AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION ON JANUARY 19, 2000

REGISTRATION NO. 333-92921

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

AMENDMENT NO. 2
TO
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

VICAL INCORPORATED

(Exact name of registrant as specified in its charter)

<TABLE>
<S> <C>

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

</TABLE>

9373 TOWNE CENTRE DRIVE, SUITE 100
SAN DIEGO, CA 92121
(858) 646-1100

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

ALAIN B. SCHREIBER, M.D.
PRESIDENT AND CHIEF EXECUTIVE OFFICER
VICAL INCORPORATED
9373 TOWNE CENTRE DRIVE, SUITE 100
SAN DIEGO, CA 92121
(858) 646-1100

(Name, address, including zip code, and telephone number, including area code, of agent for service)

COPIES TO:

<TABLE>
<S> <C>

THOMAS E. SPARKS, JR., ESQ. JOHN L. DONAHUE, ESQ. ALAN G. SMITH, ESQ. PILLSBURY MADISON & SUTRO LLP P.O. BOX 7880 SAN FRANCISCO, CALIFORNIA 94120	LANCE W. BRIDGES, ESQ. ADAM C. LENAIN, ESQ. COOLEY GODWARD LLP 4365 EXECUTIVE DRIVE, SUITE 1200 SAN DIEGO, CALIFORNIA 92121

</TABLE>

APPROXIMATE DATE OF COMMENCEMENT OF PROPOSED SALE TO THE PUBLIC:
AS SOON AS PRACTICABLE AFTER THIS REGISTRATION STATEMENT BECOMES EFFECTIVE.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. / /

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. / /

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: / /

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: / /

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box: / /

CALCULATION OF REGISTRATION FEE

<TABLE>

TITLE OF EACH CLASS OF SECURITIES TO BE REGISTERED	AMOUNT TO BE REGISTERED (1)	PROPOSED MAXIMUM OFFERING PRICE PER SHARE (2)	PROPOSED MAXIMUM AGGREGATE OFFERING PRICE	AMOUNT OF REGISTRATION FEE (3)
<S>	<C>	<C>	<C>	<C>
Common Stock, $0.01 par value.....	2,875,000 shares	$37.50	$107,812,500	$28,462.50

</TABLE>

(1) Includes 375,000 shares that the underwriters have the option to purchase to cover over-allotments, if any.

(2) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c), based upon the average of the high and low price reported on the Nasdaq National Market on January 18, 2000.

(3) Of this amount, $15,691 was previously paid in connection with the initial filing of the registration statement.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(a) OF THE SECURITIES ACT OF 1933 OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(a), MAY DETERMINE.

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THE INFORMATION IN THIS PRELIMINARY PROSPECTUS IS NOT COMPLETE AND MAY BE CHANGED. WE MAY NOT SELL THESE SECURITIES UNTIL THE REGISTRATION STATEMENT FILED WITH THE SECURITIES AND EXCHANGE COMMISSION IS EFFECTIVE. THIS PRELIMINARY PROSPECTUS IS NOT AN OFFER TO SELL NOR DOES IT SEEK AN OFFER TO BUY THESE SECURITIES IN ANY JURISDICTION WHERE THE OFFER OR SALE IS NOT PERMITTED.

SUBJECT TO COMPLETION. DATED JANUARY 19, 2000.

2,500,000 Shares

[LOGO]

Common Stock

This is an offering of 2,500,000 shares of common stock of Vical Incorporated. All of the 2,500,000 shares of common stock are being sold by Vical.

The common stock is listed on the Nasdaq National Market under the symbol "VICL." The last reported sale price of the common stock on January 18, 2000, was $35.75 per share.

SEE "RISK FACTORS" ON PAGE 6 TO READ ABOUT FACTORS YOU SHOULD CONSIDER BEFORE BUYING SHARES OF THE COMMON STOCK.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY OTHER REGULATORY BODY HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

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	Per Share	Total
<S>	<C>	<C>
Initial price to public.....	$	$
Underwriting discount.....	$	$
Proceeds, before expenses, to Vical.....	$	$

</TABLE>

To the extent that the underwriters sell more than 2,500,000 shares of common stock, the underwriters have the option to purchase up to an additional 375,000 shares from Vical at the initial price to public less the underwriting discount.

