UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, DC 20549

FORM 10-K

/ X / Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

For the fiscal year ended December 31, 2000, 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: 0-21088

VICAL INCORPORATED
(Exact name of registrant as specified in its charter)

DELAWARE	93-0948554
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

9373 TOWNE CENTRE DRIVE, SUITE 100, SAN DIEGO, CA 92121-3088
Address of principal executive offices

(858) 646-1100
Registrant's telephone number including area code

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

Securities registered pursuant to Section 12(g) of the Act: Common Stock, Par Value $0.01

Preferred Stock Purchase Rights, Par Value $0.01
(Title of Class)

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 X No

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

The aggregate market value of the Common Stock held by non-affiliates of the registrant, based upon the last sale price of the Common Stock reported on the National Association of Securities Dealers Automated Quotation National Market System on March 15, 2001, was $220,922,653.

The number of shares of Common Stock outstanding as of March 15, 2001, was 20,015,344.

DOCUMENTS INCORPORATED BY REFERENCE

(To the Extent Indicated Herein)

Registrant's Proxy Statement to be filed with the Securities and Exchange

Commission in connection with the solicitation of proxies for the Registrant's 2000 Annual Meeting of Stockholders to be held on May 30, 2001, is incorporated by reference in Part III, Items 10, as to directors, 11, 12 and 13 of this Form 10-K.

FORWARD-LOOKING STATEMENTS

The statements incorporated by reference or contained in this report discuss our future expectations, contain projections of our results of operations or financial condition, and include other "forward-looking" information within the meaning of Section 27A of the Securities Act of 1933, as amended. Our actual results may differ materially from those expressed in forward-looking statements made or incorporated by reference in this report. Forward-looking statements that express our beliefs, plans, objectives, assumptions or future events or performance may involve estimates, assumptions, risks and uncertainties. Therefore, our actual results and performance may differ materially from those expressed in the forward-looking statements. Forward-looking statements often, although not always, include words or phrases such as the following:

- "will likely result,"
- "are expected to,"
- "will continue,"
- "is anticipated,"
- "estimate,"
- "intends,"
- "plans,"
- "projection," and
- "outlook."

You should not unduly rely on forward-looking statements contained or incorporated by reference in this report. Actual results or outcomes may differ materially from those predicted in our forward-looking statements due to the risks and uncertainties inherent in our business, including risks and uncertainties in:

- clinical trial results,
- obtaining and maintaining regulatory approval,
- market acceptance of and continuing demand for our products,
- the attainment of patent protection for any of these products,
- the impact of competitive products, pricing and reimbursement policies,
- our ability to obtain additional financing to support our operations,
- the continuation of our corporate collaborations, and
- changing market conditions and other risks detailed below.

You should read and interpret any forward-looking statements together with the following documents:

- our Quarterly Reports on Form 10-Q,
- the risk factors contained in this report under the caption "Risk Factors," and
- our other filings with the Securities and Exchange Commission.

Any forward-looking statement speaks only as of the date on which that statement is made. We will not update any forward-looking statement to reflect events or circumstances that occur after the date on which such statement is made.

PART I

ITEM 1. BUSINESS

OVERVIEW

We were incorporated in 1987 and develop biopharmaceutical products based on our patented naked DNA gene transfer technologies for the prevention and treatment of life-threatening diseases. We currently focus our development on innovative cancer therapies designed to induce an immune response against cancer cells without causing serious side effects. We have retained all rights to our internally developed cancer product candidates. Our lead immunotherapy product candidate, Allovectin-7(R), is in Phase III and Phase II registration trials for patients with advanced metastatic malignant melanoma, an aggressive form of skin cancer, and in a Phase II clinical trial for patients with cancer of the head and neck. Our second immunotherapy product candidate, Leuvectin(TM), is in Phase II clinical trials for patients with advanced metastatic kidney cancer and for high-risk patients with locally confined prostate cancer.

We enter into collaborations with major pharmaceutical companies to leverage our technologies primarily for non-cancer applications such as vaccines

for infectious diseases and optimized delivery of therapeutic proteins. We believe DNA vaccines have the distinguishing characteristic of combining what promises to be a safe and cost-effective technique with preventive or therapeutic potential. They can be used where other methods fail, and may counteract the random changes that can cause a system to become tolerant of infectious agents. These features make DNA vaccines a promising approach for the prevention and therapy of diseases caused by elusive pathogens such as the human immunodeficiency virus, HIV. Merck & Co., Inc. is using our naked DNA platform technology in two Phase I clinical trials, preventive and therapeutic, as part of their HIV vaccine program. Malaria is another increasingly drug-resistant disease. Together with Aventis Pasteur and the U.S. Navy, we have begun a Phase II clinical trial to test the safety and effectiveness of a multi-gene DNA vaccine for malaria.

Our technology for the optimized delivery of therapeutic proteins has been licensed by Aventis Pharma and Vascular Genetics Inc. for their respective Phase I and Phase I and II angiogenesis clinical trials. Any resulting therapeutics may help the body to grow new blood vessels where blood flow has been restricted, such as the heart following coronary artery disease and the limbs after peripheral vascular disease.

We have established relationships through the license of our technology with a growing number of corporate partners and collaborators including:

- Merck & Co., Inc.
- Two divisions of Aventis S.A.
  - Aventis Pasteur
  - Aventis Pharma
- Pfizer Inc
- Merial
- Centocor, a wholly-owned subsidiary of Johnson & Johnson
- Boston Scientific Corporation
- Human Genome Sciences, Inc. and its affiliate, Vascular Genetics Inc.

BACKGROUND

Traditional pharmaceutical medicine pursued the discovery and development of chemical compounds as therapeutics. More recently, biological agents such as therapeutic proteins and monoclonal antibodies have been developed as treatments. These compounds typically act by enhancing or blocking biological activities, by obstructing or attacking infectious or malignant agents, or by restoring proper chemical balance within affected tissues. The effectiveness of chemical and biological agents is often limited by toxic side effects and the inability to maintain effective levels of the drug where it is needed.

One possible answer to the weaknesses of previous approaches may be found in the novel therapeutics of gene therapy. "Gene therapy" refers to a collection of processes that add or alter genes, the basic units of heredity found inside living cells, in order to improve the body's natural ability to fight disease or to make a disorder more sensitive to other kinds of therapy.

Genes themselves are sets of instructions, encoded by DNA, with each gene causing cells to produce, or express, one of the thousands of different proteins essential to cellular structure, growth, and function. The improper expression of even a single gene can severely alter a cell's normal function, frequently resulting in a disease. Gene therapy offers an approach to the treatment and prevention of disease by introducing genes into cells to direct the expression of specific proteins.

Historically, gene therapy was accomplished by inserting the desired gene into a delivery vehicle, or vector. The most common vectors were viruses that had been genetically disabled so that they could not reproduce and infect other cells. Gene therapy approaches using viruses suffer several drawbacks that may limit their widespread usefulness, including adverse immune responses and inflammation that may inhibit the activity of the virus-based therapy and prevent repeated administration. In addition, viruses can induce permanent changes in the patient's genetic makeup, which may lead to cancer. Some gene therapy product candidates under development at competing companies use viral vectors, but many of the newer formulations are using non-viral or synthetic vectors such as lipids or polymers.

OUR NAKED DNA TECHNOLOGY

The key discovery leading to our patented naked DNA direct gene delivery technology was that some muscle tissues can absorb genetic material directly, without the use of viral components, and subsequently express a desired protein for periods ranging from weeks to several months. Our naked DNA gene delivery approach involves the design and construction of plasmids, DNA segments whose ends are attached together to form a highly stable closed loop. These plasmids contain the gene encoding the protein of interest, as well as short segments of DNA that control the rate and location of protein expression. Plasmids can be manufactured through conventional fermentation and purification techniques.

Since the initial discovery of the naked DNA technology, our researchers have improved the design of our plasmids to provide increases in efficiency of gene delivery and expression. In addition, we are developing other synthetic technologies to deliver DNA directly into some non-muscle tissues, including the use of lipid molecules and synthetic polymers that facilitate direct absorption of DNA into cells. We call ourselves "The Naked DNA Company(TM)" because all of our product candidates are based on these synthetic, non-viral gene delivery methods, and because we own exclusive, broad rights to the naked DNA gene delivery technologies through our series of core patents. Our naked DNA gene delivery approach may offer novel treatment alternatives for diseases that are currently poorly addressed. Benefits of our gene delivery technology may include:

- BROAD APPLICABILITY. Our naked DNA gene delivery technology may be useful in developing novel treatments for cancer, DNA vaccines to prevent or treat infectious diseases and methods to efficiently deliver human and animal therapeutic proteins.

- CONVENIENCE. Our naked DNA therapeutics are intended to be administered like conventional pharmaceuticals on an outpatient basis.

- SAFETY. Our product candidates contain no viral components that may cause unwanted immune responses, infections, or malignant and permanent changes in the cell's genetic makeup.

- EASE OF MANUFACTURING. Our product candidates are manufactured using conventional fermentation techniques and standard purification procedures.

- COST-EFFECTIVENESS. Our naked DNA gene delivery technology may prove to be more cost-effective than therapies which require genetic modification and controlled propagation of viral vectors. The DNA, once introduced into the body, is intended to stimulate the production of a therapeutic protein at lower doses and over a prolonged period of time, which may be more cost-effective than administering the protein itself. It may also diminish potential side effects, which itself may reduce per patient treatment costs.

Potential applications of our naked DNA gene delivery technology include DNA therapeutics for cancer, in which the expressed protein is an immune system stimulant or cancer-killing agent; DNA vaccines for infectious diseases, in which the expressed protein is an antigen; and DNA therapeutic protein delivery, in which the expressed protein is a therapeutic agent.

BUSINESS STRATEGY

There are three basic elements to our business strategy:

INDEPENDENTLY DEVELOP CANCER THERAPEUTICS

We currently focus our resources on the independent development of cancer therapeutics. We believe that the large and rapidly growing market for cancer products is poorly addressed by existing treatment alternatives. In addition, we believe that this market is well suited to a development-stage company with limited resources such as Vical because:

- Clinical testing usually can be conducted in a small number of patients and benefits can be detected and verified in reasonably short periods of time

- Testing occurs in patients with advanced, life-threatening diseases with limited treatment alternatives, which may expedite the regulatory approval process

- Product acceptance is supported by objective clinical data, potentially reducing marketing costs

- Treatment decisions are made at regional cancer centers by oncologists who can be served by a small, specialized sales force

We intend to retain significant participation in the commercialization of our proprietary cancer products, although we may choose to enlist the support

of a marketing partner to accelerate market penetration.

EXPAND THE APPLICATIONS OF OUR TECHNOLOGY THROUGH STRATEGIC COLLABORATIONS

Our naked DNA technology can potentially be applied to the treatment or prevention of a wide range of diseases in addition to cancer. In markets that would require large-scale development, high-capacity manufacturing, or mass marketing, we have chosen to establish partnerships with major pharmaceutical companies. These companies have the resources necessary to develop and commercialize products for these markets. The resulting collaborations typically provide us with upfront and milestone payments during product development, as well as the potential for ongoing royalties from product sales. Our collaborations to date have involved multiple applications for DNA vaccines and DNA therapeutic protein delivery.

DEVELOP FUTURE PRODUCT OPPORTUNITIES

We are actively pursuing the development of future products, refinement of our plasmids and lipids, the exploration of alternative gene delivery technologies, and the evaluation of potential enhancements to our core naked DNA technologies. We also seek and develop additional applications of our technologies by testing new approaches to disease control or prevention. These efforts could lead to further independent product development or to additional licensing opportunities. In addition, we continually evaluate compatible technologies or products that may be of potential interest for in-licensing or acquisition. Our research and development costs for the year ended December 31, 2000, were approximately $18.5 million.

PRODUCT DEVELOPMENT

We are focused on the development of pharmaceutical product candidates based on our patented gene delivery technology. A number of therapeutic and vaccine product candidates are currently under development for the prevention or treatment of cancer, infectious diseases and metabolic disorders. The table below summarizes both our independent and collaborative product development programs. In the clinic, our current focus is on the development of innovative cancer therapies designed to induce an immune response against cancer cells. Our lead candidates, Allovectin-7(R) and Leuvectin(TM), are both in late-stage clinical trials at multiple sites throughout the United States.

Clinical trials, also called medical research and research studies, are used to determine whether new drugs or treatments are both safe and effective. Traditionally, clinical trials are done in three phases. Phase I trials mark the first time a new drug or treatment is administered to humans, and are normally conducted to determine the safety profile of a new drug. Phase II trials are conducted in order to determine preliminary effectiveness, or efficacy, optimal dosage, and to confirm the safety profile. Phase III studies are often large scale, multi-center studies conducted to compare a new treatment with a currently approved therapy. At times, a single trial may incorporate elements from different phases of development. An example might be a trial designed to determine both safety and initial efficacy. Such a trial may be referred to as a Phase I/II trial.

INDEPENDENT AND COLLABORATIVE PRODUCT DEVELOPMENT PROGRAMS

<TABLE>
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PROJECT	TARGET INDICATION(S)	DEVELOPMENT STATUS	DEVELOPMENT RIGHTS
<S>	<C>	<C>	<C>
CANCER			
Allovectin-7(R)	Melanoma	Phase III	Vical
	Head and neck cancer	Phase II	Vical
Leuvectin(TM)	Kidney cancer	Phase II	Vical
	Prostate cancer	Phase II	Vical
VAXID	B-cell lymphoma	Phase I/II	Vical
gp100	Melanoma	Phase I/II	Vical
Therapeutic DNA vaccines	Various cancers	Preclinical/Phase I	Centocor
INFECTIOUS DISEASES			

Preventive DNA vaccines	Malaria	Phase II	Aventis Pasteur
	Human immunodeficiency virus (HIV), influenza	Phase I	Merck
	Hepatitis B, Hepatitis C, human papilloma virus, herpes simplex, tuberculosis	Research/preclinical	Merck
	CMV, H. PYLORI, RSV	Research/preclinical	Aventis Pasteur
Therapeutic DNA vaccines	HIV	Phase I	Merck
	Hepatitis B, human papilloma virus	Research/preclinical	Merck
OTHER DISEASES			
Therapeutic protein DNA	Neurodegenerative diseases	Research/preclinical	Aventis Pharma
	Cardiovascular diseases	Phase I	Aventis Pharma
	Cardiovascular diseases	Phase II	Vascular Genetics
Catheter-based DNA therapy	Cardiovascular diseases	Research/preclinical	Boston Scientific
VETERINARY			
Preventive DNA vaccines	Various	Research	Merial
Therapeutic protein DNA	Various	Research	Pfizer

"Research" indicates laboratory research related to identification and synthesis of lead compounds. "Preclinical" indicates that a specific compound is undergoing toxicology testing and manufacturing scale-up, etc., in preparation for filing an Investigational New Drug (IND) application.

DNA THERAPEUTICS FOR CANCER

Cancer is a disease of uncontrolled cell growth. When detected early and still confined to a single location, surgery or irradiation can often be curative. However, neither surgery nor irradiation is considered curative for cancer that has spread throughout the body. Chemotherapy can sometimes treat cancer that has spread throughout the body; however, a number of non-cancerous cells, such as bone marrow cells, are also highly susceptible to chemotherapy. As a result, chemotherapy often has fairly significant side effects. Finally, because each of these treatments only acts for a short period of time, it is common to see cancer return after apparently successful treatment.

Using the patient's own immune system, known as immunotherapy, to treat cancer has many advantages over surgery, irradiation, and chemotherapy. It is generally believed that the immune system can recognize cancer cells and destroy them. Yet many cancers appear to have developed the ability to "hide" from the immune system. A treatment that can augment the immune response against tumor cells by making the cancer more "visible" to the immune system would likely represent a significant improvement in cancer therapy. Immune-enhancing proteins such as interleukin-2, IL-2, and interferon-alpha, IFN-a, have shown encouraging results. Still, these agents often require large and frequent doses that regularly result in severe side effects.

Our plasmid-based DNA vaccine approach consists of injecting immune stimulating genes complexed with a cationic lipid delivery vehicle, DMRIE/DOPE, directly into malignant tumors. Following injection, the lipid delivery vehicle facilitates uptake of the gene product into tumor cells, where it directs the production of protein. This local expression of immune-stimulating proteins often results in the same local effect from the protein with fewer systemic toxicities.

In addition, non-viral DNA-based vaccines appear to offer an added margin of safety compared to viral-based therapies, as no viral particles are contained in the formulation. The ease of manufacture, routine treatment administration, performed in the clinic with minimal discomfort, and the excellent toxicity profile suggest that plasmid-based DNA vaccines may offer advantages over current modalities of therapy.

Preclinical studies in animals have demonstrated the safety and efficacy of this approach. Subsequently, in early human studies, a low incidence of treatment related adverse events has been observed. Our two lead plasmid-based DNA vaccines being developing are reviewed below.

ALLOVECTIN-7(R)

Allovectin-7(R) is a DNA/lipid complex containing the human gene encoding HLA-B7, which is found infrequently in the human population. Allovectin-7(R) is designed to be injected directly into a tumor, where malignant cells absorb it and express the HLA-B7 antigen. This DNA/lipid complex induces a powerful immune response. Furthermore, the treatment may trigger an immune response against additional tumor cells, both locally and systemically, by enabling the immune system to recognize other features of the tumor cells. Allovectin-7(R) is currently in advanced clinical testing for patients with metastatic melanoma and for patients with tumors of the head and neck.

METASTATIC MELANOMA

The American Cancer Society, ACS, estimates the diagnosis of approximately 51,400 new cases of melanoma in the U.S. and 7,800 deaths from this disease in 2001. Currently, there are no consistently effective therapies for the advanced disease. Treatment for these patients normally includes a combination of chemotherapy, radiotherapy, and surgery. In patients whose disease continues to progress after they have received all available treatments, the average survival is seven to nine months.

Due to the lack of effective treatment options and toxicities of most chemotherapeutic and radiation regimes, immunotherapies such as Allovectin-7(R) represent an attractive approach for patients with advanced melanoma. In multi-center Phase I/II and Phase II trials, Allovectin-7(R) was well tolerated and several patients developed durable reductions in overall tumor burden or maintained stable disease. Combined results from three trials were updated in December 2000 at the Eighth International Gene Therapy of Cancer Conference.

Of 90 evaluable end stage melanoma patients treated with intratumoral injections of Allovectin-7(R), 22, or 24%, demonstrated clinical benefit. We believe these results compare favorably to available clinical

data on other FDA-approved biological agents such as IFN-a and IL-2. A correlation between tumor response and site of disease was documented. Tumor regression was noted more often in patients with soft-tissue metastatic disease, disease involving skin and lymph nodes, than in patients with visceral disease, affecting multiple internal organs. In the soft-tissue subgroup, ten out of 33 patients, or 31%, demonstrated a clinical benefit. In contrast, only six out of 37 patients with visceral disease, or 16%, demonstrated a clinical benefit. This is consistent with other cancer vaccine studies, where tumor burden is a major determinant of tumor rejection and anti-tumor responses. Interestingly, we saw a higher local response rate, or reduction of the injected lesion, than systemic response, or reduction of overall disease. Survival was longer in patients demonstrating either local, with a median 8.8 months, or systemic response, with a median 26.4 months, than non-responding patients, with a median of 7.6 months.

These trials also confirmed the excellent safety profile of Allovectin-7(R). Side effects from Allovectin-7(R) were primarily mild. The most common complaint was temporary pain at the injection site. The side-effect profile for Allovectin-7(R) appears to improve over other FDA-approved biological agents. Treatment with IFN-a or IL-2 frequently causes serious side effects requiring hospitalization and occasionally causes life-threatening or fatal complications.

