Committee awarded Mr. Kessman $158,796 (reflecting the level of attainment and his 50% bonus target), at Mr. Kessman's instigation such amount was reduced to $95,000 in order to preserve cash, which he believed to be in the best interests of the Company and its stockholders.

(2) In awarding the 2006 bonuses, the Compensation Committee agreed to increase Ms. Cahill and Ms. Fitzgerald's target percentage from 25% to 30% based on performance.

On March 12, 2007, the Compensation Committee approved the corporate performance criteria against which the Company's 2007 bonus targets will be measured. The performance criteria for 2007, which had been proposed by Mr. Kessman, are tied to corporate, clinical, research and development, commercial, regulatory, administrative and financial goals with an emphasis on completing key clinical trials and moving forward with regulatory filing requirements. While the goals relating to securing additional financing have already been met, the Company's ability to meet the business, clinical, regulatory, research and development and other financial goals set in the performance criteria is subject to risks and uncertainties, including those described under "Item 1A — Risk Factors" of this Annual Report on Form 10-K.

Restricted Stock. The Company's 2005 Stock Incentive Plan allows the Board of Directors or the Compensation Committee to grant stock-based awards of the Company's Common Stock to executive officers and employees. Under the terms of the 2005 Stock Incentive Plan, the Board of Directors and the Compensation Committee have authority to select the executive officers and employees who will

be granted stock-based awards and to determine the timing, pricing and number of shares of stock to be awarded. The primary form of long-term incentive award that the Compensation Committee has granted to our named executive officers in 2006 consists of restricted shares of our common stock. Based on the report furnished by Buck Consultants, the restricted stock grant agreement entered into by the Company provides for vesting of the shares upon the earliest of: (i) December 31, 2008, (ii) a Change in Control, as defined in the Company's 2005 Stock Incentive Plan, or (iii) the Company receiving approval of an NDA to market Cloretazine® (VNP40101M) although the Compensation Committee may adopt other or additional vesting criteria for future awards, if any.

The Compensation Committee believes strongly that equity-based incentive awards are an integral part of total compensation for our named executive officers each of whom has significant responsibility for the Company's long-term results. The Compensation Committee believes that restricted stock provides an effective means of delivering incentive compensation while fostering stock ownership on the part of management. Stock-based awards with the foregoing described vesting criteria reward executive officers only to the extent that stockholders have likely also benefited from increases in the value of the Company and its Common Stock. This process serves to align the interests of named executive officers with those of stockholders. The Compensation Committee also believes that restricted stock awards motivate the named executive officers' commitments to and successful execution of productivity, innovation, growth and business objectives aligned with shareholders' interests. The Compensation Committee also determined that granting certain of our named executive officers restricted stock was more attractive to executives than granting stock options because, unlike stock options, there is no money required to exercise them for cash, and, though subject to restrictions, these awards allow the Company to issue all the shares on a current basis.

With the exception of significant promotions, new hires and/or certain special adjustments and/or circumstances, we generally make these types of awards at the last meeting of the Compensation Committee each fiscal year. This timing was selected because it enables us to consider year-end performance of the Company and the participants and the Compensation Committee's expectations for the coming year. The Compensation Committee's schedule is determined in advance at the beginning of each fiscal year, subject to adjustment, thus the proximity of any awards to earnings announcements or other market events is coincidental. The Compensation Committee agreed to issue restricted stock awards to the named executive officers below which were approved by the Compensation Committee and granted to the named executive officers in December 2006.

Name	Shares of Restricted Stock
Alan Kessman	1,200,000
Howard B. Johnson	570,000
Ann Lee Cahill	480,000
Meghan Fitzgerald	360,000[(1)]
Ivan King, Ph.D.	277,778

(1) Ms. Fitzgerald received an additional 160,000 shares of restricted stock upon joining the Company in January 2006.

The awards approved in December 2006 were part of an award to our named executive officers of an aggregate of 2,887,778 shares of our restricted common stock. Once the 2005 Stock Incentive Plan was adopted, on the recommendation of Buck Consultants, Inc., the Compensation Committee developed a non-binding three-year target schedule of restricted common stock awards for our executive officers, and the increase over the previous year's grant of 1,013,890 shares of restricted common stock to our named executive officers results from the Compensation Committee's decision to accelerate its award schedule by granting in 2006 all of the remaining shares issuable under its target schedule. This was done with the aim of increasing employee stock ownership in 2006 and to provide an added incentive to certain of the Company's employees, including the named executive officers, in particular as we enter the later stages of development of Cloretazine® (VNP40101M). Other than as described in this paragraph, there were no material increases or decreases in compensation in 2006.

On March 12, 2007, on the recommendation of Mr. Kessman, the Compensation Committee approved the following restricted stock awards to the named executive officers:

Name	Shares of Restricted Stock
Alan Kessman	120,000
Howard B. Johnson	50,000
Ann Lee Cahill	50,000
Meghan Fitzgerald	35,000
Ivan King, Ph.D.	35,000

These shares vest upon the earliest of: (i) January 1, 2009, (ii) a Change in Control, as defined in the Company's 2005 Stock Incentive Plan, or (iii) the Company receiving approval of an NDA to market Cloretazine® (VNP40101M).

Accounting and Tax Treatment

Section 162(m) of the Internal Revenue Code of 1986, as amended, generally denies publicly-held corporations a federal income tax deduction for compensation exceeding $1,000,000 paid to Named Executive Officers, excluding performance-based compensation. Through December 31, 2006, this provision has not limited our ability to deduct executive compensation, but the Compensation Committee will continue to monitor the potential impact of Section 162(m) on our ability to deduct executive compensation.

The accounting treatment of our compensation plans, including without limitation shared-based payments accounted for under SFAS No. 123(R) which we adopted as required on January 1, 2006, is not a significant factor in how we design our executive compensation plans.

Perquisites; Other Compensation

We annually review any perquisites that our Chief Executive Officer and the other named executive officers may receive. In general, we do not provide our executives with many of the types of perquisites that other companies offer their executives, such as club memberships or vehicle allowances. In addition to the cash and equity compensation described above, we provide our named executive officers with the same benefit package available to all of our salaried employees. This package includes:

- Cafeteria plan – health and dental insurance, life insurance, disability insurance and long term care coverage (portion of costs), flexible spending pre-tax reimbursement plans for health and dependent care;
- Participation in 401k plan, including matching contribution, and employee stock purchase plan which allows purchase of stock at a 15% discount; and
- Tuition reimbursement.

The named executive officers are entitled to severance in various circumstances upon a change-in-control as described under the heading "Potential Payments Upon Termination or Change in Control" below. We also provide relocation assistance which is determined on a case by case basis. In addition, we provide assistance with tax planning and compliance of up to $6,000 per annum for our Chief Executive Officer and $600 per annum for the other named executive officers. We have also agreed to reimburse Mr. Johnson for his commuting expenses. Pursuant to the terms of his employment agreement, we pay life and disability insurance policy premiums for Mr. Kessman.

Stock Ownership Guidelines

Though the Compensation Committee seeks to align shareholder and management interests through restricted stock awards, the Company does not have specific established stock ownership guidelines for any of its officers.

The foregoing discussion describes the compensation objectives and policies which were utilized with respect to our named executive officers during 2006. In the future, as the Compensation

Committee continues to review each element of the executive compensation program with respect to our named executive officers, the objectives of our executive compensation program, as well as the methods which the Compensation Committee utilizes to determine both the types and amounts of compensation to award to our named executive officers, may change.