The underwriters expect to deliver the shares against payment in New York, New York on , 2000.

GOLDMAN, SACHS & CO.

ROBERTSON STEPHENS

SG COWEN

FIRST UNION SECURITIES, INC.

Prospectus dated , 2000.

GRAPHICS' DESCRIPTIONS FOR EDGAR

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<S>	<C>
[Numerous Product Opportunities Graphic, Inside Front Cover]	
Header:	Vical's Naked DNA Technology Offers Numerous Product Opportunities.
Description:	Graphic illustration of the gene-based drug candidates identifying their use in DNA Vaccine, Immunotherapy and DNA Therapeutics for Infectious Diseases, Oncology and Protein Delivery, respectively.
[Stages of Clinical Trial Graphic, Inside Back Cover]	
Header:	Advanced Clinical Trials With Multiple Cancer Therapies
Description:	Graphic illustration of the various stages of clinical trials of Vical's products Allovectin-7, Leuvectin, Vaxid and gp100 vaccine for various cancer diseases.
[Naked DNA Technology Graphic, Inside Back Cover]	
Header:	Vical's Naked DNA Technology
Description:	Graphic illustration of the process by which Vical's Naked DNA Technology enters the target cell and expresses the desired protein.

</TABLE>

PROSPECTUS SUMMARY

THIS SUMMARY HIGHLIGHTS INFORMATION CONTAINED ELSEWHERE OR INCORPORATED BY REFERENCE IN THIS PROSPECTUS. THIS SUMMARY MAY NOT CONTAIN ALL OF THE INFORMATION THAT YOU SHOULD CONSIDER BEFORE DECIDING TO INVEST IN OUR COMMON STOCK. YOU SHOULD READ THIS ENTIRE PROSPECTUS CAREFULLY, INCLUDING THE "RISK FACTORS" SECTION, THE FINANCIAL STATEMENTS AND THE NOTES TO THOSE STATEMENTS AND THE DOCUMENTS INCORPORATED BY REFERENCE IN THIS PROSPECTUS. UNLESS OTHERWISE INDICATED, ALL INFORMATION IN THIS PROSPECTUS ASSUMES NO EXERCISE OF THE UNDERWRITERS' OVER-ALLOTMENT OPTION. SEE "UNDERWRITING."

OUR BUSINESS

OVERVIEW

We 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 candidates, ALLOVECTIN-7 and LEUVECTIN, are both in late-stage clinical trials for multiple indications.

We also license our technologies to pharmaceutical companies for the development of applications typically outside our focus such as vaccines for infectious diseases and optimized delivery of therapeutic proteins. These strategic collaborations provide us with the opportunity to receive royalties and profit sharing, if products are successfully developed and commercialized. In addition, proceeds from these license agreements help fund development of our product candidates.

TARGET MARKETS

We focus on developing cancer therapies which may offer safer and more cost-effective treatments than are currently available. Our development programs address a number of cancers which in aggregate threaten the lives of millions of people worldwide. The high public and patient awareness of the need for improved

therapies, coupled with the limited efficacy of existing treatments such as chemotherapy, provides Vical with an attractive market.

Potential applications of our naked DNA gene delivery technology include DNA therapeutics for cancer, DNA vaccines for infectious diseases and DNA therapeutic protein delivery for other types of disease. We also believe a significant potential exists for a number of veterinary applications.

OUR TECHNOLOGIES

We pioneered and continue to develop naked DNA gene delivery technologies. Our DNA technologies are protected by a number of patents. Our approach involves the design and construction of stable, closed loops of DNA. These DNA segments contain genes that promote production of desired proteins for periods ranging from weeks to several months. We believe the potential benefits of our technology 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 which 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 over a prolonged period of time, which may be more cost-effective than administering the protein itself.

OUR PRODUCT CANDIDATES

We have several unpartnered cancer product candidates in clinical trials:

- ALLOVECTIN-7 for the treatment of metastatic melanoma, in Phase III and Phase II registration trials, and head and neck cancer, in Phase II,

- LEUVECTIN, for the treatment of kidney cancer, Phase II, and prostate cancer, Phase II,

- VAXID, for the prevention of recurrence of B-cell lymphoma, Phase I/II, and

- a DNA vaccine for the treatment of metastatic melanoma, Phase I/II.