Based on the promising data from earlier trials, and following discussions with the FDA, we began registration trials, a Phase II study and a Phase III study, for Allovectin-7(R) in May 1998. We announced in May 2000 that we would continue to recruit patients as planned in our two ongoing registration trials with Allovectin-7(R) in patients with metastatic melanoma, based on the recommendations of an independent Drug Safety Review Board. Our Phase II trial looked to optimize patient selection in an effort to enroll patients with the greatest chance of benefit from Allovectin-7(R). Enrollment was completed in late 2000. We expect to present initial results in 2001. The Phase III trial is ongoing in multiple centers across the United States. In our Phase III trial, we are recruiting patients that have metastatic melanoma and who have not received prior chemotherapy. Half the patients are receiving dacarbazine, the only chemotherapeutic agent currently approved by the FDA for metastatic melanoma. The other half are receiving dacarbazine plus Allovectin-7(R). The objective of this trial is to determine if Allovectin-7(R) treatment can increase the response rate, time to disease progression, and overall survival. Positive results from either or both of these trials could allow us to apply to the FDA for approval to market Allovectin-7(R).

In addition to optimizing patient selection and combining Allovectin-7(R) with other modalities of therapy, we initiated a Phase II trial in February 2001 evaluating different doses and treatment regimens. Given that injected tumors respond more frequently than non-injected lesions, one strategy to increase the response rate to Allovectin-7(R) may be to inject multiple

tumors rather than single tumors as in prior studies. In addition, higher doses of Allovectin-7(R) may allow for the uptake of Allovectin-7(R) into a greater number of tumor cells and therefore generate a stronger immune response.

HEAD AND NECK CANCER

Head and neck cancer includes several types of localized tumors affecting the oral cavity, the larynx or pharynx. The ACS estimates approximately 40,100 new diagnoses and 11,800 deaths from these cancers in 2001 in the U.S. When found early, head and neck cancers are often treated with surgery or irradiation therapy. Results of standard treatment depend on factors such as the number of tumors, their size, and their specific location.

Results from three sequential Phase I and Phase II clinical trials testing Allovectin-7(R) in patients with advanced squamous cell carcinoma of the head and neck were presented in August 2000 at the Fifth International Conference on Head and Neck Cancer. Data were compiled from a single-center, Phase I study and two multi-center, Phase II studies for patients with unresectable head and neck cancer who had failed to respond to conventional therapies. Of 60 HLA-B7 negative patients from the three trials, 6 patients achieved clinical responses, with a 50 percent or greater reduction in tumor burden, and 14 achieved stable disease, with less than 50 percent reduction or less than 25 percent increase in tumor burden, upon completing the first treatment cycle. The 20 responding or stable patients went on to a second treatment cycle. Upon completing the second treatment cycle, five patients had a partial response, and six patients had stable disease. The duration of response for the five responding patients ranged from 20 to 79 weeks. The duration of response for the six stable patients ranged from 18 weeks and remaining stable to 34 weeks. Allovectin-7(R) was generally well-tolerated, with no serious drug-related side effects.

We concluded that treatment with Allovectin-7(R) appears to be safe and that further studies are warranted in patients with less-advanced head and neck cancer.

Based on these conclusions, we initiated a multi-center Phase II trial in February 2001 with Allovectin-7(R) in up to 25 patients scheduled for surgical treatment of early-stage cancer of the oral cavity and oropharynx. The primary goal in the trial is reduction of the tumor prior to surgery. Additional objectives include assessment of the immune response to Allovectin-7(R), evaluation of the treatment's toxicity, and analysis of the time to disease progression.

LEUVECTIN(TM)

Leuvectin(TM) is a DNA/lipid complex containing the gene encoding IL-2, a cytokine that plays a role in stimulating immune response. Systemic IL-2 protein therapy is currently the only immunotherapeutic agent approved by the FDA for treatment of metastatic renal cell carcinoma, but its administration is associated with serious toxicity in the majority of patients. We expect that Leuvectin(TM), when injected into tumors, will cause the malignant cells to produce IL-2. Local expression of IL-2 may then stimulate the patient's immune system to attack and destroy the tumor cells. Because Leuvectin(TM) delivers IL-2 locally rather than throughout the body, it may provide efficacy comparable to the protein treatment with fewer side effects. Leuvectin(TM) is being tested in Phase II clinical trials for patients with kidney cancer and prostate cancer.

KIDNEY CANCER

The ACS estimates that there will be about 30,800 new cases of kidney cancer and about 12,100 deaths from this disease in the U.S. in 2001. Renal cell carcinoma accounts for almost 85% of kidney tumors and approximately three percent of all adult cancers. Our early results from Phase I/II and Phase II studies in renal cell carcinoma indicated that Leuvectin(TM) was well tolerated and effective in delivering the IL-2 protein, with a favorable risk-benefit ratio in these patients. Based on these results, a multi-center Phase II study was initiated in May 1998. We have since completed our enrollment with 61 volunteers. An analysis of the first 37 patients showed that Leuvectin(TM) caused objective clinical responses in the patients with good prestudy performance status and limited disease distribution. The treatment was generally well tolerated, with most complaints consisting of mild to moderate flu-like symptoms and pain at the injection site. Initial results from this study were reported in May 1999 at the Annual Meeting of the Society of Clinical Oncology with follow-on data presented at the same conference in May 2000. At that time, we announced the start of a new Phase II multi-center trial that will take advantage of Leuvectin(TM)'s strong safety and patient tolerance records to increase the injection dose from 1mg to 4mg. This study is ongoing.

PROSTATE CANCER

According to the ACS, prostate cancer is the second leading cause of

cancer fatalities among men in the U.S., with an estimated 198,100 new diagnoses of prostate cancer in the U.S., and 31,500 deaths from the disease in 2001.

Preclinical studies demonstrate that Leuvectin(TM) can stimulate an anti-tumor immune response against prostate cancer cells in the laboratory. In May 1997, we initiated a Phase I study at UCLA to evaluate the safety and efficacy of intraprostatic Leuvectin(TM) in two groups of patients: pre-prostatectomy and rising PSA following local irradiation therapy . Results of the trial were presented in May 1999 at the Annual Meeting of the American Urological Association. The data indicated that the treatment was safe and well tolerated, and that it could stimulate an immune response against the disease. The most common side effects included mild to moderate rectal spotting, perineal discomfort, and muscle aches. In eight of twelve patients scheduled for surgery, pre-surgical serum PSA, a marker for disease progression, levels decreased significantly after Leuvectin(TM) treatment. Three patients were diagnosed with metastatic disease at the time of the surgery and were therefore excluded from the trial. All nine patients who remained in the trial after surgery maintained negligible PSA levels after 11 to 18 months and continuing at the time of the meeting. In seven of nine patients with progressive disease following radiation therapy, serum PSA levels decreased significantly after treatment with Leuvectin(TM). In four of five patients receiving a second treatment course of Leuvectin(TM), the rate of increase in PSA levels was reduced considerably. On the basis of these data, we initiated two multi-center Phase II clinical trials in June 1999. These studies are ongoing.

VAXID

In collaboration with Stanford University Medical Center, we are developing a plasmid-based DNA vaccine, VAXID, against low-grade, non-Hodgkin's, B-cell lymphoma, or NHL. NHL is a disease in which cells in the lymph nodes or other lymphatic tissue grow abnormally. Although low-grade NHL often exhibits a slow growth rate with an initial response to standard treatment, the disease often recurs and may subsequently develop into a widespread, aggressive lymphoma. The ACS estimates that 56,200 new diagnoses and 26,300 deaths from NHL are expected in 2001.

VAXID contains a patient-specific gene encoding a characteristic molecule of cancerous B-cells. Preclinical studies in mice have demonstrated that the injection of a plasmid-based DNA vaccine encoding a gene specific to the B-cell lymphoma resulted in strong and specific immune responses and significant protection against subsequent tumor challenge. We believe that immunization of post-chemotherapy patients with VAXID could result in the elimination of residual disease and the prevention of relapse. An initial Phase I/II study of VAXID is ongoing.

GP100 VACCINE

In collaboration with the National Cancer Institute, NCI, we are supporting the development of a plasmid-based DNA vaccine, which may cause cells to produce a modified melanoma-related protein known as gp100. This protein is expected to trigger an immune response against melanoma tumor cells. In earlier studies, the NCI tested a vaccine using portions of the modified gp100 protein in combination with systemic IL-2 protein therapy. A 42% response rate was reported in end-stage melanoma patients. The NCI initiated a new study in 1998 testing a gp100 plasmid-based DNA vaccine provided by us in combination with IL-2 protein. We believe a plasmid-based DNA vaccine may be more generally applicable and may provide advantages in manufacturing, administration, and safety.

DNA VACCINES FOR INFECTIOUS DISEASES

According to the World Health Organization, infectious and parasitic diseases cause approximately one-third of all deaths worldwide, making them the leading cause of death. Most deaths from infectious diseases are caused by acute lower respiratory infections, tuberculosis, neonatal diarrhea, AIDS and malaria. Vaccines are generally recognized as the most cost-effective approach for infectious disease health care. However, the technical limitations of conventional vaccine approaches have constrained the development of effective vaccines for many diseases.

We believe our potential vaccine products should be simpler to manufacture than vaccines made using cumbersome and labor-intensive techniques involving difficult tissue culture procedures and live viruses. Further, our revolutionary naked DNA vaccine technology may overcome two deficiencies of traditional preventive vaccine approaches: the inability to counteract the random changes in the strains of various infectious agents, and the need for safe formulations, or adjuvants, to boost an antibody response or to cause sufficient killer T-cell responses.

Our scientists have shown in animal experiments that the intramuscular injection of plasmid DNA encoding a protein common to all strains of the

influenza virus stimulates both antibody and killer T-cell responses against the virus itself and virus-infected cells. The immune response is potent, specific and requires no adjuvants. For over a year following vaccination, treated animals demonstrated higher survival rates than untreated control animals when challenged with various strains of inhaled influenza virus. This observed cross-strain protection, if reproducible in humans, will offer a key advantage compared with conventional vaccines. Thus, our direct gene delivery technology may be universal, not requiring frequent re-design or product modification for each new viral strain.

Only a few years ago, DNA vaccines were an unproven novelty with limited acceptance in the scientific community. Today, numerous scientific publications have documented the efficacy of DNA vaccines in providing potent immune responses or protective immunity against viruses, bacteria and parasites in dozens of species from fish to primates, including human volunteers. Additional studies have extended these findings to other models of infectious diseases for which there are no approved vaccines, such as HIV, herpes and malaria.

Through our collaborations with major pharmaceutical companies, we have seen our naked DNA vaccine technology advance in recent years into human testing with developmental vaccines. Clinical programs in 2000 based on our licensed technology included a Phase I trial of a DNA vaccine to prevent infection with HIV, a Phase I trial of a DNA vaccine to treat patients already infected with HIV, and a Phase II trial of a DNA vaccine to prevent infection with malaria.

Because of the large-scale development programs, manufacturing capacity, and distribution channels required to successfully market a vaccine, we believe collaborations with major pharmaceutical companies are the most effective way to apply our patented technology in the emerging DNA vaccine field. We have long-standing, active partnerships with two of the three largest vaccine manufacturers in the world, Merck and Aventis Pasteur. These relationships are summarized below. Further details can be found in "--Collaboration and Licensing Agreements--Corporate Partners."

MERCK

We have licensed our naked DNA vaccination technology to Merck for a total of seven preventive vaccine targets:

- hepatitis B virus, HBV
- hepatitis C virus, HCV
- human immunodeficiency virus, HIV
- human papilloma virus, HPV
- herpes simplex virus, HSV
- influenza virus
- tuberculosis, TB

In addition, Merck also has a license covering three therapeutic vaccine targets: HBV, HIV and HPV.

Merck's investigational HIV vaccine program includes development of vaccines based on our naked DNA vaccine technology to prevent and treat HIV infections. Merck is testing naked DNA vaccines for HIV in two human trials, one for uninfected volunteers and one for volunteers already infected with HIV and receiving highly active anti-retroviral therapy. The human testing began in December 1999. Merck also holds licenses to develop preventive and therapeutic vaccines for several other infectious disease vaccine targets. At its annual business briefing in December 2000, Merck highlighted its investigational HIV vaccine program as a key research initiative.

AVENTIS PASTEUR

We also have a license and option agreement with Aventis Pasteur, for a total of four preventive vaccine targets:

- cytomegalovirus, CMV
- HELICOBACTER PYLORI
- malaria
- respiratory syncytial virus, RSV

We currently are in discussions with Aventis Pasteur concerning a possible renegotiation of the terms of this agreement. We are collaborating with Aventis Pasteur and the U.S. Naval Medical Research Center, NMRC, to develop a DNA vaccine against malaria. There is no effective vaccine against malaria. This is a severe infectious disease characterized by fever, headache, and joint pain, which if untreated can lead to death. Infection normally occurs when the parasite enters a victim's bloodstream during a mosquito bite. Each year, 300 to 500 million people worldwide are treated for malaria and more than one million die from the disease, according to the World Health Organization.

In July 1997, in collaboration with Aventis Pasteur, we began a Phase I trial of a single-gene experimental vaccine against the parasite that causes malaria. NMRC conducted the clinical trial with approximately twenty volunteers. Trial results, reported in the October 16, 1998, issue of SCIENCE, indicated that subjects immunized with a potential malaria DNA vaccine developed dose-related killer T-cell immune responses.

In August 2000, the malaria vaccine program advanced to Phase II clinical testing of the safety, immunogenicity, and protective efficacy of a multi-gene DNA vaccine intended to prevent infection by the malaria parasite. The vaccine, designated MuStDO 5, incorporates five genes that are designed to cause production of immunogens to trigger an immune response against the malaria parasite in the blood-borne sporozoite and liver-based merozoite stages of its life cycle. In this first Phase II controlled challenge trial, the MuStDO 5 DNA vaccine includes dose escalation of a naked DNA agent encoding granulocyte macrophage colony stimulating factor, GM-CSF, an immune system stimulant.

Research and testing are being supported by the Department of Defense Military Infectious Diseases Research Program and the Office of Naval Research's Advanced Technology Development Program.

DNA THERAPEUTIC PROTEIN DELIVERY

Our naked DNA direct gene delivery technology also may permit the development of alternatives to therapeutic protein administration for diseases. Major shortcomings of some therapeutic proteins include their short duration of action and the potential side effects associated with high levels of circulating protein after intravenous administration. We believe that direct injection into muscles of genes that encode the protein of interest may enable the muscle cells to act as protein factories causing a sustained release of low levels of the therapeutic proteins, reducing side effects and the need for repeated dosing. Our technology may be most suitable for the delivery of proteins that are required in small amounts over prolonged periods of time.

Much attention is being focused on the emerging field of angiogenesis, which involves inducing the growth of new blood vessels to replace those blocked by disease. DNA-based delivery of growth factors has been successfully demonstrated in human trials. Other potential applications, still being tested in animal models, could involve the delivery of proteins that maintain nerve cell function for treating certain neurodegenerative diseases, or the delivery of biologically active compounds such as insulin to treat diabetes or erythropoietin to treat certain forms of anemia.

On February 24, 2000, the Company and Human Genome Sciences, Inc., HGS, signed a reciprocal royalty-bearing license. Under the agreement, we have the option to exclusively license up to three genes from HGS for gene-based product development. HGS has the option to license our naked DNA gene delivery technology for use in up to three gene-based products. We also granted an exclusive, royalty-bearing license to Vascular Genetics Inc., VGI, for naked DNA delivery of Vascular Endothelial Growth Factor-2, VEGF-2. VGI, a privately held company in which HGS is a major shareholder, has conducted Phase I and Phase II clinical trials using naked DNA delivery of the VEGF-2 gene to promote angiogenesis in patients with coronary artery disease or peripheral vascular disease. The FDA placed the VGI trials on a clinical hold in 2000 as a result of procedural irregularities in the conduct of the trials. The FDA has requested information for which VGI is developing scientific testing techniques.

We licensed our naked DNA gene delivery technology to Aventis Pharma in 1997 for the delivery of neurologically active proteins that may be applicable in treating neurodegenerative diseases such as Alzheimer's, Parkinson's and Lou Gehrig's diseases. In 1999, Aventis Pharma began testing the naked DNA delivery of a gene encoding an angiogenic growth factor in patients with peripheral vascular disease, a severe loss of blood flow caused by blockage of arteries feeding the foot and lower leg. Aventis Pharma licensed the rights to our gene transfer technology in July 2000. The agreement resulted in an initial payment to us of $1.5 million and could generate milestone payments plus royalties if products advance through commercialization.

VETERINARY APPLICATIONS

Prior to its development for human therapy, our naked DNA gene delivery technology was extensively tested in animals. Research scientists have published numerous papers detailing favorable

results in many species and covering a broad range of disease indications. Animal health encompasses two distinct market segments: livestock, or animals bred and raised for food or other products; and companion animals, or pets.

Serving the animal health markets requires highly efficient manufacturing and specialized distribution channels. Consequently, we have licensed our naked DNA technology to leading animal health pharmaceutical companies for development and commercialization.

DNA VACCINES FOR VETERINARY INFECTIOUS DISEASES

We entered into a corporate alliance in March 1995 relating to DNA vaccines in the animal health area with Merial, a joint venture between Merck and Aventis S.A. Merial has exercised and unexercised options to acquire exclusive licenses to our gene delivery technologies to develop and commercialize DNA-based vaccines to prevent infectious diseases in domesticated animals.

VETERINARY DNA THERAPEUTIC PROTEIN DELIVERY

In January 1999, we entered into a collaborative research, license, and option agreement granting Pfizer rights to use our patented naked DNA gene delivery technologies to deliver certain therapeutic proteins for animal health applications.

INTELLECTUAL PROPERTY

Patents and other proprietary rights are essential to our business. We file patent applications to protect our technology, inventions, and improvements to our inventions that we consider important to the development of our business.

We also rely upon trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain our competitive position. We have filed or participated as licensee in the filing of more than 40 patent applications in the United States and have made over 360 additional counterpart foreign filings in foreign countries relating to our technology. Our patent applications seek to cover naked DNA gene delivery for immunization and delivery therapeutic proteins to patients, specific gene sequences and formulations of gene-based product candidates, methods for producing pharmaceutical-grade DNA, and the composition of matter of several families of lipid molecules and their uses in gene delivery. Many of these patents have been issued by the U.S. Patent and Trademark Office. Several other applications are still pending in the United States, and corresponding foreign applications have been filed.

We and our exclusive licensors have received numerous U.S. and foreign patents covering various aspects of our proprietary technology. Most of these patents are recently issued and have considerable patent life remaining. These patents are described as follows:

- CORE DNA DELIVERY TECHNOLOGY. We have received issued U.S. patents covering our core DNA therapeutics technology, including patents on methods of administering gene sequences for the purposes of expressing therapeutic proteins or for inducing immune responses. Other issued patents specifically cover the administration of genes into blood vessels and the heart. Patent coverage of our core DNA delivery technology has also been obtained in Europe.

- CORE LIPID TECHNOLOGY. We have received issued U.S. patents covering numerous examples of cationic lipid compounds that are used to facilitate delivery of DNA therapeutics to some tissues. These patented compounds include the lipids contained in our lead product candidates, Allovectin-7(R) and Leuvectin(TM). Patent protection of these key lipids also has been obtained in Europe and Japan.

- SPECIFIC DNA THERAPEUTICS. We have supplemented the broad patent coverage described above with patents covering specific product applications of our technology. To date, we have received patents issued in the U.S. covering the DNA components of Allovectin-7(R) and Leuvectin(TM).

- DNA PROCESS TECHNOLOGY. As a result of our pioneering efforts to develop the use of pure DNA as a therapeutic agent, we have also led the development of manufacturing processes for producing pharmaceutical-grade DNA. We have received issued U.S. patents covering various steps involved in the process of economically producing pure plasmid DNA for pharmaceutical use.