Summary Compensation Table

The following table sets forth information relating to total compensation awarded to, earned by or paid to our Chief Executive Officer, our Chief Financial Officer, and our three other most highly compensated executive officers during the three fiscal years ended December 31, 2006:

Name and Principal Position	Year	Salary ($)	Stock Awards[3] ($)	Non-Equity Incentive Plan Compensation[4] ($)	All Other Compensation ($)	Total Compensation ($)
Alan Kessman — Chief Executive Officer[1]	2006	$445,619	$2,388,667	$95,000	$30,167[5]	$2,959,453
Howard B. Johnson — President and Chief Financial Officer	2006	$286,000	$1,134,617	$61,150	$11,433[6]	$1,493,200
Ann Lee Cahill — Vice President, Clinical Development	2006	$240,000	$ 955,467	$52,000	$ 1,486[7]	$1,248,953
Meghan Fitzgerald — Vice President, Chief Business Officer[2]	2006	$219,452	$ 804,000	$48,000	$ 1,182[8]	$1,072,634
Ivan King, Ph.D — Vice President, Research and Development	2006	$240,000	$ 601,389	$42,762	$ 1,886[9]	$ 886,037

(1) We are a party to an employment agreement with Mr. Kessman.

(2) Ms. Fitzgerald was named an executive officer on January 10, 2006. Ms. Fitzgerald's 2006 annualized salary as an executive officer was $225,000.

(3) The value of restricted common stock awards granted to our named executive officers represents the aggregate grant date fair value computed in accordance with SFAS No. 123(R). Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. These amounts represent the accounting expense the Company will record over the vesting period of the awards and do not correspond to the actual value that will be recognized by the named executive officer. For information regarding our valuation of stock-based compensation, see "Critical Accounting Policies and Estimates – Stock-Based Compensation Expense" contained in Item 7 as well as Notes 2 and 6 to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K.

(4) The amounts shown in the column were earned and expensed in 2006 and paid in 2007 pursuant to non-equity incentive plan compensation arrangements with our named executive officers and, in the case of our Chief Executive Officer, set forth in an employment agreement. Though the Compensation Committee awarded Mr. Kessman $158,796 (reflecting the level of attainment and his 50% bonus target), at Mr. Kessman's instigation such amount was reduced to $95,000 in order to preserve cash, which he believed to be in the best interests of the Company and its stockholders.

(5) Includes premiums on life and disability insurance of $23,167, matching contribution of $1,000 to the Company's 401(k) plan and tax planning assistance of $6,000.

(6) Includes Company-paid commuting expenses of $10,219, matching contribution of $1,000 to the Company's 401(k) plan and $214 for premiums on life insurance.

(7) Includes matching contribution of $1,000 to the Company's 401(k) plan, $121 for premiums on life insurance and tax compliance assistance of $365.

(8) Includes matching contribution of $1,000 to the Company's 401(k) plan and $182 for premiums on life insurance.

(9) Includes matching contribution of $1,000 to the Company's 401(k) plan, $236 for premiums on life insurance and tax compliance assistance of $650.

In November 2003, we entered into an employment agreement effective January 1, 2004 with Alan Kessman, our Chief Executive Officer. The termination date of Mr. Kessman's extended employment agreement is December 31, 2008. Pursuant to this agreement, Mr. Kessman receives a

minimum base salary of $412,000 per year and is eligible for a bonus of up to 50% of his base salary based on the achievement of specified objectives. In addition, we pay for his personal insurance policies.

We do not have formal employment agreements with any of our named executive officers except Mr. Kessman; however, base pay, equity and non-equity incentive compensation arrangements, and other arrangements are set forth in offer letters provided to each of our named executive officers as of the date of hire or promotion. Since the date of these offer letters, the compensation paid to each of these executives has been increased.

Grants of Plan-Based Awards

Our Compensation Committee approved awards of restricted common stock under our 2005 Stock Incentive Plan to our named executive officers as set forth in the following grants of plan-based awards table during the year ended December 31, 2006:

Name	Grant Date	Date of Compensation Committee Action[1]	Estimated Future Payouts under Equity Incentive Plan Awards			Grant Date Fair Value of Stock and Option Awards
			Threshold (#)	Target (#)	Maximum (#)	
Alan Kessman.	1/5/2006	12/14/2005	—	466,667	—	$ 732,667
	12/13/2006	12/13/2006	—	1,200,000	—	$1,656,000
Howard B. Johnson . . .	1/5/2006	12/14/2005	—	221,667	—	$ 348,017
	12/13/2006	12/13/2006	—	570,000	—	$ 786,600
Ann Lee Cahill.	1/5/2006	12/14/2005	—	186,667	—	$ 293,067
	12/13/2006	12/13/2006	—	480,000	—	$ 662,400
Meghan Fitzgerald . . .	1/10/2006	12/14/2005	—	160,000	—	$ 307,200
	12/13/2006	12/13/2006	—	360,000	—	$ 496,800
Ivan King, Ph.D.	1/5/2006	12/14/2005	—	138,889	—	$ 218,056
	12/13/2006	12/13/2006	—	277,778	—	$ 383,334

(1) Action was taken on December 14, 2005 by our Compensation Committee to approve the awards of restricted common stock on January 5, 2006, subject to each named executive officer remaining in the employ of the Company as of such date and subject to each named executive officer entering into a restricted common stock grant agreement.

Our 2005 Stock Incentive Plan is administered by our Compensation Committee. The objectives of the plan include attracting, motivating and retaining key personnel and promoting our success by linking the interests of our employees, directors and consultants with our success.

There are 7,527,518 shares of common stock authorized for awards under the plan. As of December 31, 2006, 2,425,372 shares of common stock were available for grant under the plan.

The term of each 2006 restricted common stock award is ten years from the date of the grant. The awards will vest upon the earliest of (i) December 31, 2008; (ii) the approval of an NDA to market Cloretazine® (VNP40101M); or (iii) the occurrence of a Change of Control, as defined in our 2005 Stock Incentive Plan, with the exception of 20,000 shares awarded to Ms. Fitzgerald on January 10, 2006 which award vested on April 30, 2006. The 2005 Stock Incentive Plan requires that the recipient of an award be continuously employed or otherwise provide services to us. Failure to be continuously employed or in another service relationship generally results in the forfeiture of stock not vested at the time the employment or other service relationship ends.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth the outstanding equity award holdings held by our named executive officers at December 31, 2006.

	Option Awards				Stock Awards	
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date	Equity Incentive Plan Awards: Number of Unearned Shares, Units or Other Rights That Have Not Vested (#)	Equity Incentive Plan Awards: Market or Payout Value of Unearned Shares, Units or Other Rights That Have Not Vested ($)
Alan Kessman	20,000	—	$ 2.56	10/20/2008	1,666,667[3]	$2,250,000
	200,900	—	$ 5.25	1/11/2009		
	747,244	—	$ 5.78	1/11/2009		
	50,000	—	$14.88	2/24/2010		
	30,000	—	$ 7.38	12/5/2010		
	114,783	—	$ 4.75	12/6/2011		
	150,000	—	$ 0.55	7/30/2012		
	80,000	—	$ 1.57	12/10/2013		
	150,000	—	$ 4.70	12/8/2014		
Howard B. Johnson . .	350,000	—	$ 3.88	3/18/2012	791,667[3]	$1,068,750
	72,499	—	$ 0.55	7/30/2012		
	60,000	—	$ 1.57	12/10/2013		
	50,000	50,000[1]	$ 4.70	12/8/2014		
Ann Lee Cahill	15,000	—	$ 4.71	1/7/2012	666,667[3]	$ 900,000
	20,000	—	$ 0.55	7/30/2012		
	10,000	—	$ 1.57	12/10/2013		
	27,500	27,500[2]	$ 4.31	10/15/2014		
	25,000	25,000[1]	$ 4.70	12/8/2014		
Meghan Fitzgerald . . .	—	—	—	—	500,000[3]	$ 675,000
Ivan King, Ph.D	12,500	—	$ 4.38	1/29/2007	416,667[3]	$ 562,500
	5,500	—	$ 3.03	1/29/2008		
	14,000	—	$ 4.69	3/4/2009		
	17,300	—	$ 6.06	5/20/2009		
	60,000	—	$14.88	2/24/2010		
	45,000	—	$ 7.38	12/5/2010		
	53,582	—	$ 4.75	12/6/2011		
	65,000	—	$ 0.55	7/30/2012		
	40,000	—	$ 1.57	12/10/2013		
	37,500	12,500[1]	$ 4.70	12/8/2014		

(1) Options vest in two remaining equal annual installments on the third and fourth anniversary of the date of grant (December 8, 2004). This vesting schedule is accelerated in the event of a Change of Control.