OUR COLLABORATIVE PARTNERS

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

- Merck, in the fields of infectious disease vaccines and cardiovascular disease,

- Two divisions of Aventis S.A., formerly Rhone-Poulenc S.A.,

  - Aventis Pasteur, formerly Pasteur Merieux Connaught, in the field of infectious disease vaccines,

  - Aventis Pharma, formerly Rhone-Poulenc Rorer Pharmaceuticals, Inc., in the field of neurodegenerative disorders,

- Pfizer, in the field of animal health therapeutics,

- Merial, a joint venture between Merck and Rhone Merieux, in the field of animal health vaccines,

- Centocor, a wholly-owned subsidiary of Johnson & Johnson, in the field of cancer vaccines, and

- Boston Scientific, in the field of cardiovascular disease.

OUR HISTORY

We were incorporated in Delaware in 1987. Our offices are located at 9373 Towne Centre Drive, Suite 100, San Diego, California 92121-3088, and our telephone number is (858) 646-1100.

THE OFFERING

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<S>	<C>
Common stock offered by us	2,500,000 shares
Common stock to be outstanding after the offering	18,698,723 shares
Use of Proceeds	For research and development and general corporate purposes. See "Use of Proceeds."
Nasdaq National Market Symbol	VICL

</TABLE>

The above information is based on shares outstanding as of September 30, 1999.

SUMMARY FINANCIAL INFORMATION

See Note 1 of Notes to Audited Financial Statements for an explanation of the method used to determine the number of shares used in computing per share data below.

<TABLE>
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	FISCAL YEAR ENDED DECEMBER 31,					NINE MONTHS ENDED SEPTEMBER 30,
	1994	1995	1996	1997	1998	1998	1999
						(UNAUDITED)	
			(IN THOUSANDS, EXCEPT PER SHARE AND SHARE AMOUNTS)				
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
STATEMENT OF OPERATIONS DATA:							
Revenues:							
License/royalty revenue	$4,509	$5,402	$5,679	$6,477	$5,044	$4,617	$3,770
Contract revenue	1,005	900	1,061	1,326	876	371	1,992
	5,514	6,302	6,740	7,803	5,920	4,988	5,762
Operating expenses:							
Research and development	8,336	8,997	11,318	11,936	12,054	9,311	10,866
General and administrative	2,615	2,902	3,168	3,733	3,650	2,836	3,201
Total operating expenses	10,951	11,899	14,486	15,669	15,704	12,147	14,067
Loss from operations	(5,437)	(5,597)	(7,746)	(7,866)	(9,784)	(7,159)	(8,305)
Interest income	1,159	1,687	2,773	2,447	2,465	1,879	1,688
Interest expense	80	73	108	192	162	126	97
Net loss	$(4,358)	$(3,983)	$(5,081)	$(5,611)	$(7,481)	$(5,406)	$(6,714)
Basic and diluted net loss per share	$(0.34)	$(0.29)	$(0.33)	$(0.36)	$(0.47)	$(0.34)	$(0.42)
Shares used in computing basic and diluted net loss per share	12,831,585	13,504,790	15,382,848	15,484,952	15,797,585	15,786,838	

16,114,024
</TABLE>

The balance sheet data excludes 3,114,744 shares of common stock reserved but unissued under our stock plans under which options to purchase an aggregate of 1,930,229 shares of common stock at an average exercise price of $13.29 per share were outstanding at September 30, 1999. In the "As Adjusted" column below, we have adjusted the balance sheet data to give effect to receipt of the net proceeds from the sale in this offering of 2,500,000 shares of common stock at an assumed public offering price of $ per share, after deducting the estimated underwriting discount and estimated offering expenses.