At the beginning of 2000, prosecution of two of our allowed U.S. patent applications and one U.S. patent application that we licensed were under suspension by the U.S. Patent & Trademark Office, PTO,

pending resolution of possible interference proceedings with one or more parties unknown to us. For two of these three applications, the suspensions were lifted during 2000, and we received Notices of Allowance from the PTO. The third application, which is closely related to one of the previously suspended but now

allowed applications, remains under suspension while the PTO seeks to locate the file. We believe this suspension will be lifted in due course and that the application will proceed to issuance. According to European patent procedures, issued patents may be opposed by parties interested in challenging the scope or validity of the issued claims. A European patent covering our core DNA delivery technology is currently being opposed by several companies under these procedures. We intend to vigorously defend our patent position in these opposition proceedings. An unfavorable result in these opposition proceedings could cause us to lose part or all of our proprietary protection on our potential products in Europe. We believe that no others hold patents or other intellectual property that would preclude us from commercializing our proprietary technology.

Some components of our gene-based product candidates are, or may become, patented by others. As a result, we may be required to obtain licenses to conduct research, to manufacture, or to market such products. Licenses may not be available on commercially reasonable terms, or at all.

See "--Risk Factors--Our Patents and Proprietary Rights May Not Provide Us With Any Benefit and the Patents of Others May Prevent Us From Commercializing Our Products" and "The Legal Proceedings to Obtain Patents and Litigation of Third-Party Claims of Intellectual Property Infringement Could Require Us to Spend Money and Could Impair Our Operations."

COMMERCIALIZATION AND MANUFACTURING

Because of the broad potential applications of our technology, we intend to develop and commercialize products both on our own and through corporate partners. We intend to develop and market products to well-defined specialty markets, such as oncology, infectious diseases, and other life-threatening diseases. Where appropriate, we intend to rely on strategic marketing and distribution partners for manufacturing and marketing products.

We believe our DNA plasmids can be produced in commercial quantities through conventional fermentation and purification techniques. The separation and purification of plasmid DNA is a relatively straightforward procedure because of the inherent biochemical differences between plasmid DNA and the majority of other bacterial components. In addition, our lipid formulations consist of components that are synthesized chemically using traditional, readily scaleable, organic synthesis procedures.

We produce and supply our product for all of our clinical trials and intend to produce sufficient supplies for additional clinical investigations. We may also choose to have outside organizations manufacture our product candidates for expanded clinical trials under close supervision utilizing our proprietary processes.

COLLABORATION AND LICENSING AGREEMENTS

We have entered into various arrangements with corporate, academic, and government collaborators, licensors, licensees, and others. In addition to the agreements summarized below, we conduct ongoing negotiations with potential corporate partners.

CORPORATE PARTNERS

MERCK & CO., INC. In May 1991, we entered into a research collaboration and license agreement with Merck to develop vaccines utilizing our intramuscular delivery technology to prevent infection and disease in humans. In connection with the 1991 agreement, we granted Merck a worldwide exclusive license to preventive vaccines using our technology against seven human infectious diseases including influenza, HIV, herpes simplex, HBV, HCV, HPV, and tuberculosis. Merck has the right to terminate this agreement without cause on 90 days written notice.

In addition, Merck has rights to therapeutic uses of preventive vaccines developed under the 1991 agreement. In December 1995 and November 1997, Merck acquired additional rights to develop and market therapeutic vaccines against HPV, HIV, and HBV. Under the November 1997 amendment, Merck made an investment of $5.0 million for approximately 262,000 shares of our common stock.

In September 1997, we entered into an option and license agreement granting Merck the rights to use our technology to deliver certain growth factors. The agreement resulted in a payment to us of $2.0 million. Merck terminated this agreement effective June 2000.

In connection with these agreements, Merck has paid us $22.1 million through December 31, 2000. In November 1999, we received a $2.0 million payment from Merck, which extends Merck's exclusive license to develop and market therapeutic vaccines against HIV and HBV. In December 1999, Merck initiated a clinical trial with a naked DNA vaccine to prevent AIDS. In January 2000, Merck

paid us a $1.0 million milestone payment for the start of this trial. In May 2000, Merck commenced the therapeutic vaccine trial. Merck is obligated to pay additional fees if research milestones are achieved and royalties on net sales if any products are developed and marketed. For some indications we may have an opportunity to co-promote product sales.

AVENTIS PASTEUR. In September 1994, we entered into a research, option, and license agreement with the vaccine manufacturer Aventis Pasteur, a division of Aventis S.A., granting them options to acquire licenses for the use of our proprietary DNA delivery, and technologies for developing vaccines against CMV, RSV, Lyme disease, HELICOBACTER PYLORI, and malaria. In April 1996, varicella zoster was added. Aventis Pasteur has exercised its option to acquire several of these licenses. The options for Lyme and varicella zoster were not exercised and subsequently have been returned to Vical. Aventis Pasteur is obligated to make milestone and royalty payments to us if any products are developed and marketed. In July 1997, Aventis Pasteur paid us $1.0 million as a milestone payment upon initiation of a Phase I trial of an experimental vaccine against the parasite that causes malaria. We currently are in discussions with Aventis Pasteur concerning a possible renegotiation of the terms of this agreement. Through December 31, 2000, we had received $7.8 million under this agreement.

PFIZER INC. In January 1999, we entered into a collaborative research and option agreement with Pfizer to develop and market DNA-based delivery of therapeutic proteins for animal health applications. Pfizer has an option to obtain an exclusive royalty-bearing license to our technology for these applications. The option expires in January 2002. Under the agreement, Pfizer made an investment of $6.0 million for approximately 318,000 shares of our common stock. Pfizer also paid us a $1.0 million up-front license fee, and is obligated to pay us $1.5 million for research and development over the first three years of the agreement. Through December 31, 2000, Pfizer had paid us $1.0 million of this $1.5 million obligation.

MERIAL. We entered into a corporate alliance in March 1995 relating to DNA vaccines in the animal health area with Merial, a joint venture between Merck and Aventis S.A. Merial has options to take exclusive licenses to our DNA delivery technologies to develop and commercialize DNA-based vaccines to prevent infectious diseases in domesticated animals. In December 1999, Merial paid us $1.6 million for the initial exercise of options and extension of options under the agreement. In March 2000, Merial made the final payment to extend their option to March 31, 2001. Through December 31, 2000, we had received $5.0 million under this agreement. If Merial exercises additional license options and markets these vaccines, cash payments and royalties on sales would be due to us. Merial has the right to terminate this agreement without cause on 30 days written notice.

HUMAN GENOME SCIENCES, INC. AND VASCULAR GENETICS INC. On February 24, 2000, we signed a reciprocal royalty-bearing license with Human Genome Sciences, Inc., HGS. Under the agreement, we have the option to exclusively license up to three genes from HGS for gene-based product development. HGS has the option to license our naked DNA gene delivery technology for use in up to three gene-based products. In addition, we granted an exclusive, royalty-bearing license to Vascular Genetics Inc., VGI, a company in which HGS is a major shareholder, for naked DNA delivery of a gene with potential use for revascularization. In exchange, we received a minority equity interest in VGI.

AVENTIS PHARMA. In October 1997, we entered into an agreement granting Aventis Pharma, a division of Aventis S.A., an exclusive worldwide license to use our naked DNA delivery technology to deliver certain neurologically active proteins for potential treatment of neurodegenerative diseases. Under the terms of the agreement, we received $1.0 million in 1997. This agreement provides for us to receive additional payments based upon achievement of milestones and royalty payments on product sales. In 1999, Aventis Pharma began testing the naked DNA delivery of a gene encoding an angiogenic growth factor in patients with peripheral vascular disease, a severe loss of blood flow caused by blockage of

arteries feeding the foot and lower leg. They licensed the rights to our gene transfer technology in July 2000. The agreement resulted in an initial payment to us of $1.5 million and could generate milestone payments plus royalties if products advance through commercialization.

CENTOCOR, INC. In February 1998, we entered into an exclusive license and option agreement allowing Centocor, Inc., subsequently acquired by Johnson & Johnson, to use our naked DNA technology to develop and market certain DNA-based vaccines for the potential treatment of some types of cancer. We received an initial payment of $2.0 million plus reimbursement of $0.2 million of patent costs. We may receive additional payments based upon achievement of milestones and royalty payments on product sales.

BOSTON SCIENTIFIC CORPORATION. In April 1997, we entered into a sublicense agreement with Cardiogene Therapeutics, Inc., formerly known as

Genocor, Inc., for the development of catheter-based intravascular gene delivery technology under our license agreement with the University of Michigan, described below. Boston Scientific Corporation has subsequently acquired Cardiogene Therapeutics' rights under this agreement. We received $1.1 million in October 1998 under this agreement. The agreement provides for us to receive royalty payments on any related product sales.

Under the Merck, Aventis Pasteur, Merial, Aventis Pharma, Centocor, Pfizer, Human Genome Sciences, Inc. and Vascular Genetics Inc. agreements, if we were to receive milestone or royalty payments, we would be required to pay up to 10 percent of some of these payments to Wisconsin Alumni Research Foundation. Under the Boston Scientific agreement, if we were to receive milestone or royalty payments, we would be required to pay up to 25 percent of some of these payments to the University of Michigan. See "--Research Institutions--Wisconsin Alumni Research Foundation" and "--Research Institutions--The University of Michigan."

RESEARCH INSTITUTIONS

OFFICE OF NAVAL RESEARCH. In September 1998, we entered into an agreement with the Office of Naval Research, ONR, for development work on a potential multi-gene DNA vaccine to prevent malaria. In June 2000, we and the ONR amended our agreement to provide us with up to $5.5 million in funding through December 31, 2000. In November 2000, the agreement was further amended to extend the agreement to June 30, 2001. Through December 31, 2000, we had recognized revenue of $3.4 million of the total contract amount. We intend to pursue additional agreements with ONR to continue funding for this development program, however, we may not be able to enter into any further agreements.

THE UNIVERSITY OF MICHIGAN. In October 1992, we entered into a license agreement with the University of Michigan and obtained the exclusive license to technology for delivering gene-based products into cancer cells and blood vessels by catheters. In April 1997, we entered into a sublicense agreement, the rights under which are currently held by Boston Scientific Corporation, for the development of catheter-based intravascular gene delivery technology.

WISCONSIN ALUMNI RESEARCH FOUNDATION, WARF. Under a 1989 research agreement, scientists at the University of Wisconsin, Madison, and our scientists co-invented a core technology related to intramuscular naked DNA administration. In 1991, we licensed from WARF its interest in that technology. We paid WARF an initial license fee and agreed to pay WARF a royalty on sales of any products incorporating the licensed technology and a percentage of up-front license payments from third parties.

COMPETITION

The field of gene-based drug development is new and rapidly evolving, and it is expected to continue to undergo significant and rapid technological change. Rapid technological development could result in our potential products or technologies becoming obsolete before we recover a significant portion of our related research, development, and capital expenditures. We may experience competition both from other companies in the field and from companies which have other forms of treatment for the diseases we are targeting.

We are aware of several development-stage and established enterprises, including major pharmaceutical and biotechnology firms, which are exploring gene-based drugs or are actively engaged in gene delivery research and development. These include Avigen, Targeted Genetics Corp., Transgene SA,

and Valentis Inc. We may also experience competition from companies that have acquired or may acquire technology from companies, universities and other research institutions. As these companies develop their technologies, they may develop proprietary positions which may materially and adversely affect us.

In addition, a number of companies are developing products to address the same disease indications that we are targeting. For example, AVAX Technologies, Inc. and Genta Incorporated are conducting advanced clinical trials for the treatment of melanoma. As another example, Aventis, Onyx Pharmaceuticals, Inc., and ImClone Systems Incorporated are conducting clinical trials of their products to treat head and neck cancer. If these or any other companies develop products with efficacy or safety profiles significantly better than our products, we may not be able to commercialize our products, and sales of any of our commercialized products could be harmed.

Some competitors and potential competitors have substantially greater product development capabilities and financial, scientific, marketing, and human resources than we do. Other companies may develop products earlier, obtain FDA approvals for products more rapidly, or develop products that are more effective than those under development by us. We will seek to expand our technological capabilities to remain competitive; however, research and development by others may render our technology or products obsolete or noncompetitive, or result in

treatments or cures superior to ours.

Regulatory agencies such as FDA and other government agencies may expand current requirements for public disclosure of development information for gene-based product development data technology which may harm our competitive position with foreign companies and U.S. companies developing non-gene-based products for similar indications.

Our competitive position will be affected by the disease indications addressed by our potential products and those of our competitors, the timing of market introduction for these potential products and the stage of development of other technologies to address these disease indications. For us and our competitors, proprietary positions, the ability to complete clinical trials on a timely basis and with the desired results, and the ability to obtain timely regulatory approvals to market these potential products are likely to be significant competitive factors. Other important competitive factors will include the efficacy, safety, reliability, availability, and price of potential products and the ability to fund operations during the period between technological conception and commercial sales.

GOVERNMENT REGULATION

Any products we develop will require regulatory clearances prior to clinical trials and additional regulatory clearances prior to commercialization. New human DNA therapeutics are expected to be subject to extensive regulation by the FDA and comparable agencies in other countries. The precise regulatory requirements with which we will have to comply are uncertain at this time due to the novelty of the DNA-based products and therapies currently under development. We believe that our potential products will be regulated either as biological products or as drugs. Drugs are subject to regulation under the Federal Food, Drug and Cosmetic Act; biological products, in addition to being subject to provisions of that Act, are regulated under the Public Health Service Act. Both statutes and related regulations govern, among other things, the testing, manufacturing, safety, efficacy, labeling, storage, record keeping, advertising, and other promotional practices. FDA approval or other clearances must be obtained before clinical testing, and before manufacturing and marketing of biologics or drugs.

FDA approval is required prior to marketing a pharmaceutical product in the United States. To obtain this approval the FDA requires clinical trials to demonstrate the safety, efficacy, and potency of the product candidates. Clinical trials are the means by which experimental drugs or treatments are tested in humans. New therapies typically advance from laboratory, research, testing through animal, preclinical, testing, and finally through several phases of clinical, human, testing. Clinical trials may be conducted within the United States or in foreign countries. If clinical trials are conducted in foreign countries, the products under development as well as the trials are subject to regulations of the FDA and/or its counterparts in the other countries. Upon successful completion of clinical trials, approval to market the therapy for a particular patient population may be requested from the FDA in the United States and/or its counterparts in other countries.

Clinical trials are normally done in three phases. In Phase I, trials are typically conducted with a small number of patients or healthy volunteers to determine the safety profile, the pattern of drug distribution and metabolism, and early evidence on effectiveness. In Phase II, trials are conducted with a larger group of patients afflicted with a target disease in order to determine preliminary efficacy, optimal dosages, and expanded evidence of safety. In Phase III, large scale, multi-center, comparative trials are conducted with patients afflicted with a target disease in order to provide enough data for the statistical proof of safety, efficacy, and potency required by the FDA and other regulatory authorities. For life-threatening diseases, initial human testing generally is done in patients rather than healthy volunteers. These studies may provide results traditionally obtained in Phase II trials and are referred to as "Phase I/II" trials.

Obtaining FDA approval has been a costly and time-consuming process. Generally, in order to gain FDA pre-market approval, preclinical studies must be conducted in the laboratory and in animal model systems to gain preliminary information on an agent's efficacy and to identify any major safety concerns. The results of these studies are submitted as a part of an application for an Investigational New Drug, IND, which the FDA must review and allow before human clinical trials can start. The IND includes a detailed description of the clinical investigations.

A company must sponsor and file an IND for each proposed product and must conduct clinical studies to demonstrate the safety, efficacy, and potency that are necessary to obtain FDA approval. The FDA receives reports on the progress of each phase of clinical testing and it may require the modification, suspension, or termination of clinical trials if an unwarranted risk is presented to patients. Human DNA therapeutics are a new category of therapeutics

and the clinical trial period may be lengthy or the number of patients may be numerous in order to establish safety, efficacy, and potency.

After completion of clinical trials of a new product, FDA marketing approval must be obtained. If the product is regulated as a biologic, a Biologic License Application, BLA, is required. If the product is classified as a new drug, a New Drug Application, NDA, is required. The NDA or BLA must include results of product development activities, preclinical studies, and clinical trials in addition to detailed manufacturing information.

Applications submitted to the FDA are subject to an unpredictable and potentially prolonged approval process. The FDA may ultimately decide that the application does not satisfy its criteria for approval or require additional preclinical or clinical studies. Even if FDA regulatory clearances are obtained, a marketed product is subject to continual review, and later discovery of previously unknown problems or failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions. Before marketing clearance is secured, the manufacturing facility will be inspected for current Good Manufacturing Practices, GMP, compliance by FDA inspectors. The manufacturing facility must satisfy current GMP requirements prior to marketing clearance. In addition, after marketing clearance is secured, the manufacturing facility will be inspected periodically for GMP compliance by FDA inspectors, and, if the facility is located in California, by inspectors from the Food and Drug Branch of the California Department of Health Services.

In addition to the FDA requirements, the NIH has established guidelines for research involving human genetic materials, including recombinant DNA molecules. These guidelines apply to all recombinant DNA research that is conducted at facilities supported by the NIH, including proposals to conduct clinical research involving DNA therapeutics. The NIH review of clinical trial proposals and safety information is a public process and often involves review and approval by the Recombinant DNA Advisory Committee of the NIH.

In both domestic and foreign markets, sales of any approved products will depend on reimbursement from third party payers, such as government and private insurance plans. Third party payers are increasingly challenging the prices charged for medical products and services. If we succeed in bringing one or more products to market, these products may not be considered cost-effective, reimbursement may not be available, or reimbursement policies may adversely affect our ability to sell our products on a profitable basis.

We also are subject to various federal, state and local laws, regulations, and recommendations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals, and the use and disposal of hazardous or potentially hazardous substances, including radioactive compounds and infectious disease agents, used in connection with our research. The extent of government regulation which might result from any future legislation or administrative action cannot be accurately predicted.

HUMAN RESOURCES

As of March 1, 2001, we had 134 full-time employees, 20 of whom hold degrees at the doctorate level. Of these employees, 100 are engaged in, or directly support, research and development activities, and 34 are in administrative and business development positions. A significant number of our management and professional employees have prior experience with pharmaceutical and biotechnology companies. None of our employees is covered by collective bargaining agreements, and our management considers relations with our employees to be good.

FACILITIES

We lease approximately 50,000 square feet of manufacturing, research laboratory and office space in an established commercial neighborhood in northern San Diego, California, at three sites and with three leases. The leases terminate in 2004. We have the option to renew two of these three leases for an additional five-year period and can renew the third for two additional five-year periods.

Within our existing facilities, we have manufactured sufficient quantities of pharmaceutical-grade product to supply our previous and ongoing clinical trials, including the current registration trials. In addition, we have manufactured preclinical and clinical supplies of DNA for our corporate partners, for government agencies, and for numerous academic researchers. We believe that the build-out of unfinished space in our facilities will be sufficient to accommodate manufacturing of initial production quantities of our most advanced product candidates.

YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED BELOW, TOGETHER WITH ALL OF THE OTHER INFORMATION INCLUDED IN THIS REPORT, BEFORE DECIDING WHETHER TO INVEST IN OUR COMMON STOCK. IF ANY OF THE FOLLOWING RISKS ACTUALLY OCCURS, OUR BUSINESS, FINANCIAL CONDITION OR RESULTS OF OPERATIONS COULD BE HARMED. IN THIS CASE, THE TRADING PRICE OF OUR COMMON STOCK COULD DECLINE, AND YOU MAY LOSE ALL OR PART OF YOUR INVESTMENT.