(2) Options vest in two remaining equal annual installments on the third and fourth anniversary of the date of grant (October 15, 2004). This vesting schedule is accelerated in the event of a Change of Control.

(3) Restricted common stock awards vest upon the earliest of (i) December 31, 2008, (ii) a Change in Control, as defined in the Company's 2005 Stock Incentive Plan, or (iii) the Company receiving approval of an NDA to market Cloretazine® (VNP40101M)

Option Exercises and Stock Vested

There were no exercises of stock options by our named executive officers during the year ended December 31, 2006. The following table sets forth the vesting of stock (reflecting restricted common stock) for our named executive officers during the year ended December 31, 2006.

	Stock Awards	
Name	Number of Shares Acquired On Vesting (#)	Value Realized on Vesting ($)
Alan Kessman	—	—
Howard B. Johnson	—	—
Ann Lee Cahill	—	—
Meghan Fitzgerald	20,000	$38,400
Ivan King, Ph.D.	—	—

Pension Benefits

We do not sponsor any plans that provide for payments or other benefits at, following, or in connection with retirement, excluding a tax-qualified defined contribution plan.

Nonqualified Deferred Compensation

We currently do not sponsor any non-qualified defined contribution or other non-qualified deferred compensation plans.

Potential Payments Upon Termination or Change in Control

The following summaries set forth potential payments payable to our named executive officers upon termination of employment or a change in control of us under their current employment or severance agreements:

(i) Under the terms of our employment agreement with Mr. Kessman, in the event that his employment is terminated by us for any reason other than cause or disability, or if he terminates for good reason, we are obligated to pay him an amount equal to (x) two times his current base salary, (y) two times his average annual bonus for the prior two years, and (z) two times the annual amounts for his personal insurance policies, and to continue payment of certain insurance costs on his behalf for a period of two years. Under Mr. Kessman's employment agreement, it shall constitute "good reason" for Mr. Kessman to terminate his employment and receive the amounts described above if there is a change in control and the Company or its successors, as the case may be, fails to agree in writing to extend the expiration date of the employment agreement to the two-year anniversary of the change of control.

(ii) We entered into severance agreements with certain of our named executive officers, including Mr. Johnson, Ms. Cahill, Ms. Fitzgerald and Dr. King, pursuant to which each of these officers would be entitled to certain payments in the event such officer loses his or her employment during the twelve-month period following a "change in control," as defined in the agreement. Specifically, if a "change in control" occurs, the officer shall be entitled to a lump sum severance payment equal to the sum of twelve months of the officer's monthly base salary as in effect as of the date of termination or immediately prior to the change in control, whichever is greater, plus the average of the last two cash bonus payments made to the officer prior to the change in control. The officer would also be entitled to all payments necessary to provide him or her with group health insurance benefits substantially similar to those which he or she was receiving immediately prior to the date of termination until the earlier of 18 months after such termination or the date he or she has obtained new full-time employment. The foregoing amounts are not payable if termination of the officer is because of his or her death, by us for cause, or by the officer other than for good reason.

(iii) On September 13, 2005, we entered into an additional agreement with Mr. Johnson, our President and Chief Financial Officer, pursuant to which Mr. Johnson would be entitled to

certain payments in the event his employment is terminated after Mr. Kessman's retirement, resignation or termination as our Chief Executive Officer ("CEO"). Specifically, if at any time within one year after the earlier of (i) the date of a public announcement by the Company of the hiring of a new CEO and (ii) the date of hiring of such new CEO as set forth in such public announcement (the "CEO Hiring Date") Mr. Johnson is terminated by the Company without cause (as defined in the agreement), he shall be entitled to a lump sum payment equal to the sum of twelve months of his monthly base salary as in effect as of the date of termination or immediately prior to such termination, whichever is greater, plus the average of the last two cash bonus payments made to Mr. Johnson prior to his termination. Mr. Johnson would also be entitled to all payments necessary to provide him with group health insurance benefits substantially similar to those which he was receiving immediately prior to the date of termination until the earlier of 12 months after such termination or the date he obtains new full-time employment. Also, if Mr. Johnson voluntarily resigns from his position as President and Chief Financial Officer of the Company within the first 90 days following the CEO Hiring Date, he shall be entitled to receive his full base salary, at the rate as in effect at the date of resignation, at such time as such payments would have been due pursuant to his previous salary arrangement, until the earlier of 12 months after the date of such resignation or the date he obtains new full-time employment (the "Transition Period"), provided that Mr. Johnson advises and consults by telephone, in writing or, at a mutually agreeable time, in person regarding the affairs of the Company with the officers and directors of the Company upon requests for such services by such officers and directors during the Transition Period. In the event of such resignation, Mr. Johnson would also be entitled to all payments necessary to provide him with group health insurance benefits substantially similar to those which he was receiving immediately prior to the date of termination until the earlier of 12 months after such termination or the date he obtains new full-time employment. The foregoing amounts are not payable if the termination of Mr. Johnson is due to his death, is a result of a termination by us for cause or if Mr. Johnson is offered the position of CEO.

The following table sets forth the estimated value of payments and benefits due to our named executive officers under the circumstances summarized above pursuant to these employment and severance agreements assuming our named executive officers' employment was terminated on December 31, 2006.

Name	Severance	Group Health Continuation	Value of Accelerated Equity Incentive Plan Awards
Alan Kessman —			
change of control, as described in summary (i)	$1,112,572	$28,588	$2,250,000
termination, as described in summary (i)	$1,112,572	$28,588	—
Howard B. Johnson —			
change of control, as described in summary (ii)	$ 356,602	$27,113	$1,068,750
change in CEO status, as described in summary (iii)	$ 356,602	$18,075	—
voluntary resignation, as described in summary (iii)	$ 286,000	$18,075	—
Ann Lee Cahill —			
change of control, as described in summary (ii)	$ 298,500	$24,830	$ 900,000
Meghan Fitzgerald —			
change of control, as described in summary (ii)	$ 273,000	$19,869	$ 675,000
Ivan King, Ph.D. —			
change of control, as described in summary (ii)	$ 278,899	$25,020	$ 562,500

Director Compensation

We currently have seven non-employee directors that qualify for compensation under our director compensation plan. Non-employee directors receive annual cash compensation of $15,000, except for the chairman of the Board of Directors who receives $40,000 per annum, plus additional cash

compensation, ranging from $500 to $1,500 per meeting, for meetings attended, and reimbursement of actual out-of-pocket expenses incurred in connection with attendance at meetings. In addition, the chairman of each committee of the board receives annual cash compensation of $5,000, except for the chairman of the audit committee who receives $10,000 per annum. Non-employee directors receive an initial restricted common stock award under our 2005 Stock Incentive Plan, such restricted common stock to vest in three equal annual installments on the grant anniversary, and annual restricted common stock awards upon re-election to the Board of Directors, such restricted common stock to vest on the first anniversary of the date of grant. The Company does not pay employee members of the board separately for their service on the board.

The following table sets forth total compensation of our non-employee directors for the fiscal year ended December 31, 2006.