<TABLE>
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	SEPTEMBER 30, 1999	
	ACTUAL	AS ADJUSTED
	(IN THOUSANDS)	
<S>	<C>	<C>
BALANCE SHEET DATA:		
Cash, cash equivalents and marketable securities.....	$38,935	
Working capital.....	36,421	
Total assets.....	43,880	
Long-term obligations, less current portion.....	712	
Total stockholders' equity.....	38,855	

</TABLE>

RISK FACTORS

YOU SHOULD CAREFULLY CONSIDER THE RISKS DESCRIBED BELOW, TOGETHER WITH ALL OF THE OTHER INFORMATION INCLUDED IN THIS PROSPECTUS, 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 several years. For the period from our inception to September 30, 1999, we have incurred cumulative net losses totaling approximately $44.5 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 will 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 plan to seek additional funds through public and private stock offerings, arrangements with corporate partners, borrowings under lease lines of credit or other sources. If we cannot raise more money we will 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 will 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, and

- 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 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, and

- 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,

- diminish any competitive advantages that we attain, and

- 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 MAY NEGATIVELY IMPACT REGULATORY APPROVAL OR PUBLIC PERCEPTION OF OUR PRODUCTS.

The recent death of a patient undergoing a viral-based gene therapy has been widely publicized. This death and other adverse events in the field of gene therapy that may occur in the future could result in greater governmental regulation of our non-viral naked DNA technology and potential regulatory delays relating to the testing or approval of our potential products. For example, as a result of this death, the Recombinant DNA Advisory Committee of the NIH may become more active in reviewing the clinical trials or proposed clinical trials of all companies involved in gene therapy. It is uncertain what effect such increased scrutiny will have on our product development efforts or clinical trials.

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 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, and
- 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, and
- changes in estimates of our performance by securities analysts.

IF WE, OUR STRATEGIC PARTNERS OR OUR SUPPLIERS FAIL TO REMEDY YEAR 2000 ISSUES, OUR PRODUCT DEVELOPMENT PROGRAMS COULD BE INTERRUPTED AND OUR BUSINESS AND OPERATING RESULTS COULD BE HARMED.

If we, our strategic partners, or our suppliers of goods and services fail to remedy any Year 2000 issues, our business operations and development programs could be interrupted. If our strategic partners or suppliers fail to maintain systems it could cause us to incur significant

expenses to remedy any problems, or otherwise seriously damage our business. Any of the following events could affect our operations:

- if a strategic partner were unable to obtain our clinical materials or services,

- if a strategic partner were unable to manage its clinical trials or research and development activities,

- if a strategic partner were unable to pay any amounts owed to us, and

- if a supplier were unable to manufacture and ship materials to us or provide requested contract services.

We cannot predict whether an interruption is likely to occur, the duration of any interruption or the effect that an interruption would have on our future operations. We cannot guarantee that we will be able to identify and correct all Year 2000 problems on a timely basis. Similarly, we cannot guarantee that unknown or unanticipated Year 2000 issues will not arise. As a result, Year 2000 compliance efforts may involve significant time and expense and the occurrence of unknown, unanticipated or unremediated Year 2000 problems which could harm our business and operating results.

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.

FORWARD-LOOKING STATEMENTS

The statements incorporated by reference or contained in this prospectus 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 prospectus. 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 prospectus. 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 most recent Annual Report on Form 10-K,

- our Quarterly Reports on Form 10-Q,

- the risk factors contained in this prospectus 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.

USE OF PROCEEDS

The net proceeds to us from the sale of the 2,500,000 shares of common stock offered hereby are estimated to be $ assuming a public offering price of $ per share and after deducting the estimated underwriting discount and estimated offering expenses. The net proceeds to us would increase to $ if the underwriters exercise their over-allotment option in full.

We currently anticipate using substantially all of the net proceeds of this offering for research and development, including preclinical and clinical studies. The balance of the net proceeds will be used for general corporate purposes. The cost, timing and amount of funds required for such uses by us cannot be precisely determined at this time and will be based on competitive developments, the rate of our progress in research and development, the results of preclinical studies and clinical trials, the timing of regulatory approvals, payments under collaborative agreements and the availability of alternate methods of financing. Our board of directors has broad discretion in determining how the proceeds of this offering will be applied.

Proceeds may also be used to acquire businesses, technology or products that complement our business. No transactions of this type are being negotiated as of the date of this prospectus. Pending use, the net proceeds will be invested in investment grade, interest-bearing securities.

PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY

Our common stock is traded on the Nasdaq National Market, under the symbol "VICL." The following table sets forth, for the periods indicated, the high and low sale prices for the common stock as reported by Nasdaq.

<TABLE>
<CAPTION>

	HIGH	LOW
<S>	<C>	<C>
1998		
1st Quarter	$18.00	$12.00
2nd Quarter	19.00	14.00
3rd Quarter	17.88	7.19
4th Quarter	18.00	8.00
1999		
1st Quarter	$17.00	$10.00
2nd Quarter	13.50	9.13
3rd Quarter	16.66	10.88
4th Quarter	30.125	13.13
2000		
1st Quarter (through January 18, 2000)	$36.375	$25.750

</TABLE>

On January 18, 2000, the closing sale price of our common stock as reported by Nasdaq was $35.75 per share. As of September 30, 1999, there were approximately 554 holders of record of the common stock.

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain our earnings, if any, for research and development activities and, therefore, do not anticipate paying any cash dividends in the foreseeable future.

CAPITALIZATION

The following table sets forth our capitalization at September 30, 1999, and

as adjusted to give effect to our receipt of the net proceeds from the sale of 2,500,000 shares of common stock offered hereby:

<TABLE>
<CAPTION>

	SEPTEMBER 30, 1999	
	ACTUAL	AS ADJUSTED
	(IN THOUSANDS)	
<S>	<C>	<C>
Long-term obligations, less current portion.....	$ 712	$ 712
Stockholders' equity:		
Preferred stock, $0.01 par value; 5,000,000 authorized, none outstanding.....	--	--
Common stock, $0.01 par value; 40,000,000 authorized, 16,198,723 issued and outstanding, 18,698,723 issued and outstanding, as adjusted.....	162	187
Additional paid-in capital.....	83,259	
Accumulated other comprehensive loss.....	(116)	(116)
Accumulated deficit.....	(44,450)	(44,450)
Total stockholders' equity.....	38,855	
Total capitalization.....	$ 39,567	$

</TABLE>

- ------------------------

- See Note 5 of Notes to Audited Financial Statements and Note 4 of Notes to Interim Financial Statements for a description of our long-term obligations.

- The number of shares in the table above excludes 3,114,744 shares of common stock reserved but unissued under our stock plans under which options to purchase an aggregate of 1,930,229 shares of common stock were outstanding at September 30, 1999. See Note 6 of Notes to Audited Financial Statements.

SELECTED FINANCIAL DATA

The selected financial data set forth below with respect to our statements of operations for each of the years in the three-year period ended December 31, 1998, and with respect to the balance sheets at December 31, 1998 and 1997, are derived from the audited financial statements that have been examined by Arthur Andersen LLP, independent public accountants, which are included elsewhere in this prospectus and are qualified by reference to such financial statements. The selected financial data set forth below for the nine months ended September 30, 1999 and 1998, are derived from our unaudited financial statements included elsewhere in this prospectus, and in the opinion of management, includes all adjustments, consisting only of normal recurring adjustments, necessary for a fair presentation of the financial position and of the results of operations for such interim periods. Operating results for the nine months ended September 30, 1999, are not necessarily indicative of results for the full fiscal year or any future interim period. The statement of operations for the two years ended December 31, 1995, and the balance sheet data at December 31, 1996, 1995 and 1994, are derived from audited financial statements not included in this prospectus. The data set forth below should be read in conjunction with the financial statements and related notes included elsewhere in this prospectus and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

<TABLE>
<CAPTION>

	FISCAL YEAR ENDED DECEMBER 31,					NINE MONTHS ENDED SEPTEMBER 30,
	1994	1995	1996	1997	1998	1998	1999
(UNAUDITED)							
	(IN THOUSANDS, EXCEPT SHARE AND PER SHARE DATA)						
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
STATEMENT OF OPERATIONS DATA:							
Revenues:							
License/royalty revenue.....	$ 4,509	$ 5,402	$ 5,679	$ 6,477	$ 5,044	$ 4,617	$ 3,770