NONE OF OUR PRODUCTS HAVE BEEN APPROVED FOR SALE. IF WE DO NOT DEVELOP COMMERCIALLY SUCCESSFUL PRODUCTS, WE MAY BE FORCED TO CURTAIL OR CEASE OPERATIONS.

Very little data exists regarding the safety and efficacy of DNA therapeutics. All of our potential products are either in research or development. We must conduct a substantial amount of additional research and development before any U.S. or foreign regulatory authority will approve any of our products. Results of our research and development activities may indicate that our potential products are unsafe or ineffective. In this case, regulatory authorities will not approve them. Even if approved, our products may not be commercially successful. If we fail to develop and commercialize our products, we will not be successful.

WE HAVE A HISTORY OF NET LOSSES. WE EXPECT TO CONTINUE TO INCUR NET LOSSES AND WE MAY NOT ACHIEVE OR MAINTAIN PROFITABILITY.

We have not sold any products and do not expect to sell any products for the next few years. For the period from our inception to December 31, 2000, we have incurred cumulative net losses totaling approximately $53.2 million. Moreover, our negative cash flow and losses from operations will continue and increase for the foreseeable future. We may never generate sufficient product revenue to become profitable. We also expect to have quarter-to-quarter fluctuations in revenues, expenses, and losses, some of which could be significant.

WE MAY NEED ADDITIONAL CAPITAL IN THE FUTURE. IF ADDITIONAL CAPITAL IS NOT AVAILABLE, WE MAY HAVE TO CURTAIL OR CEASE OPERATIONS.

We may need to raise more money to continue the research and development necessary to bring our products to market and to establish manufacturing and marketing capabilities. We may seek additional funds through public and private stock offerings, arrangements with corporate partners, borrowings under lease lines of credit or other sources. In the event that we need more money, but are unable to raise more money we may have to reduce our capital expenditures, scale back our development of new products, reduce our workforce and license to others products or technologies that we otherwise would seek to commercialize ourselves. The amount of money we may need will depend on many factors, including:

- the progress of our research and development programs
- the scope and results of our preclinical studies and clinical trials
- the time and costs involved in:
  - obtaining necessary regulatory approvals
  - filing, prosecuting and enforcing patent claims
  - scaling up our manufacturing capabilities
- the commercial arrangements we may establish

THE REGULATORY APPROVAL PROCESS IS EXPENSIVE, TIME CONSUMING AND UNCERTAIN WHICH MAY PREVENT US FROM OBTAINING REQUIRED APPROVALS FOR THE COMMERCIALIZATION OF OUR PRODUCTS.

Testing of the potential drugs our collaborators and we develop is regulated by numerous governmental authorities in the United States and other countries. The regulations are evolving and uncertain. The regulatory process can take many years and require us to expend substantial resources. For example:

- the U.S. Food and Drug Administration, the FDA, has not established guidelines concerning the scope of clinical trials required for DNA therapeutics

- the FDA has not indicated how many patients it will require to be enrolled in clinical trials to establish the safety and efficacy of DNA therapeutics

- current regulations are subject to substantial review by various governmental agencies

Therefore, U.S. or foreign regulations could prevent or delay regulatory approval of our products or limit our ability to develop and commercialize our products. Delays could:

- impose costly procedures on our activities

o diminish any competitive advantages that we attain

o negatively affect our ability to receive royalties

We believe that the FDA and comparable foreign regulatory bodies will regulate separately each product containing a particular gene depending on its intended use. Presently, to commercialize any product we must sponsor and file a regulatory application for each proposed use. We then must conduct clinical studies to demonstrate the safety and efficacy of the product necessary to obtain FDA approval. The results obtained so far in our clinical trials may not be replicated in our on-going or future trials. This may prevent any of our potential products from receiving FDA approval.

We use recombinant DNA molecules in our product candidates, and therefore we also must comply with guidelines instituted by the National Institutes of Health, the NIH, and its Recombinant DNA Advisory Committee. The NIH could restrict or delay the development of our products.

ADVERSE EVENTS IN THE FIELD OF GENE THERAPY, OR WITH RESPECT TO OUR POTENTIAL PRODUCTS, MAY NEGATIVELY IMPACT REGULATORY APPROVAL OR PUBLIC PERCEPTION OF OUR PRODUCTS.

The death in 1999 of a patient undergoing a viral-based gene therapy at the University of Pennsylvania in an investigator-sponsored trial was widely publicized. This death and other adverse events in the field of gene therapy could result in greater governmental regulation of gene therapies,

including our non-viral naked DNA technology, and potential regulatory delays relating to the testing or approval of our potential products. In addition, the field of gene therapy is under increased scrutiny, which may affect our product development efforts or clinical trials.

For example, one patient who had undergone treatment with Allovectin-7(R) for advanced metastatic melanoma died more than two months later of progressive disease and numerous other factors after receiving multiple other cancer therapies. The death was originally reported as unrelated to the treatment. Following an autopsy, the death was reclassified as "probably related" to the treatment because the possibility could not be ruled out. We do not believe Allovectin-7(R) was a significant factor in the patient's death.

The commercial success of our potential products will depend in part on public acceptance of the use of gene therapies for the prevention or treatment of human diseases. Public attitudes may be influenced by claims that gene therapies are unsafe and our naked DNA therapeutics may not gain the acceptance of the public or the medical community. Negative public reaction to adverse events in our trials or gene therapy in general could result in greater government regulation and stricter labeling requirements of gene therapies, including our naked DNA therapeutics, and could cause a decrease in the demand for any products we may develop.

OUR PATENTS AND PROPRIETARY RIGHTS MAY NOT PROVIDE US WITH ANY BENEFIT AND THE PATENTS OF OTHERS MAY PREVENT US FROM COMMERCIALIZING OUR PRODUCTS.

Patents may not issue from any of our current applications. Moreover, if patents do issue, governmental authorities may not allow claims sufficient to protect our technology. Finally, others may challenge or seek to circumvent or invalidate patents that are issued to us or to licensors of our technology. In that event, the rights granted under patents may be inadequate to protect our proprietary technology or to provide any commercial advantage.

Our core DNA delivery technology is covered by a patent issued in Europe which is being opposed by several companies under European patent procedures. If we are not successful in this opposition proceeding we may lose part or all of our proprietary protection on our potential products in Europe.

Others may have or may receive patents which contain claims applicable to our products. These patents may impede our ability to commercialize products.

THE LEGAL PROCEEDINGS TO OBTAIN PATENTS AND LITIGATION OF THIRD-PARTY CLAIMS OF INTELLECTUAL PROPERTY INFRINGEMENT COULD REQUIRE US TO SPEND MONEY AND COULD IMPAIR OUR OPERATIONS.

Our success will depend in part on our ability to obtain patent protection for our products and processes both in the United States and in other countries. The patent positions of biotechnology and pharmaceutical companies, however, can be highly uncertain and involve complex legal and factual questions. Therefore, it is difficult to predict the breadth of claims allowed in the biotechnology and pharmaceutical fields.

We also rely on protecting our proprietary technology in part through confidentiality agreements with our corporate collaborators, employees,

consultants and certain contractors. These agreements may be breached and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or independently discovered by our competitors.

Protecting intellectual property rights can be very expensive. Litigation may be necessary to enforce a patent issued to us or to determine the scope and validity of third-party proprietary rights. Moreover, if a competitor were to file a patent application claiming technology also invented by us, we would have to participate in an interference proceeding before the U.S. Patent and Trademark Office or in a foreign counterpart to determine the priority of the invention. We may be drawn into interferences with third parties or may have to provoke interferences ourselves to unblock third party patent rights so as to allow us or our licensees to commercialize products based on our technology. Litigation could result in substantial costs and the diversion of management's efforts regardless of the results of the litigation. An unfavorable result in litigation could subject us to significant liabilities to third parties, require disputed rights to be licensed or require us to cease using some technology.

Our products and processes may infringe, or be found to infringe on, patents not owned or controlled by us. We do not know whether any patents held by others will require us to alter our products or processes, obtain licenses, or stop activities. If relevant claims of third-party patents are upheld as valid and enforceable, we could be prevented from practicing the subject matter claimed in the patents, or may be required to obtain licenses or redesign our products or processes to avoid infringement. A number of genetic sequences or proteins encoded by genetic sequences that we are investigating are, or may become, patented by others. As a result, we may have to obtain licenses to test, use or market these products. Our business will suffer if we are not able to obtain licenses at all or on terms commercially reasonable to us and we may not be able to redesign our products or processes to avoid infringement.

COMPETITION AND TECHNOLOGICAL CHANGE MAY MAKE OUR POTENTIAL PRODUCTS AND TECHNOLOGIES LESS ATTRACTIVE OR OBSOLETE.

We compete with companies, including major pharmaceutical and biotechnology firms, that are pursuing other forms of treatment or prevention for the diseases we target. We also may experience competition from companies that have acquired or may acquire technology from universities and other research institutions. As these companies develop their technologies, they may develop proprietary positions which may prevent us from successfully commercializing products.

Some of our competitors are established companies with greater financial and other resources than we have. Other companies may succeed in developing products earlier than we do, obtaining FDA approval for products more rapidly than we do, or developing products that are more effective than those we propose to develop. While we will seek to expand our technological capabilities to remain competitive, research and development by others will seek to render our technology or products obsolete or noncompetitive or result in treatments or cures superior to any therapy developed by us. Additionally, consumers may not prefer therapies developed by us over existing or newly developed therapies.

THE METHOD OF ADMINISTRATION OF SOME OF OUR POTENTIAL PRODUCTS CAN CAUSE ADVERSE EVENTS IN PATIENTS, INCLUDING DEATH.

Some of our potential products are designed to be injected directly into malignant tumors. There are medical risks inherent in direct tumor injections. For example, in clinical trials of our potential products, attending physicians have punctured patients' lungs in less than one percent of procedures, requiring hospitalization. In addition, a physician administering our product in an investigator-sponsored clinical trial inadvertently damaged tissue near the heart of a patient, which may have precipitated the patient's death. These events are reported as adverse events in our clinical trials and illustrate the medical risks related to direct injection of tumors. These risks may adversely impact market acceptance of some of our products.

COMMERCIALIZATION OF SOME OF OUR POTENTIAL PRODUCTS DEPENDS ON COLLABORATIONS WITH OTHERS. IF OUR COLLABORATORS ARE NOT SUCCESSFUL OR IF WE ARE UNABLE TO FIND COLLABORATORS IN THE FUTURE, WE MAY NOT BE ABLE TO DEVELOP THESE PRODUCTS.

Our strategy for the research, development and commercialization of some of our product candidates requires us to enter into contractual arrangements with corporate collaborators, licensors, licensees and others. Our success depends upon the performance by these collaborators of their responsibilities under these arrangements. Some collaborators may not perform their obligations as we expect or we may not derive any revenue from these arrangements.

We have collaborative agreements with several pharmaceutical companies. We do not know whether these companies will successfully develop and market any products under their respective agreements. Moreover, some of our collaborators

are also researching competing technologies to treat the diseases targeted by our collaborative programs. We may be unsuccessful in entering into other collaborative arrangements to develop and commercialize our products.

IF WE LOSE OUR KEY PERSONNEL OR ARE UNABLE TO ATTRACT AND RETAIN ADDITIONAL PERSONNEL, WE MAY NOT BE ABLE TO PURSUE COLLABORATIONS OR DEVELOP OUR OWN PRODUCTS.

We are highly dependent on the principal members of our scientific, manufacturing, marketing and management personnel, the loss of whose services might significantly delay or prevent the achievement of our objectives. We face competition from other companies, academic institutions, government entities and other organizations in attracting and retaining personnel.

WE MAY NOT BE ABLE TO MANUFACTURE PRODUCTS ON A COMMERCIAL SCALE.

We have limited experience in manufacturing our product candidates in commercial quantities. We may be dependent initially on corporate partners, licensees or others to manufacture our products commercially. We also will be required to comply with extensive regulations applicable to manufacturing facilities. We may be unable to enter into any arrangement for the manufacture of our products.

WE HAVE NO MARKETING OR SALES EXPERIENCE, AND IF WE ARE UNABLE TO DEVELOP OUR OWN SALES AND MARKETING CAPABILITY, WE MAY NOT BE SUCCESSFUL IN COMMERCIALIZING OUR PRODUCTS.

Our current strategy is to market our proprietary cancer products directly in the United States, but we currently do not possess pharmaceutical marketing or sales capabilities. In order to market and sell our proprietary cancer products, we will need to develop a sales force and a marketing group with relevant pharmaceutical experience, or make appropriate arrangements with strategic partners to market and sell these products. Developing a marketing and sales force is expensive and time consuming and could delay any product launch. Our inability to successfully employ qualified marketing and sales personnel and develop our sales and marketing capabilities will harm our business.

HEALTH CARE REFORM AND RESTRICTIONS ON REIMBURSEMENT MAY LIMIT OUR RETURNS ON POTENTIAL PRODUCTS.

Our ability to earn sufficient returns on our products will depend in part on the extent to which reimbursement for our products and related treatments will be available from:

- government health administration authorities
- private health coverage insurers
- managed care organizations
- other organizations

If we fail to obtain appropriate reimbursement, it could prevent us from successfully commercializing our potential products.

There are efforts by governmental and third party payors to contain or reduce the costs of health care through various means. We expect that there will continue to be a number of legislative proposals to implement government controls. The announcement of proposals or reforms could impair our ability to raise capital. The adoption of proposals or reforms could impair our business.

Additionally third party payors are increasingly challenging the price of medical products and services. If purchasers or users of our products are not able to obtain adequate reimbursement for the cost of using our products, they may forego or reduce their use. Significant uncertainty exists as to the reimbursement status of newly approved health care products, and whether adequate third party coverage will be available.

WE USE HAZARDOUS MATERIALS IN OUR BUSINESS. ANY CLAIMS RELATING TO IMPROPER HANDLING, STORAGE OR DISPOSAL OF THESE MATERIALS COULD BE TIME CONSUMING AND COSTLY.

Our research and development processes involve the controlled storage, use and disposal of hazardous materials, biological hazardous materials and radioactive compounds. We are subject to federal, state and local regulations governing the use, manufacture, storage, handling and disposal of materials and waste products. Although we believe that our safety procedures for handling and disposing of these hazardous materials comply with the standards prescribed by law and regulation, the risk of

accidental contamination or injury from hazardous materials cannot be completely eliminated. In the event of an accident, we could be held liable for any damages that result, and any liability could exceed the limits or fall outside the coverage of our insurance. We may not be able to maintain insurance on acceptable terms, or at all. We could be required to incur significant costs to comply with current or future environmental laws and regulations.

WE MAY HAVE SIGNIFICANT PRODUCT LIABILITY EXPOSURE.

We face an inherent business risk of exposure to product liability and other claims in the event that our technologies or products are alleged to have caused harm. These risks are inherent in the development of chemical and pharmaceutical products. Although we currently maintain product liability insurance, we may not have sufficient insurance coverage and we may not be able to obtain sufficient coverage at a reasonable cost. Our inability to obtain product liability insurance at an acceptable cost or to otherwise protect against potential product liability claims could prevent or inhibit the commercialization of any products developed by us or our collaborators. We also have liability for products manufactured by us on a contract basis for third parties. If we are sued for any injury caused by our technology or products, our liability could exceed our total assets.

OUR STOCK PRICE COULD CONTINUE TO BE HIGHLY VOLATILE AND YOU MAY NOT BE ABLE TO RESELL YOUR SHARES AT OR ABOVE THE PRICE YOU PAID FOR THEM.

The market price of our common stock, like that of many other life sciences companies, has been highly volatile and is likely to continue to be highly volatile. The following factors, among others, could have a significant impact on the market price of our common stock:

- the results of our preclinical studies and clinical trials or those of our collaborators or competitors or for DNA therapeutics in general
- evidence of the safety or efficacy of our potential products or the products of our competitors
- the announcement by us or our competitors of technological innovations or new products
- governmental regulatory actions
- changes or announcements in reimbursement policies
- developments with our collaborators
- developments concerning our patent or other proprietary rights or those of our competitors, including litigation
- concern as to the safety of our potential products
- period-to-period fluctuations in our operating results
- market conditions for life science stocks in general
- changes in estimates of our performance by securities analysts

OUR ANTI-TAKEOVER PROVISIONS COULD DISCOURAGE POTENTIAL TAKEOVER ATTEMPTS AND MAKE ATTEMPTS BY STOCKHOLDERS TO CHANGE MANAGEMENT MORE DIFFICULT.

The approval of two-thirds of our voting stock is required to approve some transactions and to take some stockholder actions, including the calling of a special meeting of stockholders and the amendment of any of the anti-takeover provisions contained in our certificate of incorporation. Further, pursuant to the terms of our stockholder rights plan adopted in March 1995, we have distributed a dividend of one right for each outstanding share of common stock. These rights will cause substantial dilution to the ownership of a person or group that attempts to acquire us on terms not approved by our Board of Directors and may have the effect of deterring hostile takeover attempts.

EXECUTIVE OFFICERS

The executive officers of Vical are elected annually by the Board of Directors. Our executive officers are as follows:

<TABLE>
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NAME	AGE	POSITION

<S>	<C>	<C>
Vijay B. Samant	48	President, Chief Executive Officer and Director
Deirdre Y. Gillespie, M.D.	44	Chief Operating Officer
Martha J. Demski	48	Vice President, Chief Financial Officer, Treasurer and Secretary
George J. Gray	54	Vice President, Operations
Jon A. Norman, Ph.D.	52	Vice President, Research

</TABLE>

VIJAY B. SAMANT joined us as President and Chief Executive Officer in November 2000. Mr. Samant has 23 years of diverse U.S. and international sales, marketing, operations, and business development experience with Merck & Co., Inc. From 1998 to mid-2000, he was Chief Operating Officer of the Merck Vaccine Division. From 1990 to 1998, he served in the Merck Manufacturing Division as Vice President of Vaccine Operations, Vice President of Business Affairs, and Executive Director of Materials Management. Mr. Samant earned his M.B.A. from the Sloan School of Management at the Massachusetts Institute of Technology in 1983. He received a master's degree in chemical engineering from Columbia University in 1977 and a bachelor's degree in chemical engineering from the University of Bombay in 1975.

DEIRDRE Y. GILLESPIE, M.D., joined us as Executive Vice President and Chief Business Officer in March 1998 and currently serves as Chief Operating Officer. Prior to joining us, Dr. Gillespie served as Vice President of Business Development for 3-Dimensional Pharmaceuticals, Inc. From 1991 to 1996, she held various management positions with the Dupont Merck Pharmaceutical Co. From 1986 to 1990, Dr. Gillespie directed clinical research activities for Sandoz Pharma AG. Dr. Gillespie received a B.Sc. in Pharmacology and Therapeutics and an M.D. from London University. Dr. Gillespie received her M.B.A. from the London Business School with a specialization in marketing and international management.

MARTHA J. DEMSKI joined us as Chief Financial Officer in December 1988 and currently serves as Vice President, Chief Financial Officer, Treasurer and Secretary. From August 1977 until joining us, Ms. Demski held various positions with Bank of America, lastly as Vice President/Section Head of the Technology Section. She also served as an adviser to Bank of America on a statewide basis regarding the biotechnology industry in California. Ms. Demski received a B.A. from Michigan State University and an M.B.A. in Finance and Accounting from The University of Chicago Graduate School of Business.

JON A. NORMAN, PH.D., joined us in January 1993 as Vice President, Research. From 1986 until joining us, Dr. Norman was the Group Leader/Section Head for the Departments of Pharmacology and Biochemistry at Bristol-Myers Squibb Corporation. He was a Senior Research Scientist at Ciba-Geigy Corporation from 1981 to 1986. Dr. Norman received his B.A. and M.A. from the University of California at Santa Barbara and his Ph.D. in Biochemistry from the University of Calgary, after which he was awarded a fellowship at the Friederich Miescher Institute in Basel, Switzerland.