Name	Fees Earned Or Paid In Cash ($)	Stock Awards[3] ($)	Option Awards[4] ($)	All Other Compensation[5] ($)	Total ($)
George Bickerstaff	$40,750	$30,996	$ 9,781	—	$81,527
Stephen K. Carter, M.D. . .	$25,000	$30,996	—	—	$55,996
William R. Miller	$51,750	$30,996	—	—	$82,746
Alan C. Sartorelli, Ph.D. . .	$27,250	$30,996	—	$2,000	$60,246
Mario Sznol, M.D.[2].	$ 9,750	$22,097	$22,907	$1,125	$55,879
Ian Williams, D. Phil.[1] . . .	$17,500	$ 9,109	—	—	$26,609
Gary K. Willis	$37,000	$30,996	$ 9,781	—	$77,777

(1) Mr. Williams was elected to our Board of Directors on June 27, 2006.

(2) Dr. Sznol was a member of our Board of Directors through June 27, 2006.

(3) Represents the dollar amount recognized for financial reporting purposes for fiscal year 2006 in accordance with SFAS No. 123(R) for the fair value of restricted common stock awards granted to these directors. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. The awards include: (i) 12,935 restricted common shares with a November 16, 2005 grant date fair market value of $26,517 that vested on November 16, 2006 awarded to Messrs. Bickerstaff, Miller, Willis and Drs. Carter, Sartorelli, Sznol; (ii) 11,300 restricted common shares with a June 28, 2006 grant date fair value of $15,255 that will vest on June 28, 2007 awarded to Messrs. Bickerstaff, Miller, Willis and Drs. Carter, Sartorelli; and (iii) 34,700 restricted common shares with a June 28, 2006 grant date fair value of $46,845 that will vest in three equal annual installments on the anniversary of the date of grant awarded to Mr. Williams. At December 31, 2006, the aggregate number of outstanding restricted common stock awards was 11,300 for each of Messrs. Bickerstaff, Miller, Willis and Drs. Carter, Sartorelli, and 34,700 for Mr. Williams. For information regarding our valuation of stock-based compensation, see ''Critical Accounting Policies and Estimates – Stock-Based Compensation Expense'' contained in Item 7 as well as Notes 2 and 6 to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K.

(4) Represents the dollar amount recognized for financial reporting purposes for fiscal year 2006 in accordance with SFAS No. 123(R) for the fair value of stock option awards granted to these directors. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. The awards include: (i) 20,000 stock options with a June 8, 2005 grant date fair value of $22,514 that vested on June 8, 2006 awarded to Messrs. Bickerstaff and Willis; and (ii) 33,335 stock options with a December 10, 2003 grant date fair value of $48,612 that vested in three equal annual installments on the anniversary of the date of grant awarded to Dr. Sznol. At December 31, 2006, the aggregate number of outstanding stock options for each of Messrs. Bickerstaff, Miller, Willis and Drs. Carter, Sartorelli, Sznol was 20,000, 88,472, 20,000, 82,051, 121,508 and 467,188, respectively. For information regarding our valuation of stock-based compensation, see ''Critical Accounting Policies and Estimates – Stock-Based Compensation Expense'' contained in Item 7 as well as Notes 2 and 6 to our Consolidated Financial Statements contained in Item 8 of this Annual Report on Form 10-K.

(5) Represents fees paid for actual scientific consulting services rendered during fiscal year 2006.

Compensation Committee Interlocks and Insider Participation

During fiscal 2006, the Compensation Committee consisted of Gary Willis, George Bickerstaff and William Miller. No member of the Compensation Committee was an officer or employee of the Company during 2006 or was formerly an officer or employee of the Company. In addition, no executive officer of the Company served as a member of another entity's board of directors or as a member of the compensation committee of another entity (or other board committee performing equivalent functions) during 2006, which entity had an executive officer serving on the Board of Directors of the Company.

COMPENSATION COMMITTEE REPORT ON EXECUTIVE COMPENSATION

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis section of this Annual Report on Form 10-K with management and, based on such review and discussion, the Compensation Committee recommends to the Board that it be included in this Annual Report on Form 10-K.

COMPENSATION COMMITTEE

Gary K. Willis (Chair)
Kevin Rakin
Ian Williams, D. Phil.

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

The following table sets forth information as of March 1, 2007 (except as otherwise noted in the footnotes) regarding the beneficial ownership (as defined by the Securities and Exchange Commission (the "SEC")) of our Common Stock: (i) each person known by us to own beneficially more than five percent of our outstanding Common Stock; (ii) each of our current directors; (iii) each executive officer named in the Summary Compensation Table under Item 11; and (iv) all of our current directors and executive officers as a group. Except as otherwise specified, the named beneficial owner has the sole voting and investment power over the shares listed and the address of each beneficial owner is c/o Vion Pharmaceuticals, Inc., 4 Science Park, New Haven, Connecticut 06511.

Directors and Officers	**Number of Shares Beneficially Owned**	**Percent of Outstanding Shares of Common Stock**
George Bickerstaff	44,235[1,10]	*
Stephen K. Carter, M.D.	106,286[2,10]	*
William R. Miller	405,594[3,10]	*
Kevin Rakin	34,700[10]	*
Alan C. Sartorelli, Ph.D.	545,948[4,10]	*
Ian Williams, D. Phil.	34,700[10]	*
Gary K. Willis	44,235[1,10]	*
Ann Lee Cahill	768,220[5,9]	1.1%
Meghan Fitzgerald	520,000[9]	*
Howard B. Johnson	1,326,166[6,9]	1.8%
Alan Kessman	3,263,450[7,9]	4.4%
Ivan King, Ph.D.	753,117[8,9]	1.0%
All directors and executive officers as a group (14 persons)	8,458,538[11]	11.3%
Other Beneficial Owners		
Meditor Group Ltd. 79 Front Street Hamilton, Bermuda	3,774,700[12]	5.0%
OrbiMed Advisors LLC OrbiMed Capital LLC Samuel D. Isaly 767 Third Avenue, 30th Floor New York, NY 10017	4,939,300[13]	6.4%
QVT Financial LP QVT Financial GP LLC QVT Associates GP LLC 1177 Avenues of the Americas, 9th Floor New York, NY 10036 QVT Fund LP Walkers SPV, Walkers House P.O. Box 908GT Mary Street George Town, Grand Cayman, Cayman Islands	4,555,833[14]	5.9%

* Less than one percent

(1) Includes 20,000 shares issuable upon exercise of options.

(2) Includes 82,051 shares issuable upon exercise of options.

(3) Includes 88,472 shares issuable upon exercise of options.

(4) Includes 190,874 shares beneficially owned by Dr. Sartorelli's wife, as to which Dr. Sartorelli disclaims beneficial ownership. Also includes 121,508 shares issuable upon exercise of options.

(5) Includes 97,500 shares issuable upon exercise of options.

(6) Includes 532,499 shares issuable upon exercise of options.

(7) Includes 12,756 shares held by a family trust of which Mr. Kessman is a controlling member. Also includes 1,542,927 shares issuable upon exercise of options.

(8) Includes 325,382 shares issuable upon exercise of options.

(9) Includes restricted shares of our common stock not vested as of March 1, 2007 as follows:

- On January 5, 2006, Messrs. Johnson, Kessman, King and Ms. Cahill were granted 221,667 shares, 466,667 shares, 138,889 shares and 186,667 shares of restricted stock, respectively, for their performance in 2005;
- Includes 140,000 shares of restricted stock granted to Ms. Fitzgerald at hire on January 10, 2006; and
- On December 13, 2006, Messrs. Johnson, Kessman, King, Ms. Cahill and Ms. Fitzgerald were granted 570,000 shares, 1,200,000 shares, 277,778 shares, 480,000 shares and 360,000 shares of restricted stock, respectively, for their performance in 2006.

All shares will vest upon the earliest of (i) December 31, 2008; (ii) the approval of an NDA to market Cloretazine® (VNP40101M); or (iii) the occurrence of a Change of Control, as defined in our 2005 Stock Incentive Plan.