</TABLE>

Contract revenue.....	1,005	900	1,061	1,326	876	371	1,992
	5,514	6,302	6,740	7,803	5,920	4,988	5,762
Operating expenses:							
Research and development.....	8,336	8,997	11,318	11,936	12,054	9,311	10,866
General and administrative.....	2,615	2,902	3,168	3,733	3,650	2,836	3,201
Total operating expenses.....	10,951	11,899	14,486	15,669	15,704	12,147	14,067
Loss from operations.....	(5,437)	(5,597)	(7,746)	(7,866)	(9,784)	(7,159)	(8,305)
Interest income.....	1,159	1,687	2,773	2,447	2,465	1,879	1,688
Interest expense.....	80	73	108	192	162	126	97
Net loss.....	$ (4,358)	$ (3,983)	$ (5,081)	$ (5,611)	$ (7,481)	$ (5,406)	$ (6,714)
Basic and diluted net loss per share.....	$ (0.34)	$ (0.29)	$ (0.33)	$ (0.36)	$ (0.47)	$ (0.34)	$ (0.42)
Weighted average shares used in computing net loss per share.....	12,831,585	13,504,790	15,382,848	15,484,952	15,797,585	15,786,838	16,114,024

	DECEMBER 31,					SEPTEMBER 30,
	1994	1995	1996	1997	1998	1999
	(IN THOUSANDS)					(UNAUDITED)
BALANCE SHEET DATA:						
Cash, cash equivalents, and marketable securities.....	$27,339	$52,528	$46,846	$45,555	$40,184	$38,935
Working capital.....	25,956	51,541	46,315	44,856	38,398	36,421
Total assets.....	30,324	55,118	52,440	50,691	44,844	43,880
Long-term obligations, less current portion.....	527	339	1,617	1,232	801	712
Total stockholders' equity.....	27,852	53,264	48,365	47,194	40,824	38,855

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- The basic and diluted net loss per share numbers were computed on the basis described in Note 1 of Notes to Audited Financial Statements. We have never paid cash dividends on our common stock and do not anticipate paying any cash dividends in the foreseeable future.

- See Note 5 of Notes to Audited Financial Statements and Note 4 of Notes to Interim Financial Statements for a description of our long-term obligations.

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, LEUVECTIN and VAXID cancer product candidates internally, while developing vaccine product candidates for infectious diseases primarily in collaboration with corporate partners Merck, and Aventis Pasteur, formerly Pasteur Merieux Connaught. 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, formerly Rhone-Poulenc Rorer, to use our gene delivery technology to deliver neurological proteins for neurodegenerative 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.

To date, we have not received revenues from the sale of products. We expect to incur substantial operating losses for at least the next several years, due primarily to the expansion of our research and development programs and the cost of preclinical studies and clinical trials. As of September 30, 1999, our accumulated deficit was approximately $44.5 million.

RESULTS OF OPERATIONS

THREE MONTHS AND NINE MONTHS ENDED SEPTEMBER 30, 1999 AND 1998

Revenues of $1.2 million were recorded for the quarter ended September 30, 1999. License revenue primarily represented recognition of deferred license fees of $0.3 million from Merial, and royalty and other revenue of $0.2 million. Contract revenue recognized was $0.7 million, and was primarily from a contract with the Office of Naval Research for the development work on a potential naked DNA vaccine to prevent malaria. This multi-year grant could provide total funding of up to $2.7 million through 2000, of which $2.2 million was recognized as revenue through September 30, 1999.

We had revenues of $1.7 million for the quarter ended September 30, 1998. License revenue primarily consisted of a license fee of $1.1 million related to a license and option agreement with Boston Scientific for the development of vascular DNA therapeutics, recognition of deferred license fees of $0.3 million from the Merial license agreement and royalty revenue of $0.2 million. In addition, for the quarter ended September 30, 1998, we recognized net contract revenue of $0.2 million.

Revenues for the nine months ended September 30, 1999, were $5.8 million. In addition to the revenue recognized in the third quarter of 1999, revenue for the nine months ended September 30, 1999, also included $1.0 million of license fees and $1.2 million of equity premium pursuant to January 1999 agreements with Pfizer, recognition of deferred license fees of $0.5 million from Merial, royalty and other revenue of $0.6 million and contract revenue of $1.3 million primarily from the Office of Naval Research.