GEORGE J. GRAY joined us in October 1992 as Vice President, Operations. Prior to that time he was at Rhone-Poulenc Rorer Inc. where he held various positions since 1975, lastly as Director, Discovery Research Ventures, US/UK from January 1990 to October 1992, and prior to that as Director, Project Management from January 1988 to December 1989. Mr. Gray received a B.A. from George Washington University.

ITEM 2. PROPERTIES

We currently lease approximately 50,000 square feet of laboratory and office space in San Diego, California, at three sites and with three leases. The leases terminate in 2004 and contain varying renewal options. Total current monthly rental on the facilities, including common area maintenance costs, is approximately $137,000.

ITEM 3. LEGAL PROCEEDINGS

Not applicable.

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

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Our common stock is traded on the Nasdaq National Market under the

symbol "VICL." The following table presents quarterly information on the price range of high and low sales prices for the common stock on the Nasdaq National Market for the periods indicated since January 1, 1999.

<TABLE>
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1999	HIGH	LOW
<S>	<C>	<C>
First Quarter	$17.00	$10.00
Second Quarter	13.50	9.13
Third Quarter	16.66	10.88
Fourth Quarter	30.13	13.13
2000		
First Quarter	$73.50	$25.00
Second Quarter	39.81	13.00
Third Quarter	29.88	15.50
Fourth Quarter	26.63	14.50

</TABLE>

As of March 15, 2001, there were approximately 500 stockholders of record of our common stock with 20,015,344 shares outstanding. We have never declared or paid any dividends and do not expect to pay any dividends in the foreseeable future.

ITEM 6. SELECTED FINANCIAL DATA

<TABLE>
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	YEAR ENDED DECEMBER 31,				
	2000	1999	1998	1997	1996
	(in thousands, except per share amounts)				
<S>	<C>	<C>	<C>	<C>	<C>
STATEMENTS OF OPERATIONS DATA:					
Revenues(1):					
License/royalty revenue.....	$ 5,027	$ 8,294	$ 5,044	$ 6,477	$ 5,679
Contract revenue.....	2,593	2,417	876	1,326	1,061
	7,620	10,711	5,920	7,803	6,740
Operating expenses:					
Research and development.....	18,514	15,344	12,054	11,936	11,318
General and administrative....	5,265	4,376	3,650	3,733	3,168
Total operating expenses	23,779	19,720	15,704	15,669	14,486
Loss from operations.....	(16,159)	(9,009)	(9,784)	(7,866)	(7,746)
Interest income(2).....	9,357	2,229	2,465	2,447	2,773
Interest expense.....	205	129	162	192	108
Net loss before cumulative effect of accounting change.....	(7,007)	(6,909)	(7,481)	(5,611)	(5,081)
Cumulative effect of accounting change(1).....	(1,510)	-	-	-	-
Net loss.....	$ (8,517)	$ (6,909)	$ (7,481)	$ (5,611)	$ (5,081)
Net loss per share (basic and diluted)	$ (0.43)	$ (0.43)	$ (0.47)	$ (0.36)	$ (0.33)
Weighted average shares used in per share calculation(2)	19,689	16,136	15,798	15,485	15,383

</TABLE>

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	AS OF DECEMBER 31,				
	2000	1999	1998	1997	1996

	(in thousands)				
<S>	<C>	<C>	<C>	<C>	<C>
BALANCE SHEET DATA:					
Cash, cash equivalents and marketable securities.....	$ 148,144	$ 37,675	$ 40,184	$ 45,555	$ 46,846
Working capital.....	145,569	35,996	38,398	44,856	46,315
Total assets.....	162,903	45,059	44,844	50,691	52,440
Long-term obligations.....	5,121	740	801	1,232	1,617
Stockholders' equity.....	150,794	38,669	40,824	47,194	48,365

</TABLE>

(1) In the fourth quarter of 2000, we changed our revenue recognition accounting policy to conform to the requirements of SAB 101, as more fully described in Note 2 of the Notes to Financial Statements.

(2) In January 2000, we completed the sale of 3,450,000 shares of Vical common stock in a public offering, which raised net proceeds of approximately $117.5 million.

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

OVERVIEW

We were incorporated in April 1987 and have devoted substantially all of our resources since that time to our research and development programs. We focus our resources on the development of our naked DNA direct gene transfer and related technologies. We are developing our Allovectin-7(R), Leuvectin(TM) and VAXID cancer product candidates internally, while developing vaccine product candidates for infectious diseases primarily in collaboration with corporate partners Merck and Aventis Pasteur. We have a license agreement allowing Centocor to use our naked DNA technology to develop and market gene-based vaccines for the potential treatment of types of cancer. We have an agreement with Boston Scientific for the use of our technology in catheter-based intravascular gene delivery. We have an agreement with Aventis Pharma, to use our gene delivery technology to deliver neurological proteins for neurodegenerative and cardiovascular diseases. We also have agreements with Pfizer for use of our technology for DNA-based delivery of therapeutic proteins in animal health applications and with Merial for use of our technology for DNA vaccines in animal infectious disease targets. We have a reciprocal royalty-bearing license with Human Genome Sciences, Inc., HGS, granting us the option to exclusively license up to three genes from HGS for gene-based product development. HGS has the option to license our naked DNA gene delivery technology for use in up to three gene-based products. In addition, we granted an exclusive, royalty-bearing license to Vascular Genetics Inc., VGI, a company in which HGS is a major shareholder, for naked DNA delivery of a gene with potential use for revascularization.

To date, we have not received revenues from the sale of products. We expect to incur substantial operating losses for at least the next few years, due primarily to the expansion of our research and development programs and the cost of preclinical studies and clinical trials. Losses may fluctuate from quarter to quarter as a result of differences in the timing of expenses incurred and the revenues received from collaborative agreements. Such fluctuations may be significant. As of December 31, 2000, our accumulated deficit was approximately $53.2 million.

When used in this discussion, the words "expects," "anticipated" and similar expressions are intended to identify forward-looking statements. These statements are subject to risks and uncertainties which could cause actual results to differ materially from those projected. Readers are cautioned not to place undue reliance on these forward-looking statements which speak only as of the date of this report. We undertake no obligation to update these forward-looking statements to reflect events or circumstances after the date of this report to reflect the occurrence of unanticipated events.

CHANGE IN ACCOUNTING PRINCIPLE

In December 1999, the SEC issued Staff Accounting Bulletin No. 101 - "Revenue Recognition in Financial Statements," or SAB 101. SAB 101 reflects the SEC's views on revenue recognition. Historically we recognized revenue from initial technology option and license fees in the period in which the agreement was signed, if there were no significant performance obligations remaining. Revenue from milestone payments was recognized as revenue as the collaborator achieved the milestones. SAB 101 requires that when there has been no culmination of the earnings process, payments must be deferred and recognized over the period over which the revenue is deemed to have been earned. As such, Vical defers and recognizes payments from technology option and license fees, and milestone payments over the period in which the revenue is deemed to have been earned.

Under option and license agreements which do not require research to be performed by us and the collaborator pays an upfront fee for an option to a license to our technology, we believe that SAB 101 would require us to recognize the revenue from the upfront payment over the option period. For those agreements which do not require research to be performed by us and the collaborator pays an upfront fee for a license to our technology, or the collaborator holds an option that is then exercised to get a license, we believe all significant performance obligations were met and the culmination of the earnings process occurred upon granting the license to the technology. In this latter instance, our only remaining performance obligation after the grant is to maintain and defend the patents and patent applications. The collaborators do not receive access to any upgrades or enhancements to our technology.

Under certain agreements we are paid to perform required research and development services during the research period specified in the agreement. For these agreements historically, we recognized the revenue on the research services, as the services were provided. This accounting is unchanged under SAB 101. However, under SAB 101, we believe that any upfront option or license payment under this type of agreement would have to be deferred and recognized over the research period.

In the fourth quarter of 2000, we completed our evaluation of payments we received under our various option and license agreements. We identified one agreement with Pfizer Inc entered into in 1999, which we believe, under SAB 101, would require a change in accounting as of the implementation date of January 1, 2000. The amount of revenue recognized in 1999 that under SAB 101 has to be deferred as of January 1, 2000, was $1.5 million.

We implemented SAB 101 in the fourth quarter of 2000, by restating the first three quarters of 2000 financial statements to apply SAB 101 effective January 1, 2000. The statement of operations reflects a one-time charge to earnings of $1.5 million for the cumulative effect of the change in accounting principle as of January 1, 2000. Accordingly, revenue for each quarter of 2000 was increased by $0.2 million to reflect the recognition of the deferred license revenue arising from the SAB 101 adjustment. The balance of the deferred revenue from this agreement will be recognized as revenue in 2001.

On a pro forma basis, if the impact of SAB 101 had been implemented effective January 1, 1999, the pro forma net loss and the pro forma net loss per share for the year ended December 31, 1999, would have been $8,419,253 and $0.52, respectively, compared with the reported net loss and the reported net loss per share of $6,909,217 and $0.43, respectively. On a pro forma basis, implementation of SAB 101 effective January 1, 1998 would not have any impact on results of operations for the year ended December 31, 1998.

RESULTS OF OPERATIONS

We had revenues of $7.6 million for the year ended December 31, 2000, compared with $10.7 million in 1999. License revenue in 2000 included $1.5 million of license fees from a June 2000 license agreement with Aventis Pharma and royalty and other revenue of $1.0 million. License revenue in 2000 also included recognition of deferred license fees of $1.8 million from Merial and Vascular Genetics Inc. and of $0.7 million from the Pfizer Inc agreement as a result of applying the change in accounting principle discussed in the section above. Contract revenue for 2000 included $0.9 million of revenues from the contract with the Office of Naval Research for the development work on a potential naked DNA vaccine to prevent malaria, revenue from contracts and grants with NIH, and revenue from Pfizer and other agreements. In June 2000, we and the Office of Naval Research amended our existing agreement to provide up to $5.5 million in funding through December 31, 2000. In November 2000, the agreement was further amended to extend the agreement to June 30, 2001. Through December 31, 2000, we had recognized revenue of $3.4 million of the total contract amount.

We had revenues of $10.7 million for the year ended December 31, 1999, compared with $5.9 million in 1998. License revenue in 1999 included $2.0 million from Merck to extend an agreement covering therapeutic naked DNA vaccines and $1.0 million for the start of a Phase I clinical trial of a preventive naked DNA vaccine to protect against HIV infection; $1.0 million of option fees and $1.2 million of equity premium pursuant to January 1999 agreements with Pfizer Inc, and $1.0 million from Merial for the initial exercise of options covering preventive naked DNA vaccines for animal health infectious diseases. The equity premium from Pfizer was a result of Pfizer purchasing for $6.0 million approximately 318,000 shares of Vical common stock at $18.87 per share. The price per share reflected a twenty-five percent premium over the trading price of the common stock. The equity premium was recognized as license revenue in 1999. License revenue also included recognition of previously deferred license fees of $1.1 million from Merial, and royalty and other revenue of $1.0 million. Contract revenues for 1999 were $2.4 million, primarily from the Office of Naval Research for the development work on a potential DNA vaccine

to prevent malaria and payments under the January 1999 agreement with Pfizer to fund research and development of up to $0.5 million per year for three years.

We had revenues of $5.9 million for the year ended December 31, 1998. License revenues in 1998 consisted of $2.2 million from Centocor, Inc. for an agreement covering technology for the potential

treatment of some types of cancer, $1.1 million from an agreement with Boston Scientific Corporation for the development of catheter-based vascular DNA therapeutics, recognition of $0.9 million of deferred license fees from a further extension of the license and option agreement with Merial, and royalty and other revenues of $0.9. Contract revenues in 1998 consisted principally of $0.7 million from the Office of Naval Research.

Research and development expenses increased to $18.5 million in 2000 from $15.3 million in 1999. The increases generally were due to expansion of our preclinical and clinical activities. The increased expenses in 2000 compared to 1999 were due to increased preclinical and clinical trial costs, facilities costs and personnel-related costs. In 1999, research and development expenses were $15.3 million compared with $12.1 million in 1998. The increase in expenses in 1999 compared to 1998 included increased preclinical and clinical trial efforts which resulted in increases to clinical trial expense, staffing costs, external research and contract services. Clinical trials expense increased to $4.1 million in 2000 from $3.6 million in 1999 due to increased activity in the Leuvectin(TM) kidney cancer clinical trial. During 1999, clinical trials expense increased to $3.6 million from $1.9 million in 1998 due to increased activity in the Allovectin-7(R) clinical trials. Research and development expense is expected to increase as our preclinical and clinical trial activities expand.

General and administrative expenses increased to $5.3 million in 2000 from $4.4 million in 1999 and $3.6 million in 1998. The increase in 2000 is attributable primarily to increased professional fees, recruiting and other costs related to the hiring a new CEO, and increased personnel-related costs in support of the expanded research and development activities. The increase in 1999 compared to 1998 was due to additional staffing and related expenses. General and administrative expenses are expected to continue to increase as research and development activities expand.

Interest income increased to $9.4 million in 2000 from $2.2 million in 1999 as a result of higher investment balances due to the January 2000 sale of 3,450,000 shares of Vical common stock in a public offering, which raised net proceeds of approximately $117.5 million. Interest income for 1999 of $2.2 million decreased from $2.5 million in 1998 due to lower balances of investments and lower rates of return. Interest expense increased to $0.2 million in 2000 from $0.1 million in 1999. The increase is due to higher average balances of capital lease obligations and bank notes payable. Interest expense in 1999 decreased to $0.1 million from $0.2 million in 1998 due to lower average balances of capital lease obligations and bank note payable.

LIQUIDITY AND CAPITAL RESOURCES

Since our inception, we have financed our operations primarily through private placements of common stock and preferred stock, four public offerings of common stock, including an offering completed in January 2000, and revenues from collaborative agreements. As of December 31, 2000, we had working capital of approximately $145.6 million compared with $36.0 million at December 31, 1999. Cash and marketable securities totaled approximately $148.1 million at December 31, 2000, compared with $37.7 million at December 31, 1999. On January 20, 2000, we sold 3,450,000 shares of common stock, including an over-allotment to the underwriters of 450,000 shares, in a public offering for $36.50 per share. Net proceeds were approximately $117.5 million after deducting underwriting fees and offering costs.

In November 2000, we amended our existing line of credit with a bank to finance certain leasehold improvements. Under the terms of the amended agreement, we can borrow an additional $1.3 million until May 1, 2001. Any outstanding borrowings under the additional credit line at June 1, 2001, convert to a term loan payable over 42 months at the bank's prime rate. Through December 31, 2000, we had used $0.2 million of the available credit of $1.3 million. Total outstanding borrowings under this amended credit line were $1.0 million at December 31, 2000.

We expect to incur substantial additional research and development expenses and general and administrative expenses, including continued increases in personnel costs, costs related to preclinical testing and clinical trials, outside services and facilities. Our future capital requirements will depend on many factors, including continued scientific progress in our research and development programs, the scope and results of preclinical testing and clinical trials, the time and costs involved in obtaining regulatory approvals, the costs involved in filing, prosecuting and enforcing patent claims, competing

technological and market developments, the cost of manufacturing scale-up, and commercialization activities and arrangements. We intend to seek additional funding through research and development relationships with suitable potential corporate collaborators. We may also seek additional funding through public or private financings. We cannot assure that additional financing will be available on favorable terms or at all.

If additional funding is not available, we anticipate that our available cash and existing sources of funding will be adequate to satisfy our operating needs through at least 2002.

RECENT ACCOUNTING PRONOUNCEMENTS

In June 1998, the FASB issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." This statement changes the previous accounting definition of derivative, expanding it to include embedded derivatives and many commodity contracts. Under the Statement, every derivative is recorded in the balance sheet at its fair value, and any changes in the derivative's fair value are recognized currently in earnings, unless specific hedge accounting criteria are met. As amended by SFAS No. 137 "Accounting for Derivative Instruments and Hedging Activities - Deferral of the Effective Date of FASB Statement No. 133," SFAS No. 133 is effective for all fiscal quarters of all fiscal years beginning after June 15, 2000. We do not anticipate that the adoption of SFAS 133 will have a material impact on our financial position or results of operations.

The Financial Accounting Standards Board has issued SFAS No. 138, "Accounting for Certain Derivative Instruments and Certain Hedging Activities - an Amendment of FASB Statement No. 133." This statement amends SFAS No. 133. SFAS No. 138 is effective concurrently with SFAS No. 133, if SFAS No. 133 is not adopted prior to June 15, 2000. We believe that the effect of adoption of SFAS No. 138 will not have a material effect on our financial statements.

In April 2000, the FASB issued FASB Interpretation Number 44, "Accounting for Certain Transactions Involving Stock Compensation: an Interpretation of APB Opinion No. 25," FIN 44. FIN 44 affects awards and modifications made after December 15, 1998. The adoption of FIN 44 during the year did not impact our accounting of stock based compensation.

ITEM 7.a. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

We are subject to interest rate risk. Our investment portfolio is maintained in accordance with our investment policy which defines allowable investments, specifies credit quality standards and limits the credit exposure of any single issuer. No investments in equity securities are made in our investment portfolio. At December 31, 2000, 69 percent of the investments would mature within one year, 25 percent would mature within two years, and 6 percent would mature within three years. The average maturity was nine months. Our investments are all classified as available-for-sale securities. We projected an ending fair value of our cash equivalents and marketable securities using a twelve-month time horizon, a nine-month average maturity and assuming a 150-basis-point increase in interest rates. The decrease in fair value assuming a 150-basis-point increase in interest rates compared with fair value with no change in interest rates was not material at December 31, 2000.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The consolidated financial statements and supplementary data of us required by this item are set forth at the pages indicated in Item 14(a)(1).

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

Not applicable.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS

DIRECTORS

The directors of Vical are as follows:

<TABLE>
<CAPTION>

NAME AFFILIATION

R. Gordon Douglas	Chairman of the Board, Vical Incorporated
Vijay B. Samant	President and CEO, Vical Incorporated (since November 28, 2000)
Alain B. Schreiber, M.D. (retired from Company and Board of Directors)	President and CEO, Vical Incorporated (through June 30, 2000)
M. Blake Ingle	Inglewood Ventures
Patrick F. Latterell	Venrock Associates
Gary A. Lyons	Neurocrine Biosciences, Inc.
Dale A. Smith	Baxter International Inc. (retired)
Philip M. Young	U.S. Venture Partners

The information required by this item (with respect to directors) is incorporated by reference from the information under the caption "Election of Directors" contained in our Proxy Statement to be filed with the Securities and Exchange Commission in connection with the solicitation of proxies for our 2001 Annual Meeting of Stockholders to be held on May 30, 2001 ("Proxy Statement"). The required information concerning Executive Officers of Vical is contained in Part I of this Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated by reference from the information under the caption "Executive Compensation" contained in the Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information required by this item is incorporated by reference from the information under the caption "Security Ownership of Certain Beneficial Owners and Management" contained in the Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information required by this item is incorporated by reference from the information contained under the caption "Certain Transactions" contained in the Proxy Statement.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(a) (1) FINANCIAL STATEMENTS

The financial statements required by this item are submitted in a separate section beginning on page F-1 of this report.

<TABLE>

</TABLE>

(2) FINANCIAL STATEMENT SCHEDULES

Schedules have been omitted because of the absence of

conditions under which they are required or because the required information is included in the financial statements or the notes thereto.

(3) EXHIBITS

Exhibits with each management contract or compensatory plan or arrangement required to be filed are identified. See paragraph (c) below.

(b) REPORTS ON FORM 8-K

No reports on Form 8-K were filed during the quarter ended December 31, 2000.