(10) Includes restricted shares of our common stock not vested as of March 1, 2007 as follows:

- On June 28, 2006, Messrs. Bickerstaff, Miller and Willis, and Drs. Carter and Sartorelli each received an annual grant of 11,300 shares of restricted stock and Mr. Williams received an initial grant following his appointment to our board of directors of 34,700 shares of restricted stock following our 2006 annual meeting of stockholders; and
- On January 15, 2007, Mr. Rakin received an initial grant following his appointment to our board of directors of 34,700 shares of restricted stock.

Annual director grants will vest (i) one year after date of grant; or (ii) upon a Change of Control, as defined in our 2005 Stock Incentive Plan. Initial director grants will vest (i) in three equal annual installments on the anniversary of the date of grant; or (ii) upon a Change of Control, as defined in our 2005 Stock Incentive Plan.

(11) Includes 2,899,272 shares issuable upon exercise of options.

(12) Based on data set forth in Schedule 13G filed with the SEC on February 22 2007, 3,774,700 shares reported in such Schedule 13G are held by Meditor Group Ltd., which shares dispositive and voting power over the shares. Meditor Master Cobra Fund Ltd., an investment management client of Meditor Group Ltd., has the right to receive and the power to direct the receipt of dividends from, and the proceeds from the sale of, the shares.

(13) Based on data set forth in an Amendment 1 to Schedule 13G filed with the SEC on February 13, 2007, of the 4,939,300 shares reported in such Schedule 13G: (i) 1,408,500 shares are held by OrbiMed Advisors LLC; and (ii) 3,530,800 shares are held by OrbiMed Capital LLC. OrbiMed Advisors LLC and OrbiMed Capital LLC are investment advisors. Samuel D. Isaly is a control person for OrbiMed Advisors LLC and OrbiMed Capital LLC and shares dispositive and voting power over the shares held by OrbiMed Advisors LLC and OrbiMed Capital LLC. OrbiMed Advisors LLC and OrbiMed Capital LLC hold shares on behalf of Caduceus Capital Master Fund Limited (502,400 shares), Caduceus Capital II, L.P. (271,100 shares), UBS Eucalyptus Fund, LLC (366,500 shares), PW Eucalyptus Fund, Ltd. (42,300 shares), HFR SHC Aggressive Master Trust (81,800 shares), Knightsbridge Post Venture IV L.P. (150,600 shares), Knightsbridge Integrated Holdings, V, LP (188,800 shares), Knightsbridge Netherlands II, LP (44,300 shares), Knightsbridge Integrated Holdings IV Post Venture, LP (65,200 shares),Knightsbridge Post Venture III, LP (21,300 shares), Knightsbridge Netherlands I LP (20,000 shares), Knightsbridge Netherlands III — LP (58,500 shares), Knightsbridge Integrated Holdings II Limited (31,600 shares), Knightsbridge Venture Completion 2005 L.P. (33,200 shares), Knightsbridge Venture Capital VI, L.P. (93,700 shares), Knightsbridge Venture Capital III LP (21,400 shares), and Finsbury Emerging Biotechnology Trust plc (2,946,600 shares).

(14) Based on data set forth in Schedule 13G filed with the SEC on February 21, 2007, of the 4,555,833 shares reported in such Schedule 13G: (i) 3,905,000 shares are beneficially owned by QVT Fund LP consisting of 3,125,000 shares underlying convertible senior notes and 780,000 shares underlying common stock purchase warrants; and (ii) 650,833 shares, consisting of 520,833 shares underlying convertible senior notes and 130,000 shares underlying common stock purchase warrants, are held in a separate discretionary account managed for Deutsche Bank AG (the "Separate Account"). QVT Financial LP is the investment manager for QVT Fund LP and the Separate Account and shares dispositive and voting power over the shares held by each of the QVT Fund LP and the Separate Account. Accordingly, QVT Financial LP may be deemed to be the beneficial owner of an aggregate of 4,555,833 shares, consisting of the shares held by QVT Fund LP and the Separate Account. QVT Financial GP LLC, as general partner of QVT Financial LP may be deemed to beneficially own the same number of shares reported by QVT Financial LP, and QVT Associates GP LLC, as general partner of QVT Fund LP, may be deemed to beneficially own the same number of shares as reported by QVT Fund LP. Each of QVT Financial LP, QVT Financial GP LLC and QVT Associates GP LLC disclaim beneficial ownership of the shares reported in the Schedule 13G, except to the extent of any pecuniary interest therein.

Equity Compensation Plan Information

The following table provides information about shares of our common stock that may be issued upon the exercise of options and rights under all of the Company's existing equity compensation plans as of December 31, 2006.

Plan Category	Number of Securities to be Issued Upon Exercise of Outstanding Options, Warrants and Rights	Weighted-Average Exercise Price of Outstanding Options, Warrants and Rights($)	Number of Securities Available for Future Issuance Under Equity Compensation Plans
Equity compensation plans approved by security holders	3,283,873[1,2]	$4.47	2,763,549[3]
Equity compensation plans not approved by security holders	948,144[4]	[4]	—
Total	4,232,017		2,763,549

(1) Reflects the following:

(a) Outstanding options to purchase 1,137,222 shares of our common stock granted under our 2003 Stock Option Plan. We no longer grant stock options under our 2003 Stock Option Plan due to the adoption of our 2005 Stock Incentive Plan, and

b) Outstanding options to purchase 2,146,651 shares of our common stock granted under our 1993 Stock Option Plan. We no longer grant stock options under our 1993 Stock Option Plan, which expired on April 15, 2003.

(2) Under our 2000 Employee Stock Purchase Plan, participants are permitted to purchase our common stock during the stock offering period. Accordingly, the number of shares of common stock to be issued under our 2000 Employee Stock Purchase Plan is not determinable and is not included.

(3) Reflects 2,425,372 shares of our common stock available for future issuance at December 31, 2006 under our 2005 Stock Incentive Plan and 338,177 shares of our common stock available for future issuance at December 31, 2006 under our 2000 Employee Stock Purchase Plan.

(4) Reflects outstanding options to purchase 948,144 shares of our common stock granted under our Senior Executive Stock Option Plan (the "Senior Plan") to Mr. Kessman in January 1999 at exercise prices ranging from $5.25 to $5.775 in connection with his employment agreement. The shares of common stock issuable upon exercise of the options granted to Mr. Kessman under the Senior Plan have not been registered. The following summarizes the principal terms of the Senior Plan, which was adopted by our Board of Directors on January 11, 1999. Options may be granted under the Senior Plan to our Chief Executive Officer and to a director or officers who are considered a Reporting Persons under Rule 16b-3. The Board has appointed its Compensation Committee to administer the plan. Subject to the limitations of the Senior Plan, the Compensation Committee has broad authority under the Senior Plan. The maximum number of shares of common stock that may be issued under the Senior Plan is 980,000, subject to customary antidilution and other adjustments provided for in the Senior Plan, and the maximum number of shares of common stock with respect to such options that may be granted to any individual in any calendar year is 980,000 shares. Shares of common stock available for issuance under the Senior Plan may be authorized and unissued or held by the Company in its treasury. All options expire not more than 10 years after the date of grant. The exercise price for each share of common stock covered by an option will be determined by the Committee at the time of grant. The Committee may establish vesting and other conditions or restrictions on the exercise of an option and/or upon the issuance of common stock in connection with the exercise of an option as it deems appropriate. No option will be exercisable during the first 6 months after the date of grant. If an optionee's employment or service terminates, the portion of an option not exercisable on the date of termination shall immediately terminate and the portion of an option that is exercisable on the date of termination shall remain exercisable for a period of time following the termination date, as follows: (i) if due to death or disability, for one year; (ii) if due to cause, immediately terminates; and (iii) for any other termination, for 3 months. The Senior Plan will terminate on September 9, 2013, unless sooner terminated by the Board. The Board may amend or terminate the Senior Plan at any time.