(c) EXHIBITS

<TABLE>
<CAPTION>

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
<S>	<C>
3.1(i)(9)	Restated Certificate of Incorporation.
3.1(ii)(9)	Amended and Restated Bylaws of the Company.
4.1(9)	Specimen Common Stock Certificate.
4.2(2)	Rights Agreement dated as of March 20, 1995, between the Company and First Interstate Bank of California.
4.3(10)	Stock Purchase Agreement dated November 3, 1997, between the Company and Merck & Co., Inc.
4.4(11)	Stock Purchase Agreement dated as of January 22, 1999, between the Company and Pfizer Inc
10.1(4)#	Stock Incentive Plan of Vical Incorporated.
10.2(5)#	1992 Directors' Stock Option Plan of Vical Incorporated.
10.3(3)	Form of Indemnity Agreement between the Company and its directors and officers.
10.5(3)#	Employment Agreement dated August 20, 1992, between the Company and Mr. George J. Gray.
10.6(3)#	Employment Agreement dated November 2, 1992, between the Company and Dr. Jon A. Norman.
10.7(3)	Stock Purchase Agreement dated February 20, 1992.
10.8(3)	Lease dated December 4, 1987, between the Company and Nexus/GADCo.-UTC, a California Joint Venture, as amended.
10.9(6)*	Research Collaboration and License Agreement dated May 31, 1991, between the Company and Merck & Co., Inc.
10.12(1)*	License Agreement dated January 1, 1991, between the Company and Wisconsin Alumni Research Foundation.
10.14(1)*	License Agreement dated October 23, 1992, between the Company and the Regents of University of Michigan.

</TABLE>

<TABLE>

<S>	<C>
10.16(7)	Research, Option and License Agreement dated September 29, 1994, between the Company and Pasteur Merieux Serums & Vaccins.
10.17(8)	Amendment dated April 27, 1994, to Research Collaboration and License Agreement dated May 31, 1991, between the Company and Merck & Co., Inc.
10.19(10)*	Amendment dated November 3, 1997, to Research Collaboration and License Agreement dated May 31, 1991, between the Company and Merck & Co., Inc.
10.20(12)	Amendment No. 4 to the Lease dated December 4, 1987, between the Company and Nippon Landic (U.S.A.), Inc., a Delaware Corporation (as successor in interest to Nexus GADGO-UTC).
10.21 (13)*	License Agreement dated February 24, 2000 between Vical and Human Genome Sciences, Inc.
10.22 (13)*	License Agreement dated February 24, 2000 between Vical and Vascular Genetics Inc.
10.23#	Employment Agreement dated November 28, 2000 between the Company and Vijay B. Samant

23.1	Consent of Arthur Andersen LLP.	

</TABLE>

(1) Incorporated by reference to the Company's Registration Statement on Form S-1 (No. 33-56830) filed on January 7, 1993.
(2) Incorporated by reference to the exhibit of the same number to the Company's Report on Form 10-K for the fiscal year ended December 31, 1994 (No. 0-21088).
(3) Incorporated by reference to the Exhibits of the same number filed with the Company's Registration Statement on Form S-1 (No. 33-56830) filed on January 7, 1993.
(4) Incorporated by reference to Exhibit 10.1 filed with the Company's Registration Statement on Form S-8 (file No. 333-80681) filed on June 15, 1999.
(5) Incorporated by reference to Exhibit 10.1 filed with the Company's Registration Statement on Form S-8 (No. 333-30181) filed on June 27, 1997.
(6) Incorporated by reference to Exhibit 10.9 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1994 (No. 0-21088).
(7) Incorporated by reference to Exhibit A of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1994.
(8) Incorporated by reference to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 1994 (No. 0-21088).
(9) Incorporated by reference to the exhibit of the same number filed with the Company's Registration Statement on Form S-3 (No. 33-95812) filed on August 15, 1995.
(10) Incorporated by reference to the exhibit of the same number to the Company's Annual Report on Form 10-K for the year ended December 31, 1997, filed on March 30, 1998.
(11) Incorporated by reference to the exhibit of the same number to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 1999.
(12) Incorporated by reference to the exhibit of the same number to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1999.
(13) Incorporated by reference to the exhibit of the same number to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2000.

* The Company has received confidential treatment of certain portions of these agreements.
# Indicates management contract or compensatory plan or arrangement.

(d) FINANCIAL STATEMENT SCHEDULES

The financial statement schedules of Vical Incorporated required by this item are set forth at the pages indicated in Item 14(a)(2).

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 on March 27, 2001.

VICAL INCORPORATED

By: /s/ VIJAY B. SAMANT.
Vijay B. Samant
President and Chief Executive Officer

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.

<TABLE>

<S>	<C>	<C>
/s/ VIJAY B. SAMANT Vijay B. Samant	President, Chief Executive Officer and Director	March 27, 2001
/s/ MARTHA J. DEMSKI	Vice President, Chief Financial Officer,	March 27, 2001

Martha J. Demski	Treasurer and Secretary	
/s/ R. GORDON DOUGLAS R. Gordon Douglas	Chairman of the Board of Directors	March 27, 2001
/s/ PHILIP M. YOUNG Philip M. Young	Director	March 27, 2001
/s/ PATRICK F. LATTERELL Patrick F. Latterell	Director	March 27, 2001
/s/ DALE A. SMITH Dale A. Smith	Director	March 27, 2001
/s/ M. BLAKE INGLE M. Blake Ingle	Director	March 27, 2001
/s/ GARY A. LYONS Gary A. Lyons	Director	March 27, 2001

</TABLE>

REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To Vical Incorporated:

We have audited the accompanying balance sheets of Vical Incorporated, a Delaware corporation, as of December 31, 2000 and 1999, and the related statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2000. 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 auditing standards generally accepted in the 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 financial position of Vical Incorporated as of December 31, 2000 and 1999, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2000, in conformity with accounting principles generally accepted in the United States.

ARTHUR ANDERSEN LLP

San Diego, California
February 9, 2001

VICAL INCORPORATED
BALANCE SHEETS

<TABLE>
<CAPTION>

	December 31, 2000	1999
<S>	<C>	<C>
ASSETS		

Current Assets:		
Cash and cash equivalents	$ 16,480,087	$ 11,149,587
Marketable securities - available-for-sale	131,663,766	26,525,181
Receivables and other	4,413,077	3,971,621
Total current assets	152,556,930	41,646,389
Investment, at cost	5,000,000	--
Property and Equipment:		
Equipment	6,978,906	5,948,458
Leasehold improvements	3,062,779	1,646,023
	10,041,685	7,594,481
Less--accumulated depreciation and amortization	(6,504,640)	(5,708,349)
	3,537,045	1,886,132
Patent costs, net of accumulated amortization of $326,257 and $220,715	1,638,935	1,380,245
Other assets	170,302	146,470
	$ 162,903,212	$ 45,059,236
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable and accrued expenses	$ 3,895,531	$ 3,839,642
Current portion of capital lease obligations	611,775	627,957
Current portion of notes payable	317,764	106,887
Current portion of deferred revenue	2,162,474	1,076,166
Total current liabilities	6,987,544	5,650,652
Long-Term Obligations:		
Long-term obligations under capital leases	1,413,602	739,885
Notes payable	707,869	--
Deferred revenue	3,000,001	--
Total long-term obligations	5,121,472	739,885
Commitments		
Stockholders' Equity:		
Preferred stock, $.01 par value--5,000,000 shares authorized--none outstanding	--	--
Common stock, $.01 par value--40,000,000 shares authorized--20,011,244 and 16,201,136 shares issued and outstanding in 2000 and 1999, respectively	200,112	162,011
Additional paid-in capital	203,106,680	83,292,870
Accumulated other comprehensive income (loss)	649,658	(140,801)
Accumulated deficit	(53,162,254)	(44,645,381)
Total stockholders' equity	150,794,196	38,668,699
	$ 162,903,212	$ 45,059,236

</TABLE>

See accompanying notes.

VICAL INCORPORATED
STATEMENTS OF OPERATIONS

<TABLE>
<CAPTION>

	Year ended December 31,		
	2000	1999	1998
<S>	<C>	<C>	<C>
Revenues:			
License/Royalty revenue	$ 5,027,407	$ 8,294,283	$ 5,044,607
Contract revenue	2,592,643	2,417,198	875,773

	7,620,050	10,711,481		5,920,380
Operating expenses:				
Research and development	18,513,744	15,343,586		12,054,367
General and administrative	5,265,270	4,376,471		3,649,841
	23,779,014	19,720,057		15,704,208
Loss from operations	(16,158,964)	(9,008,576)		(9,783,828)
Other income (expense):				
Interest income	9,356,722	2,229,181		2,465,545
Interest expense	(204,595)	(129,822)		(162,224)
	9,152,127	2,099,359		2,303,321
Loss before cumulative effect of change in accounting principle	(7,006,837)	(6,909,217)		(7,480,507)
Cumulative effect of change in accounting principle	(1,510,036)	--		--
Net loss	$ (8,516,873)	$ (6,909,217)	$	(7,480,507)
Net loss per share (basic and diluted)				
Loss per share before cumulative effect of change in accounting principle	$ (0.36)	$ (0.43)	$	(0.47)
Cumulative effect of change in accounting principle	(0.07)	--		--
Net loss per share	$ (0.43)	$ (0.43)	$	(0.47)
Weighted average shares used in computing net loss per share	19,688,754	16,135,590		15,797,585

</TABLE>

See accompanying notes.

VICAL INCORPORATED
STATEMENTS OF STOCKHOLDERS' EQUITY
FOR THE THREE YEARS ENDED DECEMBER 31, 2000

<TABLE>
<CAPTION>

	Common Stock		Additional Paid-in	Other	Accumulated
	Shares	Amount	Capital	Income	Comprehensive (Loss)
<S>	<C>	<C>	<C>	<C>	
BALANCE, December 31, 1997	15,731,316	$ 157,313	$ 77,267,971		$ 24,028

Stock option exercises	135,228	1,352	1,064,512	-
Unrealized gain on marketable securities arising during holding period				
Reclassification of realized gain included in net loss				
Unrealized gain on marketable securities	-	-	-	45,412
Net loss	-	-	-	-
BALANCE, December 31, 1998	15,866,544	158,665	78,332,483	69,440
Issuance of common stock	317,969	3,180	4,790,461	-
Stock option exercises	16,623	166	169,926	-
Unrealized loss on marketable securities arising during holding period				
Reclassification of realized gain included in net loss				
Unrealized loss on marketable securities	-	-	-	(210,241)
Net loss	-	-	-	-
BALANCE, December 31, 1999	16,201,136	162,011	83,292,870	(140,801)
Issuance of common stock	3,450,000	34,500	117,430,126	-
Stock option exercises	487,211	4,872	5,829,891	-
Retirement of optionee shares used in stock swap to exercise stock options	(127,103)	(1,271)	(3,446,207)	-
Unrealized gain on marketable securities arising during holding period				
Reclassification of realized gain included in net loss				
Unrealized gain on marketable securities	-	-	-	790,459
Net loss	-	-	-	-
BALANCE, December 31, 2000	20,011,244	$ 200,112	$ 203,106,680	$ 649,658

</TABLE>

<TABLE>
<CAPTION>

	Accumulated Deficit	Total Stockholders' Equity	Total Comprehensive Loss	
<S>	<C>	<C>	<C>	
BALANCE, December 31, 1997	$(30,255,657)	$ 47,193,655	$ (5,538,418)	
Stock option exercises	-	1,065,864		
Unrealized gain on marketable securities arising during holding period			$ 57,041	
Reclassification of realized gain included in net loss			(11,629)	
Unrealized gain on marketable securities	-	45,412	45,412	-
Net loss	(7,480,507)	(7,480,507)	(7,480,507)	-

-			
BALANCE, December 31, 1998	(37,736,164)	40,824,424	$ (7,435,095)
Issuance of common stock	-	4,793,641	
Stock option exercises	-	170,092	
Unrealized loss on marketable securities arising during holding period			$ (191,191)
Reclassification of realized gain included in net loss			(19,050)
-			
Unrealized loss on marketable securities	-	(210,241)	(210,241)
Net loss	(6,909,217)	(6,909,217)	(6,909,217)
-			
BALANCE, December 31, 1999	(44,645,381)	38,668,699	$ (7,119,458)
Issuance of common stock	-	117,464,626	
Stock option exercises	-	5,834,763	
Retirement of optionee shares used in stock swap to exercise stock options	-	(3,447,478)	
Unrealized gain on marketable securities arising during holding period			$ 865,942
Reclassification of realized gain included in net loss			(75,483)
-			
Unrealized gain on marketable securities	-	790,459	790,459
Net loss	(8,516,873)	(8,516,873)	(8,516,873)
-			
BALANCE, December 31, 2000	$(53,162,254)	$150,794,196	$ (7,726,414)

</TABLE>

See accompanying notes.

VICAL INCORPORATED
STATEMENTS OF CASH FLOWS

<TABLE>
<CAPTION>

	Year ended December 31,		
	2000	1999	1998
<S>	<C>	<C>	<C>
OPERATING ACTIVITIES:			
Net loss	$ (8,516,873)	$ (6,909,217)	$ (7,480,507)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	1,200,328	1,041,351	920,695
Write-off of abandoned patent application costs	--	--	94,800
Changes in operating assets and liabilities:			
Receivables and other	(441,456)	(2,538,910)	133,821
Accounts payable and accrued expenses	55,889	1,558,390	856,649
Deferred revenue	(913,691)	826,166	71,739
Net cash used in operating activities	(8,615,803)	(6,022,220)	(5,402,803)
INVESTING ACTIVITIES:			
Purchases of marketable securities	(173,781,977)	(28,255,344)	(19,982,713)
Sales of marketable securities	69,433,851	28,135,862	

26,809,668			
Capital expenditures	(1,317,547)	(441,324)	
(34,292)			
Other assets	(23,832)	(13,086)	
(1,885)			
Patent expenditures	(364,232)	(86,386)	
(288,252)			
Net cash (used in) provided from investing activities	(106,053,737)	(660,278)	
6,502,526			
FINANCING ACTIVITIES:			
Principal payments under capital lease obligations	(770,617)	(539,136)	
(487,702)			
Payments on notes payable	(273,554)	(160,329)	
(267,217)			
Proceeds from notes payable	1,192,300	--	
--			
Issuance of common stock, net	119,851,911	4,963,733	
1,065,864			
Net cash provided from financing activities	120,000,040	4,264,268	
310,945			
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	5,330,500	(2,418,230)	
1,410,668			
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	11,149,587	13,567,817	
12,157,149			
CASH AND CASH EQUIVALENTS AT END OF YEAR	$ 16,480,087	$ 11,149,587	$
13,567,817			
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Interest paid	$ 196,384	$ 128,411	$
167,622			
NONCASH INVESTING AND FINANCING ACTIVITIES:			
Property and equipment acquired under capital lease and notes payable financing	$ 1,428,151	$ 685,705	$
348,920			
Investment in preferred stock of Vascular Genetics Inc. in exchange for grant of license	$ 5,000,000	$ --	$
--			
Stock options exercised through swap of outstanding shares owned by optionee, which shares received by the Company were then retired	$ 3,447,478	$ --	$
--			

</TABLE>

See accompanying notes.

VICAL INCORPORATED
NOTES TO FINANCIAL STATEMENTS
December 31, 2000

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

ORGANIZATION AND BUSINESS ACTIVITY

Vical Incorporated (the "Company"), a Delaware corporation, was incorporated in 1987 and has devoted substantially all of its resources since that time to its research and development programs. The Company is focusing its resources on the development of its naked DNA gene transfer technologies for the prevention and treatment of life-threatening diseases.

All of the Company's potential products are in research and development. No revenues have been generated from the sale of any of such products, nor are any such revenues expected for at least the next few years. The products currently under development by the Company will require significant additional research and development efforts, including extensive preclinical and clinical testing and regulatory approval, prior to commercial use. There can be no assurance that the Company's research and development efforts will be successful and that any of the Company's potential products will prove to be safe and effective in clinical trials. Even if developed, these products may not receive regulatory approval or be successfully introduced and marketed at prices that would permit the Company to operate profitably. The Company expects to continue to incur substantial losses and not generate positive cash flow from operations for at least the next few years. No assurance can be given that the Company can generate sufficient product revenue to become profitable or generate positive cash flow from operations at all or on a sustained basis.

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

PROPERTY AND EQUIPMENT

Equipment is recorded at cost and depreciated over the estimated useful lives of the assets (3-5 years) using the straight-line method. Leasehold improvements are recorded at cost and amortized over the shorter of the life of the lease or the remaining useful life of the asset using the straight-line method.

PATENT COSTS

The Company capitalizes certain costs related to patent applications. Accumulated costs are amortized over the estimated economic lives of the patents using the straight-line method, generally commencing at the time the patent application is filed. Costs related to patent applications are written off to expense at the time such costs are deemed to have no continuing value.

ASSET IMPAIRMENT

The Company reviews long-lived assets and certain intangibles for impairment whenever events or changes in circumstances indicate that the total amount of an asset may not be recoverable. An impairment loss is recognized when estimated future cash flows expected to result from the use of the asset and the eventual disposition are less than its carrying amount.

RESEARCH AND DEVELOPMENT COSTS

All research and development costs are expensed as incurred.

REVENUE UNDER COLLABORATIVE AGREEMENTS

The Company earns revenue from licensing access to its proprietary technology and performing services under research and development contracts. As more fully explained in Note 2, in 2000 Vical changed its method of accounting for certain payments under collaborative agreements. Effective January 1, 2000, any initial license or option payment received under an agreement under which the Company also provides research and development services is recognized over the term of the research and development period. Payments for options on a license to our technology are recognized over the option period. Fees paid to extend an option are recognized over the option extension period. Upfront license payments are recognized upon contract signing if the fee is paid within 30

days, is nonrefundable, and there are no significant performance obligations remaining. Revenue from milestones is recognized as the milestones are achieved and collection of payment is reasonably assured. Revenue under research and development contracts is recognized as the services are performed. Advance payments received in excess of amounts earned are classified as deferred revenue.

NET LOSS PER SHARE

Basic and diluted net loss per share for each of the three years in the period ended December 31, 2000, has been computed using the weighted average number of shares of common stock outstanding during the three periods ended December 31, 2000. Diluted loss per share does not include any stock options as the effect would be antidilutive. See Note 7 for information on the number of options outstanding and the weighted average exercise price at December 31, 2000, 1999 and 1998.

INCOME TAXES

Deferred tax liabilities and assets are determined based on the difference between the financial statements and the tax basis of assets and liabilities using the estimated enacted tax rate in effect given the provisions of the enacted tax laws.

FAIR VALUE OF FINANCIAL INSTRUMENTS
The carrying amounts of financial instruments such as receivables, other assets, accounts payable and accrued expenses reasonably approximate fair value because of the short maturity of these items. The Company believes the carrying amounts of the Company's notes payable and obligations under capital leases approximate fair value because the interest rates on these instruments change with, or approximate, market interest rates.

COMPREHENSIVE LOSS
The Company has implemented Statement of Financial Accounting Standards No. 130 ("SFAS 130"), "Reporting Comprehensive Income." This statement requires that all items that are required to be recognized under accounting standards as components of comprehensive income be reported in a financial statement that is displayed with the same prominence as other financial statements. Accordingly, in addition to reporting net loss, the Company has displayed the impact of any unrealized gain or loss on marketable securities as a component of comprehensive loss and has displayed an amount representing total comprehensive loss for each period presented. The Company has presented the required information in the statements of stockholders' equity.

BUSINESS SEGMENTS
The Company has adopted SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information" and has determined that it operates in one business segment dedicated to research in gene delivery technology.

RECLASSIFICATIONS
Certain prior year amounts have been reclassified to conform to the current year presentation.