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

Mr. Bickerstaff, one of our directors, is a principal of CRT Capital Group LLC ("CRT"), which was the initial purchaser of our 7.75% convertible senior notes due 2012 and warrants in a private placement in February 2007. CRT received a purchase discount of $3.6 million which represented 6% of the $60 million principal amount of the notes.

Our Board of Directors has reviewed the materiality of any relationship that each of our directors has with the Company, either directly or indirectly. Based on this review, the Board has determined that all of the directors are "independent directors" as defined by the Nasdaq Stock Market®, except Mr. Kessman, our Chief Executive Officer, and Mr. Bickerstaff, who is not independent by virtue of

his relationship with CRT and the transaction described in the immediately preceding paragraph. Neither Mr. Kessman nor Mr. Bickerstaff serves on any committee.

ITEM 14. ***Principal Accountant Fees and Services***

The following table presents the aggregate fees for professional audit services and other services rendered by Ernst & Young LLP, our independent registered public accountants, in 2006 and 2005:

	Years ended December 31,			
	2006		2005	
	Fees	% Approved by the Audit Committee	Fees	% Approved by the Audit Committee
Audit fees	$182,088	100%	$181,776	100%
Audit related fees	—	—	—	—
Tax fees	30,341	100%	29,554	100%
All other fees	1,515	100%	1,515	100%
Total	$213,944		$212,845	

Audit Fees consist of fees billed for the annual audit of our financial statements and other audit services including the provision of consents and the review of documents filed with the SEC. The fees for 2006 include $50,812 of accrued audit fees for the 2006 year-end audit that were not billed until 2007. The fees for 2005 include $64,765 of accrued audit fees for the 2005 year-end audit that were not billed until 2006.

Tax Fees consist of fees billed for tax compliance services.

All Other Fees consist of a subscription fee for an online accounting research database.

Audit Committee Pre-approval Policies and Procedures

The Audit Committee of our Board of Directors is responsible, among other matters, for the oversight of the external auditor. The Audit Committee has adopted a policy regarding pre-approval of audit and permissible non-audit services provided by our independent registered public accountants (the "Policy").

Under the Policy, proposed services either (i) may be pre-approved by the Audit Committee without consideration of specific case-by-case services as "general pre-approval"; or (ii) require the specific pre-approval of the Audit Committee as "specific pre-approval". The Audit Committee may delegate either type of pre-approval authority to one or more of its members. The Policy sets out the audit, audit-related, tax and other services that have received the general pre-approval of the Audit Committee, including those described in the footnotes to the table, above; these services are subject to annual review by the Audit Committee. All other audit, audit-related, tax and other services must receive a specific pre-approval from the Audit Committee.

The Audit Committee establishes budgeted fee levels annually for each of the four categories of audit and non-audit services that are pre-approved under the Policy, namely, audit, audit-related, tax and other services. Requests or applications to provide services that require specific approval by the Audit Committee are submitted to the Audit Committee by both the external auditor and the chief financial officer. At each regular meeting of the Audit Committee, the external auditor provides a report in order for the Audit Committee to review the services that the external auditor is providing, as well as the status and cost of those services.

PART IV

ITEM 15. ***Exhibits, Financial Statement Schedules***

(a) 1. Financial Statements

The following is a list of the Financial Statements included in Item 8 of Part II of this Report:

2. Financial Statement Schedules

Schedules not included herein are omitted because they are inapplicable or not required or because the required information is given in the financial statements and notes thereto.

3. Exhibits

The exhibits required by this item and included in this Report or incorporated herein by reference are as follows:

Exhibit No.		Description
2.1	—	Agreement and Plan of Merger among MelaRx Pharmaceuticals, Inc., OncoRx Research Corp. and OncoRx, Inc. dated as of April 19, 1995[1]
2.2	—	Certificate of Merger, dated April 20, 1995[1]
3.1	—	Restated Certificate of Incorporation, as amended[2]
3.2	—	By-laws, as amended[2]
3.3	—	Certificate of Amendment to the Certificate of Incorporation of Vion Pharmaceuticals, Inc. dated as of July 26, 2001[8]
3.4	—	Certificate of Amendment to the Certificate of Incorporation of Vion Pharmaceuticals, Inc. dated as of June 10, 2004[17]
4.1	—	Rights Agreement dated as of October 26, 1998 between Vion Pharmaceuticals, Inc. and American Stock Transfer & Trust Company (includes form of Right Certificate attached as Exhibit A and a Summary of Rights to Purchase Common Shares attached as Exhibit B thereto)[3]
4.2	—	Revised form of Warrant Agreement by and between Vion Pharmaceuticals, Inc. and Brean Murray & Co., Inc.[4]
4.3	—	Form of Underwriter's Warrant (included as Exhibit A to Exhibit 4.2 above)[4]
4.4	—	Amendment No. 1 to Rights Agreement between Vion Pharmaceuticals, Inc. and American Stock Transfer & Trust Company dated as of August 16, 2004[18]

Exhibit No.		Description
10.1	—	License Agreement between Yale University and OncoRx, Inc. dated as of August 31, 1994[1]
10.2	—	Letter Agreement between Yale University and OncoRx, Inc. dated August 19, 1994[1]
10.3	—	Extension Agreement between Yale University and MelaRx Pharmaceuticals, Inc., dated as of July 1, 1992[1]
10.4	—	License Agreement between Yale University and OncoRx Corporation dated as of November 15, 1995[10]
10.5	—	Letter Agreement between Yale University and MelaRx Pharmaceuticals, Inc., dated as of February 2, 1995[1]
10.6	—	License Agreement between Yale University and OncoRx, Inc. dated as of December 15, 1995[10]
10.7	—	Consulting and Finder's Agreement between MelaRx Pharmaceuticals, Inc. and Jacob A. Melnick, dated June 4, 1992, as amended by Agreement dated February 17, 1995[1]
10.8	—	Clinical Trials Agreement between Vion Pharmaceuticals, Inc. and the Division of Cancer Treatment and Diagnosis, NCI, dated January 9, 2003[10]
10.9	—	Letter Agreement between Yale University and OncoRx, Inc. (formerly MelaRx Pharmaceuticals, Inc.), dated July 5, 1995[1]
10.10	—	Amendment No. 1 to License Agreement between Yale University and Vion Pharmaceuticals, Inc. (f/k/a OncoRx, Inc.) dated as of June 12, 1997[5]
10.11	—	Amendment No. 2 to License Agreement between Yale University and Vion Pharmaceuticals, Inc. (f/k/a OncoRx, Inc.) dated as of June 12, 1997[5]
10.12	—	Amendment No. 3 to a License Agreement between Yale University and Vion Pharmaceuticals, Inc. (f/k/a OncoRx, Inc.) dated as of September 25, 1998[6]
10.13	—	Amendment No. 4 to a License Agreement between Yale University and Vion Pharmaceuticals, Inc. (f/k/a OncoRx, Inc.) dated as of January 31, 2000 [8,33]
10.14	—	Amendment No. 5 to a License Agreement between Yale University and Vion Pharmaceuticals, Inc. (f/k/a OncoRx, Inc.) dated as of March 3, 2003[11,33]
10.15	—	Form of Severance Agreement between the Company and Ann Lee Cahill, Terrence W. Doyle, Meghan Fitzgerald, Howard B. Johnson, Ivan King, Aileen Ryan, Karen Schmedlin and Mario Sznol[7]
10.16	—	Senior Executive Stock Option Plan[7]
10.17	—	Lease between Science Park Development Corporation and Vion Pharmaceuticals, Inc. dated November 1, 2001[9]
10.18	—	Vion Pharmaceuticals, Inc. Amended and Restated 1993 Stock Option Plan, as Amended[9]
10.19	—	Securities Purchase Agreement as of June 19, 2003[12]
10.20	—	Registration Rights Agreement as of June 19, 2003[12]
10.21	—	Form of Warrant [12]
10.22	—	Securities Purchase Agreement as of September 8, 2003[13]