RECENT ACCOUNTING PRONOUNCEMENTS
In June 1998, the Financial Accounting Standards Board (FASB), issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." This statement changes the previous accounting definition of derivative, expanding it to include embedded derivatives and many commodity contracts. Under the Statement, every derivative is recorded in the balance sheet at its fair value, and any changes in the derivative's fair value are recognized currently in earnings unless specific hedge accounting criteria are met. As amended by SFAS No. 137 "Accounting for Derivative Instruments and Hedging Activities - Deferral of the effective date of FASB Statement No. 133," SFAS No. 133 is effective for all fiscal quarters of all fiscal years beginning after June 15, 2000. The Company does not anticipate that the adoption of SFAS 133 will have a material impact on its financial position or results of operations.

The FASB has issued SFAS No. 138, "Accounting for Certain Derivative Instruments and Certain Hedging Activities - an Amendment of FASB Statement No. 133." This statement amends SFAS No. 133. SFAS No. 138 is effective concurrently with SFAS No. 133 if SFAS No. 133 is not adopted prior to June 15, 2000. The Company believes that the adoption of SFAS No. 138 will not have a material effect on the Company's financial statements.

In April 2000, the FASB issued FASB Interpretation Number 44, "Accounting for Certain Transactions Involving Stock Compensation: an Interpretation of APB Opinion No. 25", FIN 44. FIN 44 affects awards and modifications

made after December 15, 1998. The adoption of FIN 44 during the year did not impact the Company's accounting of stock based compensation.

2. CHANGE IN ACCOUNTING PRINCIPLE

In December 1999, the Securities and Exchange Commission (SEC) issued Staff Accounting Bulletin No. 101 - "Revenue Recognition in Financial Statements," or SAB 101. SAB 101 reflects the SEC's views on revenue recognition. Historically Vical recognized revenue from initial technology option and license fees in the period in which the agreement was signed if there were no significant performance obligations remaining. Revenue from milestone payments was recognized as revenue as the collaborator achieved the milestones. SAB 101 requires that when there has not been the culmination of the earnings process, payments must be deferred and recognized over the period over which the revenue is deemed to have been earned. As such, Vical defers and recognizes payments from technology option and license fees, and milestone payments over the period in which the revenue is deemed to have been earned.

Under option and license agreements which do not require research to be performed by the Company and the collaborator pays an upfront fee for an option to a license to our technology, the Company believes that SAB 101 requires the Company to recognize the revenue from the upfront payment over the option period. For those agreements which do not require research to be performed by the Company and the collaborator pays an upfront fee for a license to the Company's technology, or the collaborator holds an option that is then exercised to get a license, the Company believes all significant performance obligations were met and the culmination of the earnings process occurred upon granting the

license to the technology. In the latter case, the Company's only remaining performance obligation after that is to maintain and defend the patents and patent applications. The collaborators do not get access to any upgrades or enhancements to the Company's technology.

Under certain agreements the Company is paid to perform required research and development services during the research period specified in the agreement. For these agreements historically the Company recognized the revenue on the research services as the services were provided. This accounting is unchanged under SAB 101. However, under SAB 101 the Company believes that any upfront option or license payment under this type of agreement would have to be deferred and recognized over the research period.

In the fourth quarter of 2000, the Company completed its evaluation of payments the Company received under its various option and license agreements. The Company identified one agreement with Pfizer Inc entered into in 1999 which the Company believes under SAB 101 would require a change in accounting as of the implementation date of January 1, 2000. The amount of revenue recognized in 1999 that under SAB 101 has to be deferred as of January 1, 2000 was $1.5 million.

Vical implemented SAB 101 in the fourth quarter of 2000 by restating the first three quarters of 2000 financial statements to apply SAB 101 effective January 1, 2000. The statement of operations reflects a one-time charge to earnings for the cumulative effect of the change in accounting principle as of January 1, 2000, of $1.5 million. Accordingly, revenue for each quarter of 2000 was increased by $0.2 million to reflect the recognition of the deferred license revenue arising from the SAB 101 adjustment. See Note 11. The balance of the deferred revenue from this agreement will be recognized as revenue in 2001.

On a pro forma basis, if the impact of SAB 101 had been implemented effective January 1, 1999, the pro forma net loss and the pro forma net loss per share for the year ended December 31, 1999, would have been $8,419,253 and $0.52, respectively, compared with the reported net loss and the reported net loss per share of $6,909,217 and $0.43, respectively. On a pro forma basis, implementation of SAB 101 effective January 1, 1998 would not have any impact on results of operations for the year ended December 31, 1998.

3. CASH EQUIVALENTS AND MARKETABLE SECURITIES

The Company invests its excess cash in debt instruments of financial institutions, corporations with strong credit ratings, and in U.S. government obligations. The Company has established guidelines relative to diversification and maturities that maintain safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. Cash equivalents are short-term, highly liquid investments with original maturities of less than three months. Cash equivalents of $15,293,920 and $8,520,283 at December 31, 2000 and 1999, respectively, are primarily in commercial paper, federal agency discount notes and money market funds.

The Company classifies its marketable securities as available-for-sale and records the unrealized holding gains or losses as a separate component of stockholders' equity. Realized gains or losses, calculated based on the specific identification method, were not material for the years ended December 31, 2000, 1999, and 1998.

At December 31, 2000, marketable securities consisted of the following:

<TABLE>
<CAPTION>

	Amortized Cost	Market Value	Unrealized Gain
<S>	<C>	<C>	<C>
U.S. government obligations	$ 41,574,838	$ 41,797,682	$ 222,844
Corporate bonds	70,124,059	70,422,931	298,872
Asset backed securities	9,846,522	9,940,908	94,386
Certificates of deposit	6,491,499	6,512,625	21,126
International bond	2,977,190	2,989,620	12,430
Total marketable securities	$ 131,014,108	$ 131,663,766	$ 649,658

</TABLE>

Approximately 69 percent, 25 percent, and 6 percent of these securities mature within one, two, and three years, respectively, as of December 31, 2000.

At December 31, 1999, marketable securities consisted of the following:

<TABLE>

<CAPTION>

	Amortized Cost	Market Value	Unrealized Loss
<S>	<C>	<C>	<C>
U.S. government obligations	$ 6,787,024	$ 6,742,952	$ (44,072)
Corporate bonds	17,835,525	17,747,168	(88,357)
Asset backed securities	2,043,433	2,035,061	(8,372)
Total marketable securities	$ 26,665,982	$ 26,525,181	$ (140,801)

</TABLE>

4. SIGNIFICANT CONTRACTS AND LICENSE AGREEMENTS

MERCK & CO., INC.
The Company has entered into three separate agreements in 1991, 1992 and 1997 with Merck & Co., Inc. (Merck) which provide Merck with certain exclusive rights to develop and commercialize vaccines using the Company's "naked" DNA technology for certain disease targets. The 1991 and 1997 agreements are for human vaccine targets and the 1992 agreement is for animal vaccine targets. Prior to 1996, Merck exercised its options to seven preventive human infectious disease vaccines using the Company's naked DNA technology pursuant to the 1991 agreement. In November 1997, the Company and Merck amended the 1991 agreement and granted Merck certain rights to develop and market therapeutic vaccines against the human immunodeficiency virus (HIV) and hepatitis B virus (HBV). Under the amended agreement, Merck made an investment of $5.0 million for approximately 262,000 shares of the Company's common stock including a 25 percent premium over the average per share closing price for the twenty trading days prior to the date of the agreement. The premium of $1.0 million on the investment was reflected in revenue in 1997 and the balance of the investment, net of costs to issue the shares of stock, was reflected in common stock and additional paid-in capital. The September 1997 agreement between the Company and Merck granted Merck the rights to use the Company's naked DNA technology to deliver certain growth factors as potential treatments for a range of applications including revascularization. A September 1997 agreement resulted in a payment to the Company of $2.0 million in 1997. This agreement expired in June 2000.

In November 1999, Merck paid Vical $2.0 million to extend an agreement covering therapeutic naked DNA vaccines. In December 1999, Merck started a Phase I clinical trial of a preventive naked DNA vaccine to protect against HIV infection. This event triggered a milestone payment of $1.0 million which the Company received in January 2000. Vical accrued the revenue for this milestone in December 1999. Through December 31, 2000, the Company had received a total of $22.1 million, including the payment for the investment for common stock, under these agreements. There were no license revenues recognized under these agreements in 2000 and 1998, and $3.0 million was recognized in 1999. Both agreements provide for the Company to receive additional payments based upon achievement of certain defined milestones and royalty payments based on net product sales.

PFIZER INC
In January 1999, Pfizer Inc (Pfizer) entered into a collaborative and option agreement and a stock purchase agreement with the Company. Under the terms of the collaborative and option agreement, Pfizer paid the Company $1.0 million in option fees. In addition the Company agreed to provide access to two full time equivalent employees to assist Pfizer in its research and development efforts for $0.5 million of research and development expenses annually for three years. Under the terms of the stock purchase agreement Pfizer made an investment of $6.0 million for approximately 318,000 shares of the Company's common stock at $18.87 per share, reflecting a 25 percent premium. The $1.0 million option fee and the $1.2 million premium on the purchase of stock were recognized as revenue in 1999, and the balance of the common stock investment, net of costs to issue the shares of stock, was reflected in common stock and additional paid-in capital in 1999.

As explained in Note 2, in 2000 the Company changed its method of accounting for these types of agreements. The accompanying Statement of Operations reflects a cumulative effect adjustment for approximately $1.5 million to defer the amount of revenue recognized in 1999 that under SAB 101 is required to be recognized over the contractual research period in 2000 and 2001. In 2000, the Company recognized $733,333 of the deferred license revenue under the new revenue recognition policy. Through December 31, 2000, the Company had received a total of $8.5 million (including the payment for the investment in common stock) under this agreement. The Company recognized $553,000 and $353,000 of revenue in 2000 and 1999 respectively, for research and development work and $105,000 for contract manufacturing in 2000.

HUMAN GENOME SCIENCES, INC. AND VASCULAR GENETICS INC.
On February 24, 2000, the Company and Human Genome Sciences, Inc. (HGS) signed a reciprocal royalty-bearing license. Under the agreement, the Company has the option to exclusively license up to three genes from HGS for gene-based product development. HGS has the option to license the Company's naked DNA gene delivery technology for use in up to three gene-based products. In addition, the Company granted an exclusive, royalty-bearing license to Vascular Genetics Inc. (VGI), a company in which HGS is a major shareholder, for naked DNA delivery of a gene with potential use for revascularization. In exchange, Vical received a minority equity interest in VGI. This investment was recorded at estimated fair value of $5.0 million on the date of investment, and is reflected as Investment, at cost, in the accompanying balance sheet. The investment is being accounted for using the cost method. The Company also recorded a liability for deferred revenue of $5.0 million. This deferred revenue is being recognized ratably each month through September 30, 2004. The VGI trials were placed on clinical hold by the FDA in 2000 as a result of procedural irregularities in the conduct of the trials. The FDA has requested information for which VGI is developing scientific testing techniques.

MERIAL
The Company entered into a corporate alliance in March 1995 relating to DNA vaccines in the animal health area with Merial, a joint venture between Merck and Aventis S.A. Merial has options to acquire exclusive licenses to the Company's naked DNA gene delivery technologies to develop and commercialize DNA-based vaccines to prevent infectious diseases in domesticated animals. Merial made payments of $1.1 million in 1999, and $1.0 million in 1998 to extend the options under this agreement. In December 1999, Merial paid the Company $1.6 million for the initial exercise of options and extension of options under the agreement. In March 2000, Merial paid an additional $0.2 million to extend the broad option to March 2001. Through December 31, 2000, the Company had received a total of $5.0 million under these agreements. License revenue recognized under this agreement was $875,000, $2,075,000, and $850,000 in 2000, 1999 and 1998, respectively. If Merial exercises additional license options and markets these vaccines, cash payments and royalties on net product sales would be due to the Company.

AVENTIS PASTEUR
In September 1994, the Company entered into an agreement with Aventis Pasteur (AP) that included a research collaboration and options for AP to take exclusive licenses to Vical's naked DNA vaccine technology for each of five vaccine targets. In addition, Vical was paid an annual research fee through September 1997 by AP for expenses incurred in performing certain preclinical work as defined in the agreement. Through 1996, AP had added another option and exercised four options. In 1997, AP paid the Company $1.0 million as a milestone payment under the agreement because the Company and AP began a Phase I clinical trial of an experimental vaccine against the parasite that causes malaria. The Company and AP sponsored the trial which was conducted by the U.S. Naval Medical Research Institute and the U.S. Army Medical Research Institute of Infectious Diseases. Through December 31, 2000, Vical has received $7.8 million under this agreement. No revenue was recognized in 2000 or 1999, and $239,000 was recognized in 1998. The agreement provides for the Company to receive

additional payments based upon achievement of certain defined milestones and royalty payments based on net product sales. Vical is currently in discussion with AP concerning the possible renegotiation of this agreement.

AVENTIS PHARMA
In October 1997, the Company and Aventis Pharma entered into an agreement granting Aventis Pharma an exclusive worldwide license to use the Company's naked DNA gene delivery technology to develop certain gene therapy products for potential treatment of neurodegenerative diseases. Under the terms of the agreement, the Company received $1.0 million, which was recognized as revenue in 1997. In June 2000, the Company and Aventis Pharma entered into a license agreement granting Aventis Pharma rights to use Vical's technology to deliver a growth factor gene for which Aventis Pharma holds rights. Vical received $1.5 million, which was recognized as revenue in June 2000. These agreements provide for the Company to receive additional payments based upon achievement of certain defined milestones and royalty payments based on net product sales.

CENTOCOR, INC.
In February 1998, the Company signed an agreement allowing Centocor, Inc. (Centocor) to use Vical's naked DNA technology to develop and market gene-based vaccines for the potential treatment of certain types of cancer. The agreement resulted in a payment to Vical of $2.2 million, which was recognized as revenue in 1998. The payment represented an initial payment of $2.0 million under the license agreement and reimbursement of $0.2 million of patent costs. The Company may receive further payments plus royalties if Centocor successfully develops products using the Vical technology. The agreement grants to Centocor exclusive worldwide licenses and options to license Vical's naked DNA technology to deliver certain antigens to induce immune responses against the associated cancer cells.

BOSTON SCIENTIFIC CORPORATION
In September 1998, the Company and Boston Scientific Corporation entered into a license and option agreement for the development of catheter-based intravascular gene delivery technology. The Company received $1.1 million, which was recognized as revenue in 1998. The agreement also provides for the Company to receive royalty payments on net product sales.

NAVAL MEDICAL RESEARCH INSTITUTE
In September 1998, the Company signed a cooperative agreement with the Office of Naval Research to develop a multi-gene malaria DNA vaccine and test its ability to protect humans against malaria. This agreement, as last amended in November 2000, would provide up to approximately $5.5 million of funding to the Company through June 30, 2001, of which $948,000, $1,778,000 and $697,000 of contract revenue was recognized under this agreement in 2000, 1999 and 1998, respectively.

OTHER RESEARCH AND LICENSING AGREEMENTS
The Company also received revenue under research and licensing agreements with other entities including the U.S. government of which approximately $1,997,000, $1,296,000 and $735,000 was recognized as revenue during the years ended December 31, 2000, 1999 and 1998, respectively.

Under the Merck, Aventis Pasteur, Merial, Aventis Pharma, Centocor, Pfizer, Human Genome Sciences. and Vascular Genetics agreements, if the Company were to receive milestone or royalty payments, the Company would be required to pay up to 10 percent of some of these payments to Wisconsin Alumni Research Foundation. Under the Boston Scientific agreement, if the Company were to receive milestone or royalty payments, the Company would be required to pay up to 25 percent of some of these payments to the University of Michigan.

5. OTHER FINANCIAL DATA

Accounts payable and accrued expenses consisted of the following at December 31, 2000 and 1999:

<TABLE>
<CAPTION>

	2000	1999
<S>	<C>	<C>
Accrued clinical trials cost	$1,732,967	$1,411,277
Employee compensation	932,540	880,797
Accrued royalties payable	147,500	547,500
Accounts payable	139,174	214,925
Other accrued liabilities	943,350	785,143
	$3,895,531	$3,839,642

</TABLE>

6. COMMITMENTS

LEASES
The Company leases its office and research facilities and certain equipment under operating and capital leases. The minimum annual rents on the office and research facilities are subject to increases based on changes in the Consumer Price Index subject to certain minimum and maximum annual increases. The Company is also required to pay taxes, insurance and operating costs under the facilities leases. Two of the three facilities leases can be renewed for one additional five-year period beyond their expiration in 2004 and the third facility lease can be renewed for two additional five-year periods. The equipment capital leases are secured by substantially all equipment of the Company.

<TABLE>
<CAPTION>

	Operating Leases	Capital Leases
<S>	<C>	<C>
Years ending December 31,		
2001	$1,562,034	$ 774,769
2002	1,604,046	672,884
2003	1,649,742	594,328
2004	1,749,552	327,240
2005	-	-

Total minimum lease payments	$6,565,374	2,369,221
Less amount representing interest		(343,844)
Present value of capital lease payments		2,025,377
Less current portion		(611,775)
Long-term obligations under capital leases		$1,413,602

</TABLE>

In January 2001, the Company amended an existing facilities lease and increased the operating leases' minimum lease payments by a total of approximately $281,000.

Rent expense for the years ended December 31, 2000, 1999 and 1998, was $1,397,475, $1,085,183 and $998,195, respectively.

Cost and accumulated depreciation of equipment and software under capital leases were as follows:

<TABLE>
<CAPTION>

	Cost	Accumulated Depreciation	Net
<S>	<C>	<C>	<C>
December 31, 2000	$ 2,820,675	$ 1,008,909	$ 1,811,766
December 31, 1999	$ 2,583,485	$ 1,490,376	$ 1,093,109

</TABLE>

NOTES PAYABLE
In November 2000, the Company amended its existing line of credit with a bank to finance certain leasehold improvements. Under the terms of the amended agreement, the Company can borrow an additional $1.3 million until May 1, 2001. Any outstanding borrowings under the additional credit line at June 1, 2001, convert to a term

loan payable over 42 months at the bank's prime rate. Through December 31, 2000, the Company had used $192,000 of the available credit of $1.3 million. The Company's outstanding borrowings under the original credit agreement are also payable monthly with interest at the bank's reference rate minus 0.25 percentage points, resulting in an interest rate of 9.25% at December 31, 2000. There were no amounts outstanding under this line at December 31, 1999. Total outstanding borrowings at December 31, 2000, were $1.0 million. In 2000, the maximum borrowings were $1,049,000, the weighted average borrowings were $865,777, and the weighted average interest rate was 9.14%.

Financial covenants under the agreement require, among other things, that the ratio of liabilities to tangible net worth not exceed 0.3 to 1.0, and that the Company maintain liquid assets such as cash and certificates of deposit, U.S. treasury bills and other obligations of the federal government, and readily marketable securities of at least $20.0 million. The Company was in compliance with these covenants as of December 31, 2000.

RESEARCH AND LICENSE AGREEMENTS
In 2000 and 1999, the Company continued research and exclusive license agreements with various universities for continuing research and license rights to technology related to gene therapy. The agreements generally grant the Company the right to commercialize any product derived from specified technology. Fees paid are expensed as incurred and future obligations on these agreements are not significant.

7. STOCKHOLDERS' EQUITY

PREFERRED STOCK

The Company's certificate of incorporation, as amended, authorizes the issuance of up to 5,000,000 preferred shares. The Board of Directors is authorized to fix the number of shares of any series of preferred stock and to determine the designation of such shares. However, the amended certificate of incorporation specifies the initial series and the rights of that series. No shares of preferred stock were outstanding at December 31, 2000 or 1999.