Exhibit No.		Description
10.23	—	Registration Rights Agreement as of September 8, 2003[13]
10.24	—	Form of Warrant[13]
10.25	—	Research Services Agreement between Vion Pharmaceuticals, Inc. and Eli Lilly and Company as of September 8, 2003[14,33]
10.26	—	License Agreement between Vion Pharmaceuticals, Inc. and Beijing Pason Pharmaceuticals, Inc. dated September 12, 2003[14,33]
10.27	—	Employment Agreement between Vion Pharmaceuticals, Inc. and Alan Kessman dated as of November 3, 2003[14]
10.28	—	Research Collaboration and Option Agreement with a group of inventors from the Institute of Pharmacy and the Institute of Medical Chemistry and Biochemistry at the University of Innsbruck, and Austria Wirtschaftsservice Gesellschaft m.b.H. and Vion Pharmaceuticals, Inc. dated November 24, 2003[26,33]
10.29	—	Securities Purchase Agreement as of February 9, 2004[15]
10.30	—	Registration Rights Agreement as of February 9, 2004[15]
10.31	—	Form of Warrant[15]
10.32	—	License Agreement between Johnson & Johnson Consumer Companies, Inc. and Vion Pharmaceuticals, Inc. dated March 1, 2004 [16,33]
10.33	—	Vion Pharmaceuticals, Inc. 2003 Stock Option Plan, as amended[17]
10.34	—	Form of Stock Option Agreement for Executive Officers[17]
10.35	—	Amendment to Option Agreements with Mario Sznol[17]
10.36	—	Consulting Agreement between Vion Pharmaceuticals, Inc. and Mario Sznol dated October 15, 2004[19]
10.37	—	Placement Agency Agreement by and among Vion Pharmaceuticals, Inc., CIBC World Markets Corp. and Leerink Swann & Company, dated January 25, 2005[20]
10.38	—	Escrow Agreement by and between Vion Pharmaceuticals, Inc., JPMorgan Chase Bank, N.A. and CIBC World Markets Corp., dated January 25, 2005[20]
10.39	—	Agreement by and between Howard B. Johnson and Vion Pharmaceuticals, Inc., dated September 13, 2005[21]
10.40	—	Amendment No. 1, dated September 13, 2005, to the Employment Agreement with Alan Kessman dated November 3, 2003[21]
10.41	—	Amended Exclusive License Agreement, by and among Dr. Johnny Easmon, Prof. Dr. Gottfried Heinisch, Dr. Gerhard Purstinger, Prof. Dr. Heinz-Herbert Fiebig, Prof. Dr. Johann-Hofmann, Austria Wirtschaftsservice Gesellschaft M.B.H. and Vion Pharmaceuticals, Inc., dated as of June 30, 2005[22,33]
10.42	—	Vion Pharmaceuticals, Inc. 2005 Stock Incentive Plan[23]
10.43	—	Form of Restricted Stock Agreement for Non- Employee Directors under the 2005 Stock Incentive Plan[24]
10.44	—	Form of Restricted Stock Agreement under 2005 Stock Incentive Plan for Executive Officers[24]

Exhibit No.		Description
10.45	—	Amendment No. 2 of Employment Agreement of Alan Kessman, dated as of January 3, 2006[24]
10.46	—	First Amendment to Lease, dated January 25, 2006, by and between Vion Pharmaceuticals, Inc. and Science Park Development Corporation[25]
10.47	—	Consulting Agreement, made as of April 1, 2006, by and between Vion Pharmaceuticals, Inc. and TW Doyle Consulting Inc.[27]
10.48	—	Consulting Agreement, made as of May 8, 2006, by and between Vion Pharmaceuticals, Inc. and Mario Sznol[28]
10.49	—	Amendment to Option Agreements with Terrence W. Doyle as of June 27, 2006[29]
10.50	—	Employment Offer Letter to Meghan Fitzgerald dated December 13, 2005[30]
10.51	—	Employment Offer Letter to Aileen Ryan dated June 19, 2006[30]
10.52	—	Manufacturing and Service Contract for Commercial and Development Products between Vion Pharmaceuticals, Inc. and BenVenue Laboratories, Inc., dated effective as of November 28, 2006[31,34]
10.53	—	Indenture, dated as of February 20, 2007, between Vion Pharmaceuticals, Inc. and U.S. Bank National Association, as Trustee (including Form of Note attached thereto)[32]
10.54	—	Registration Rights Agreement, dated as of February 20, 2007, between Vion Pharmaceuticals, Inc. and CRT Capital Group LLC, as Initial Purchaser[32]
10.55	—	Form of Warrant[32]
21.1	—	Subsidiaries of the Registrant
23.1	—	Consent of Independent Registered Public Accounting Firm
24.1	—	Power of Attorney (included on signature page)
31.1	—	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	—	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	—	Certification of the Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	—	Certification of the Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

(1) Incorporated by reference to the Company's Registration Statement on Form SB-2 (File No. 33-93468), effective August 14, 1995.

(2) Incorporated by reference to the Company's Quarterly Report on Form 10-QSB for the quarterly period ended June 30, 1998.

(3) Incorporated by reference to the Company's Current Report on Form 8-K filed on October 26, 1998.

(4) Incorporated by reference to the Company's Registration Statement on Form S-1 (File No. 333-83837), effective October 26, 1999.

(5) Incorporated by reference to the Company's Quarterly Report on Form 10-QSB for the quarter ended June 30, 1997.

(6) Incorporated by reference to the Company's Annual Report on Form 10-KSB for the fiscal year ended December 31, 1998.

(7) Incorporated by reference to the Company's Quarterly Report on Form 10-QSB for the quarter ended March 31, 1999.

(8) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2001.

(9) Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2001.

(10) Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2002.

(11) Incorporated by reference to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002.

(12) Incorporated by reference to the Company's Current Report on Form 8-K filed on June 20, 2003.

(13) Incorporated by reference to the Company's Current Report on Form 8-K filed on September 10, 2003.

(14) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003.

(15) Incorporated by reference to the Company's Current Report on Form 8-K filed on February 11, 2004.

(16) Incorporated by reference to the Company's Current Report on Form 8-K/A filed on March 18, 2004.

(17) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004.

(18) Incorporated by reference to the Company's Current Report on Form 8-K filed on August 16, 2004.

(19) Incorporated by reference to the Company's Current Report on Form 8-K/A filed on November 9, 2004.

(20) Incorporated by reference to the Company's Current Report on Form 8-K filed on January 26, 2005.

(21) Incorporated by reference to the Company's Current Report on Form 8-K filed on September 13, 2005.

(22) Incorporated by reference to the Company's Current Report on Form 8-K filed on September 28, 2005.

(23) Incorporated by reference to the Company's Current Report on Form 8-K filed on October 31, 2005.

(24) Incorporated by reference to the Company's Current Report on Form 8-K filed on January 9, 2006.

(25) Incorporated by reference to the Company's Current Report on Form 8-K filed on January 31, 2006.

(26) Incorporated by reference to the Company's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2003.

(27) Incorporated by reference to the Company's Current Report on Form 8-K filed on April 5, 2006.

(28) Incorporated by reference to the Company's Current Report on Form 8-K filed on May 12, 2006.

(29) Incorporated by reference to the Company's Current Report on Form 8-K filed on June 29, 2006.

(30) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2006.

(31) Incorporated by reference to the Company's Current Report on Form 8-K/A filed on February 14, 2007.

(32) Incorporated by reference to the Company's Current Report on Form 8-K filed on February 20, 2007.