COMMON STOCK

The Company's certificate of incorporation, as amended, authorizes the issuance of up to 40,000,000 common shares. Common stock shares totaling 20,011,244 and 16,201,136 were outstanding at December 31, 2000 and 1999, respectively. On January 20, 2000, the Company completed a public offering of 3,450,000 shares of its common stock, including 450,000 shares issued to cover over-allotments, at a price of $36.50 per share. Proceeds to the Company, net of underwriting fees and offering expenses, were approximately $117.5 million.

STOCK PLAN AND DIRECTORS OPTION PLAN

The Company has a stock plan (Stock Incentive Plan of Vical Incorporated) under which 3,200,000 shares of common stock are reserved for issuance to employees, non-employee directors and consultants of the Company. The plan provides for the grant of incentive and nonstatutory stock options and the direct award or sale of shares. The exercise price of stock options must equal at least the fair market value on the date of grant. The maximum term of options granted under the plan is ten years. Except for annual grants to directors which vest at the next annual meeting, options generally vest 25 percent on the first anniversary of the date of grant, with the balance vesting quarterly over the remaining three years. The plan has also limited the number of options that may be granted to any plan participant in a single calendar year to 300,000 shares.

The Company also has a directors stock option plan (Directors Plan) that provides for the issuance to non-employee directors of up to 210,000 shares of the Company's common stock, of which options for 202,500 shares have been granted. It is not anticipated that there will be any future grants under the Directors Plan.

The following table summarizes stock option transactions for the Company's stock option plans for the years ended December 31, 2000, 1999 and 1998:

<TABLE>
<CAPTION>

	Shares	Weighted Average Exercise Price	Weighted Average Fair Value of Grants
<S>	<C>	<C>	<C>
Outstanding, December 31, 1997	1,442,498	$12.04	
Granted	580,875	$15.56	$11.12
Exercised	(135,228)	$ 7.88	
Forfeited	(73,100)	$13.99	
Outstanding, December 31, 1998	1,815,045	$13.39	
Granted	546,900	$17.89	$13.06
Exercised	(16,623)	$10.23	
Forfeited	(50,057)	$15.19	
Outstanding December 31, 1999	2,295,265	$14.45	
Granted	783,675	$21.18	$15.62
Exercised	(487,211)	$11.98	
Forfeited	(132,322)	$20.26	
Outstanding December 31, 2000	2,459,407	$16.77	

</TABLE>

The following table summarizes information about stock options outstanding under the Company's stock option plans at December 31, 2000:

<TABLE>
<CAPTION>

Options Outstanding				Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price

<S>	<C>	<C>	<C>	<C>	<C>	
$ 0.16 - $14.16	652,157	5.9	$ 11.29	538,472	$ 10.93	
$14.19 - $15.50	549,246	7.1	$ 15.30	386,222	$ 15.27	
$15.625 - $17.625	497,585	9.1	$ 16.67	145,317	$ 16.60	
$18.00 - $20.75	589,894	9.1	$ 20.55	119,973	$ 20.53	
$20.93 - $59.06	170,525	9.3	$ 29.72	1,625	$ 21.47	
$0.160 - $59.06	2,459,407	7.8	$ 16.77	1,191,609	$ 14.01	

</TABLE>

The number of shares and weighted average price of options exercisable at December 31, 2000, 1999 and 1998 were 1,191,609 shares at $14.01, 1,219,839 shares at $12.65, and 844,829 shares at $11.53, respectively.

The Company has adopted the disclosure-only provisions of SFAS 123. Accordingly, no compensation cost has been recorded for the fair value of the stock options issued under the plans. Had compensation cost for the Company's stock option plans been determined consistent with the provisions of SFAS 123, the Company's net loss and loss per share would have increased to the pro forma amounts indicated below:

<TABLE>
<CAPTION>

	2000	1999	1998
<S>	<C>	<C>	<C>
Net loss - as reported	$ 8,516,873	$ 6,909,217	$ 7,480,507
Net loss - pro forma	$ 15,277,441	$ 11,591,993	$ 11,645,607
Net loss per share - as reported	$ (0.43)	$ (0.43)	$ (0.47)
Net loss per share - pro forma	$ (0.78)	$ (0.72)	$ (0.74)

</TABLE>

The fair value of each option grant was estimated on the date of grant using the Black-Scholes option-pricing model with the following weighted average assumptions used for grants: risk free interest rates of 5.79% (2000),

5.70% (1999), and 5.09% (1998), and expected volatility of 81% (2000) and 71% (1999 and 1998). An expected option life of 4 (2000) and 5 (1999 and 1998) years and a dividend rate of zero is assumed for the years presented.

8. RELATED PARTIES

Included in other assets at December 31, 2000 and 1999, is the long-term portion of notes receivable, representing amounts due from certain officers and employees of the Company. Imputed interest is applied at the applicable federal rate. The loan agreements allow for the notes to be forgiven under certain circumstances over the next three years. The long-term portion is $73,333 and $70,000 at December 31, 2000 and 1999, respectively. The current portion, included in receivables and other, is $76,667 and $50,000 at December 31, 2000 and 1999, respectively.

In November 2000, the Company entered into an employment agreement with its current CEO. The agreement provides for certain relocation payments to be paid and for a future non interest-bearing loan of up to $500,000 for the purchase of a residence. Imputed interest will be applied at the applicable federal rate. When this loan is made, it will be secured by a second deed of trust on the residence. If the Company terminates the CEO's employment without "cause," or the CEO resigns for "good reason" (as defined in the agreement), the Company will continue to pay his base compensation for up to twelve months. The Company has one other employment agreement which would require payments for up to six months to an executive officer in the event that officer is terminated without cause or resigns for specified reasons.

9. INCOME TAXES

As of December 31, 2000, the Company has available net operating loss carryforwards of approximately $47.1 million and research and development credit carryforwards of approximately $5.2 million to reduce future federal income

taxes, if any. These carryforwards expire through 2019 and are subject to review and possible adjustment by the Internal Revenue Service.

Effective September 30, 1999, one of the Company's product candidates, Allovectin-7(R), was granted orphan drug designation for the treatment of invasive and metastatic melanoma by the U.S. Food and Drug Administration (FDA) Office of Orphan Products Development. Orphan drug designation provides certain tax benefits for qualifying expenses. Effective April 20, 2000, another of the Company's product candidates, Leuvectin(TM), was granted orphan drug designation for treatment of renal cell carcinoma.

The Tax Reform Act of 1986 limits a company's ability to utilize certain net operating loss and tax carryforwards in the event of cumulative change in ownership in excess of 50 percent, as defined. The Company has completed numerous financings that have resulted in a change in ownership in excess of 50 percent, as defined. The utilization of net operating loss and tax credit carryforwards may be limited due to these ownership changes.

The Company has a deferred tax asset of approximately $23.7 million related primarily to its net operating loss and tax credit carryforwards. A valuation allowance has been recognized to offset the entire amount of the deferred tax asset as realization of such asset is uncertain.

10. EMPLOYEE BENEFIT PLANS

The Company has a net defined contribution savings plan under section 401(k) of the Internal Revenue Code. The plan covers substantially all employees. The Company matches employee contributions made to the plan according to a specified formula. The Company's matching contributions totaled approximately $131,000, $107,000 and $95,000, in 2000, 1999 and 1998, respectively.

11. SUMMARY OF UNAUDITED QUARTERLY FINANCIAL INFORMATION

The following is a summary of the unaudited quarterly results of operations for the years ended December 31, 2000 and 1999, as restated to reflect the change in accounting principle effective January 1, 2000 discussed in Note 2, and a reconciliation of amounts previously reported to the amounts as restated (in thousands, except per share amounts):

<TABLE>
<CAPTION>

2000	March 31,	June 30,	Sept. 30,
<S>	<C>	<C>	<C>
Revenues as previously reported	$ 998	$ 2,764	$ 1,430
Impact of accounting change on revenues	183	183	183
Revenues as restated	$ 1,181	2,947	1,613
Net loss as reported	$ (2,911)	$ (818)	$ (1,870)
Impact of accounting change on revenues	183	183	183
Cumulative effect of accounting change	(1,510)	-	-
Net loss as restated	$ (4,238)	$ (635)	$ (1,687)

</TABLE>

<TABLE>
<CAPTION>

2000	March 31, (Restated)	June 30, (Restated)	Sept. 30, (Restated)	Dec. 31,
<S>	<C>	<C>	<C>	<C>
Revenues	$ 1,181	$ 2,947	$ 1,613	$ 1,879
Research and development costs	4,317	4,710	4,524	4,963
Total operating expenses	5,647	6,020	5,787	6,325
Net loss before cumulative effect of accounting change	(2,728)	(635)	(1,687)	(1,957)
Effect of accounting change	(1,510)	-	-	-
Net loss	(4,238)	(635)	(1,687)	

(1,957)				
Net loss per common share (basic and diluted):				
Loss per share before cumulative effect of accounting change	(0.14)	(0.03)	(0.08)	(0.10)
Effect of accounting change	(0.08)	-	-	-
Net loss per share	(0.22)	(0.03)	(0.08)	(0.10)
Weighted average shares used in per share calculation	19,022	19,823	19,896	20,008

</TABLE>

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<CAPTION>

1999	March 31,	June 30,	Sept. 30,	Dec. 31,
<S>	<C>	<C>	<C>	<C>
Revenues	$ 3,281	$ 1,253	$ 1,229	$ 4,948
Research and development	3,614	3,738	3,514	4,478
Costs				
Total operating expenses	4,627	4,860	4,581	5,652
Net loss	(809)	(3,068)	(2,837)	(195)
Net loss per common share (basic and diluted)	(0.05)	(0.19)	(0.18)	(0.01)
Weighted average shares used in per share calculation	15,953	16,191	16,196	16,200

</TABLE>

EXHIBIT 10.23

VICAL INCORPORATED
9373 TOWNE CENTRE DRIVE
SUITE 100
SAN DIEGO, CA 92121

November 28, 2000

Mr. Vijay B. Samant
96 Norristown Road
Blue Bell, PA 19422

Dear Vijay:

It is with great pleasure that we present our offer to you of the position of President and Chief Executive Officer of Vical Incorporated, (the "Company"), effective no later than November 28, 2000. We are all enthusiastic about the prospect of working with you in this exciting company.

This letter sets forth the basic terms and conditions of your employment with the Company. By signing this letter, you will be agreeing to these terms:

1. DUTIES AND SCOPE OF EMPLOYMENT.

(a) POSITION. The Company agrees to employ you as its President and Chief Executive Officer. You will report to the Board of Directors of the Company (the "Board") and have the powers and duties commensurate with such position.

(b) DIRECTORSHIP. The Company agrees to use its best efforts to cause you to be nominated for election as a member of the Board throughout the term of your employment. At the pleasure of the Company's stockholders, you agree to serve as a Director on the Board at no additional compensation.

(c) OBLIGATIONS. During the term of your employment, you will devote your full business efforts and time to the Company and its subsidiaries (if any). You will not render services to any other person or entity without the express prior approval of the Board. During your employment, you will not engage, directly or indirectly, in any other business activity (whether or not pursued for pecuniary advantage) that is or may be competitive with the Company; provided that you may own less than one percent of the outstanding securities of any publicly traded corporation.

2. COMPENSATION.

(a) SALARY. During your employment, the Company agrees to pay you as compensation for your services a base salary at the annual rate of $330,000 or at such higher rate as the Company may determine from time to time. Such salary will be payable in accordance with the Company's standard payroll procedures. (The annual compensation specified in this Section 2(a), together with any increases in such compensation that the Company may grant from time to time, is referred to in this Agreement as "Base Compensation.")

(b) BONUS. Upon commencement of your employment, the Company will grant to you a signing bonus of 2,000 registered, fully vested shares of its common stock, at no cost to you. You will be responsible for any personal taxes arising from this stock grant. Further, you will be eligible for a cash bonus at the end of the first employment year of up to 50% of your Base Compensation during that period upon the achievement of objectives which we will mutually agree upon within 60 days following your commencement of employment.

3. EMPLOYEE BENEFITS. During the term of your employment, you will be eligible to participate in the employee benefit plans maintained by the Company, subject in each case to the generally applicable terms and conditions of the plan in question and to the determinations of any person or committee administering such plan. The benefits may be changed from time to time by the Company. Employee benefits currently include health, dental and life insurance and a 401(k) plan. You will also be entitled to four weeks of paid vacation for

each full year of service, which can be taken at any time during the year. Sick leave will be in accordance with the Company's generally applicable policies. Any vacation or sick leave not used within 90 days following the end of a year of service will not accrue.

4. BUSINESS EXPENSES. During your employment, you will be authorized to incur necessary and reasonable travel, entertainment and other business expenses in connection with your duties hereunder. The Company will reimburse you for such expenses upon presentation of an itemized account and appropriate supporting documentation, all in accordance with the Company's generally applicable policies.

5. STOCK OPTION. Upon the commencement of your employment, the Company will grant to you a stock option (an incentive stock option, to the extent permitted by law) to purchase from the Company 300,000 shares of the Company's common stock (the "Shares"). The exercise price of your stock option will be equal to the fair market value on the date of the grant. Your stock option will be granted pursuant to the Company's Amended and Restated 1992 Stock Plan and will be subject to the terms and conditions of the Plan and, except as to the vesting provisions described below, the Company's form of stock option agreement, a copy of which you have previously received. Your stock options will vest (become exercisable) on a monthly basis over a four-year period. You will also be eligible to receive an annual grant of stock options commencing in 2001, with an exercise price equal to the fair market value on the date of the grant, at the discretion of the Board of Directors and based upon agreed upon

performance goals. Further, you will be entitled to receive an additional one-time stock option grant on February 28, 2002 based upon the achievement by that date of goals (which will consist of "stretch" goals) to be agreed upon by the Board and you by February 28, 2001 ("2001 Performance Options"); upon achievement of those goals you will be entitled to receive Performance Options to purchase up to 75,000 shares of common stock, with an exercise price equal to the fair market value on the date of the grant .

6. RELOCATION. To assist you in moving to the San Diego area, we are prepared to pay the reasonable and customary expenses of relocating you and your family, not to exceed $60,000. In addition, in the event your residence in Blue Bell, Pennsylvania is prepared and maintained (including customary insurance coverage) for sale in reasonable condition and listed for sale by September 1, 2001, the Company will reimburse you up to $100,000 of any loss you incur on its sale; provided that, in the event such a loss is anticipated, the Company or its designees may, at the Company's sole discretion, purchase that residence for an amount equal to its cost to you (estimated to be approximately $550,000). The Company will also loan to you an amount not to exceed $500,000 for the purpose of purchasing a residence in the San Diego area, such loan to be evidenced by a promissory note bearing interest at the lowest applicable federal rate for imputed interest under the Internal Revenue Code and secured by a second deed of trust on the residence. The loan will be due and payable upon the earlier of (A) the sale of that residence, (B) 90 days following the termination of your employment for any reason or (C) January 1, 2006. Once you and your family have relocated to the San Diego area, the Company will provide to you, for a period of not to exceed 24 months, a monthly housing cost-of-living differential payment of up to $2,500 per month. Further, the Company will either pay the costs, not to exceed $3,500 per month, of temporary housing for you in San Diego or, at the Company's option, provide temporary housing to you until the earlier of your purchase of a San Diego residence or November 30, 2001. The Company will also reimburse you for the reasonable costs of your commuting to San Diego for a period of up to 12 months . You will be responsible for any personal taxes arising from any of the above-described relocation payments, except that the Company will reimburse you for personal taxes arising from the payment of up to $60,000 described in the first sentence of this paragraph and arising from any temporary housing costs paid by the Company.

7. PROPRIETARY INFORMATION AND INVENTIONS AGREEMENT. You will be required to sign and abide by the terms of the enclosed Employee's Proprietary Information and Inventions Agreement, a copy of which you have previously received.

8. IMMIGRATION DOCUMENTATION. Please be advised that your employment is contingent on your ability to prove your identity and authorization to work in the United States. You must comply with the Immigration and Naturalization Service's employment verification requirements.

9. TERM AND TERMINATION OF EMPLOYMENT.

(a) "AT WILL" EMPLOYMENT. Your employment with the Company is "at will" and not for a specified term and may be terminated by you or the Company at any time for any reason, with or without cause. Except as expressly provided in subsection (c) below, upon a

termination of your employment, you will only be entitled to the compensation, benefits and reimbursements described in Section 2, 3 and 4 for the period preceding the effective date of the termination.

(b) DEFINITIONS. For all purposes under this Agreement,

(i) "Good Reason" shall mean (A) you have incurred a material reduction in your authority or responsibility, including removal of your direct reporting relationship to the Board of Directors, (B) any reduction in Base Compensation or (C) a material breach of this Agreement by the Company;

(ii) "Cause" shall mean (A) a substantial failure to perform your duties hereunder, other than a failure resulting from complete or partial incapacity due to physical or mental illness or impairment, (B) gross misconduct or fraud or (C) conviction of, or a plea of "guilty" or "no contest" to, a felony.

(iii) "Disability" shall mean that you, at the time your employment is terminated, have performed substantially none of your duties under this Agreement for a period of not less than three consecutive months as the result of your incapacity due to physical or mental illness.

(c) SALARY CONTINUATION. Subject to subsection (d) below, the Company will continue to pay your Base Compensation (at the annual rate then in effect) for up to 12 months following a termination of your employment, plus an amount equal to any cash bonus paid to you in the prior year, if:

(i) the Company terminates your employment without your consent for any reason other than Cause or Disability; or

(ii) you voluntarily resign your employment for Good Reason.

The payments under this subsection (c) will (i) continue only so long as you do not enter into any employment or consulting arrangement or agreement (for a period of 12 months subsequent to such termination) with any company primarily involved in research, development or commercialization of a method of delivery of naked DNA into humans or animals and (ii) cease in the event of your death. In order to receive your salary continuation, you will be required to sign a release in a form acceptable to the Company, of any and all claims that you may have against the Company.

(d) MITIGATION. In the event of a termination of your employment subsequent to November 30, 2001, the payments under subsection (c) above shall be reduced on a dollar-for-dollar basis by any other compensation earned by you for personal services performed as an employee or independent contractor during the 12-month period following the termination of your employment, including (without limitation) deferred compensation. You will apply your best efforts to seek and obtain other employment or consulting engagements, whether on a full-

or part-time basis, during such 12-month period in order to mitigate the Company's obligations under subsection (c) above.

Please note that this Agreement supersedes any prior agreements, representations or promises of any kind, whether written, oral, express or implied between the parties hereto with respect to the subject matters herein, and it, together with your stock option agreement and Employee's Proprietary Information and Inventions Agreement, constitutes the full, complete and exclusive agreement between you and the Company with respect to the subject matters herein. This Agreement cannot be changed unless in writing, signed by

you and an authorized officer of the Company. If any term of this Agreement is held to be invalid, void or unenforceable, the remainder of this Agreement shall remain in full force and effect and shall in no way be affected, and the parties will use their best efforts to find an alternative way to achieve the same result.

This offer letter may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one and the same instrument.

To indicate your acceptance of this offer of employment, please sign below and return one signed copy to me no later than November 28, 2000.

Sincerely,

VICAL INCORPORATED

BY /s/ R. GORDON DOUGLAS JR., M.D.

R. Gordon Douglas, Jr., M.D.
Chairman of the Board

ACCEPTED AND AGREED this 28th day of November, 2000:

/s/ VIJAY B. SAMANT
- ---
Vijay B. Samant

EXHIBIT 23.1

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation of our report included in this Form 10-K, into Vical Incorporated's previously filed Registration Statements Files No. 33-60826, No. 33-60824, No. 33-81602, No. 33-81600, No. 33-87972, No. 333-30181, and No. 333-80681.

/s/ ARTHUR ANDERSEN LLP

San Diego, California
March 26, 2001