(33) Certain portions of this exhibit have been omitted pursuant to an order granting confidential treatment by the Securities and Exchange Commission.

(34) Certain portions of this exhibit have been omitted pursuant to a request for an order granting confidential treatment by the Securities and Exchange Commission. The omitted non-public information has been filed with the Securities and Exchange Commission.

SIGNATURES

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

VION PHARMACEUTICALS, INC.
Registrant

Date: March 14, 2007

By: /s/ Alan Kessman
Alan Kessman
Chief Executive Officer

POWER OF ATTORNEY

KNOWN ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Alan Kessman and Howard B. Johnson, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this Annual Report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue thereof.

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

Signature	Title	Date
/s/ William R. Miller William R. Miller	Chairman of the Board	March 14, 2007
/s/ Alan Kessman Alan Kessman	Chief Executive Officer and Director (Principal Executive Officer)	March 14, 2007
/s/ Howard B. Johnson Howard B. Johnson	President and Chief Financial Officer (Principal Financial Officer)	March 14, 2007
/s/ Karen Schmedlin Karen Schmedlin	VP Finance and Chief Accounting Officer (Principal Accounting Officer)	March 14, 2007
/s/ George Bickerstaff George Bickerstaff	Director	March 14, 2007
/s/ Stephen K. Carter, M.D. Stephen K. Carter, M.D.	Director	March 14, 2007
/s/ Kevin Rakin Kevin Rakin	Director	March 14, 2007
/s/ Alan C. Sartorelli, Ph.D. Alen C. Sartorelli, Ph.D.	Director	March 14, 2007
/s/ Ian Williams, D. Phil. Ian Williams, D. Phil.	Director	March 14, 2007
/s/ Gary K. Willis Gary K. Willis	Director	March 14, 2007

EXHIBIT 21.1 SUBSIDIARIES OF THE REGISTRANT

Name of Subsidiary	Incorporated In
VION (UK) LIMITED	UNITED KINGDOM
VION AUSTRALIA PTY LTD	VICTORIA, AUSTRALIA

Consent of Independent Registered Public Accounting Firm

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

(1) Registration Statement (Form S-8 No. 333-129746, No. 333-98738, No. 333-39407, No. 333-38730 and No. 333-67050) pertaining to the Vion Pharmaceuticals, Inc. 2005 Stock Incentive Plan, the Vion Pharmaceuticals, Inc. 2003 Stock Option Plan, the Vion Pharmaceuticals, Inc. Amended and Restated 1993 Stock Option Plan, as amended and in the Registration Statement (Form S-8 No. 333-53772) pertaining to the Vion Pharmaceuticals, Inc. 2000 Employee Stock Purchase Plan, and

(2) Registration Statement (Form S-3 No. 333-37941, No. 333-61477, No. 333-79939, No. 333-95671 and No. 333-58206) of Vion Pharmaceuticals, Inc. and in the related Prospectus;

of our reports dated March 12, 2007, with respect to the consolidated financial statements of Vion Pharmaceuticals, Inc., Vion Pharmaceuticals, Inc.'s management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of Vion Pharmaceuticals, Inc., included in this Form 10-K for the year ended December 31, 2006.

/s/ Ernst & Young LLP

Hartford, Connecticut
March 12, 2007

EXHIBIT 31.1

CERTIFICATION

I, Alan Kessman, Chief Executive Officer of Vion Pharmaceuticals, Inc., certify that:

1. I have reviewed this annual report on Form 10-K (this "report") of Vion Pharmaceuticals, Inc. (the "registrant");

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 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) 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 functions):

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

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

Date: March 14, 2007

/s/ Alan Kessman

Alan Kessman
Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Howard B. Johnson, Chief Financial Officer of Vion Pharmaceuticals, Inc., certify that:

1. I have reviewed this annual report on Form 10-K (this "report") of Vion Pharmaceuticals, Inc. (the "registrant");

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 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 annual 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) 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 functions):

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

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

Date: March 14, 2007

/s/ Howard B. Johnson

Howard B. Johnson
Chief Financial Officer

EXHIBIT 32.1

WRITTEN STATEMENT OF THE CHIEF EXECUTIVE OFFICER

Pursuant to 18 U.S.C. Section 1350, I, the undersigned Chief Executive Officer of Vion Pharmaceuticals, Inc. (the "Company"), hereby certify that the Annual Report on Form 10-K of the Company for the year ended December 31, 2006 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 14, 2007

/s/ Alan Kessman

Alan Kessman
Chief Executive Officer

EXHIBIT 32.2

WRITTEN STATEMENT OF THE CHIEF FINANCIAL OFFICER

Pursuant to 18 U.S.C. Section 1350, I, the undersigned Chief Financial Officer of Vion Pharmaceuticals, Inc. (the "Company"), hereby certify that the Annual Report on Form 10-K of the Company for the year ended December 31, 2006 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 14, 2007

/s/ Howard B. Johnson

Howard B. Johnson
Chief Financial Officer

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Directors and Officers

BOARD OF DIRECTORS

William R. Miller
Chairman of the Board; former Vice Chairman of the Board of Directors of Bristol-Myers Squibb Company

George Bickerstaff
Managing Director of CRT Capital Group LLC
Former Chief Financial Officer of Novartis Pharma AG

Stephen K. Carter, M.D.
Former Senior Vice President,
Clinical and Regulatory Affairs of SUGEN, Inc.

Alan Kessman
Chief Executive Officer

Kevin Rakin
Executive-in-Residence, Canaan Partners
Co-Founder, former President and Chief Executive Officer of Genaissance Pharmaceuticals, Inc.

Alan C. Sartorelli, Ph.D.
Founder and Chairman, Scientific Advisory Board;
Alfred Gilman Professor of Pharmacology,
Yale University School of Medicine

Ian Williams, D. Phil
Former Executive Director of Strategic Management Group,
Pfizer Global Research and Development

Gary K. Willis
Former Chairman, President and Chief Executive Officer of Zygo Corporation

OFFICERS

Alan Kessman
Chief Executive Officer

Howard B. Johnson
President and Chief Financial Officer

Ann Cahill
Vice President, Clinical Development

Meghan Fitzgerald
Vice President and Chief Business Officer

Ivan King, Ph.D.
Vice President, Research and Development

Aileen Ryan
Vice President, Regulatory Affairs

Karen Schmedlin
Vice President of Finance,
Chief Accounting Officer and Secretary

James Tanguay, Ph.D.
Vice President, Chemistry, Manufacturing and Control

Shareholder Information

CORPORATE WEBSITE

For further information, the Company's website provides current and historical information on Vion Pharmaceuticals, Inc., its product development programs, its clinical trials, investor relations and career opportunities. This site is located at: www.vionpharm.com.

INVESTOR RELATIONS

Copies of the Company's 2006 Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K filed with the Securities and Exchange Commission are available online at www.vionpharm.com or to shareholders without charge upon written request. General stockholder inquiries, including requests for the Company's Annual Report on Form 10-K, should be directed to the Company's investor relations department at the address on the back cover.

TRANSFER AGENT AND REGISTRAR

American Stock Transfer & Trust Company
59 Maiden Lane
New York, New York 10038
(800) 937-5449

CORPORATE COUNSEL

Fulbright and Jaworski L.L.P.
New York, New York

INDEPENDENT ACCOUNTANTS

Ernst & Young LLP
Hartford, Connecticut

STOCK LISTING

The Nasdaq Capital Market℠
Symbol: VION

ANNUAL MEETING OF STOCKHOLDERS

June 26, 2007 at 10:00 am
The Stamford Marriott Hotel
2 Stamford Forum
243 Tresser Boulevard
Stamford, Connecticut 06901

Four Science Park
New Haven, CT 06511
Tel: 203-498-4210
Fax: 203-498-4211
www.vionpharm.com