Revenues for the nine months ended September 30, 1998, were $5.0 million, and in addition to the revenue recognized in the third quarter of 1998, also included license payments of $2.2 million from Centocor under a license and option agreement and reimbursement of certain costs, recognition of deferred license fees from Aventis Pasteur and Merial and royalty revenue totaling $0.9 million, and $0.2 million of contract revenues, mostly from Aventis Pasteur.

Our total operating expenses for the quarter ended September 30, 1999, were $4.6 million compared with $4.0 million for the second quarter of 1998. Total operating expenses for the nine months ended September 30, 1999, were $14.1 million compared with $12.1 million for the same period in 1998.

Research and development expenses increased to $3.5 million for the three months ended September 30, 1999, from $3.2 million for the same period in 1998. For the nine months ended September 30, 1999, research and development expenses were $10.9 million compared with $9.3 million in the same period of 1998. The increase in research and development expenses for the three-month and nine-month periods was generally due to increased preclinical and clinical trial costs, and personnel-related costs. The increases for the three-month and nine-month periods ended September 30, 1999 were partially offset by lower license payments to third parties.

General and administrative expenses increased to $1.1 million for the three months ended September 30, 1999, from $0.9 million for the same period in 1998. General and administrative expenses for the nine months ended September 30, 1999, increased to $3.2 million from $2.8 million for the same period in 1998. The increase primarily is attributable to increased personnel costs.

Investment income for the three-month and nine-month periods ended September 30, 1999, was $0.5 million and $1.7 million, respectively. Investment income for the three-month and nine-month periods ended September 30, 1998, was $0.6 million and $1.9 million, respectively. The decreases primarily are a result of lower investment balances and lower rates of return on investments.

YEARS ENDED DECEMBER 31, 1998, 1997 AND 1996

We had revenues of $5.9 million for the year ended December 31, 1998, compared with $7.8 million in 1997 and $6.7 million in 1996. License revenues in 1998 consisted of $2.2 million from Centocor for an agreement covering technology for the potential treatment of some types of cancer, $1.1 million from an agreement with Boston Scientific 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, royalty revenues of $0.7 million and $0.2 million of other license revenue. Contract revenues in 1998 consisted principally of $0.7 million from an agreement with the Office of Naval Research for the development work on a potential DNA vaccine to prevent malaria. This agreement is a multi-year agreement which could provide up to an additional $2.0 million in revenues through 2000. Contract revenue in 1998 also included $0.2 million of reimbursements from Aventis Pasteur and other sources.

We had revenues of $7.8 million for the year ended December 31, 1997, compared with $6.7 million in 1996. Revenues in 1997 were composed of research and license revenue of $2.0 million from a 1997 Merck agreement covering certain growth factors; the equity premium of $1.0 million on the investment Merck made in 1997 in our common stock under an amendment to the 1991 collaborative agreement; $2.4 million for the Aventis Pasteur collaboration; $1.0 million for the 1997 collaborative agreement with Aventis Pharma for neurodegenerative disease targets; and other agreements which totaled $1.4 million. In November 1997, we amended our 1991 agreement with Merck and granted Merck rights to develop and market therapeutic vaccines against human immunodeficiency virus, HIV, and hepatitis B virus, HBV. Under the November 1997 amendment, Merck made an investment of $5.0 million for approximately 262,000 shares of our common stock. The price per share reflected a twenty-five percent premium over the trading price of the common stock. The premium on the investment was reflected in revenue in 1997. The Aventis Pasteur revenue represented contract revenue of $1.1 million as payment for clinical and preclinical work and license revenue of $1.3 million, of which $1.0 million was for a milestone payment for the start

of the malaria clinical trial and the balance was the recognition of deferred license fees. Revenues in 1996 resulted from research and license revenue from: the Aventis Pasteur collaboration in the amount of $2.7 million, the 1991 Merck agreement in the amount of $1.5 million, a collaboration with Genzyme Corporation in the amount of $1.3 million, and several other agreements in the amount of $1.2 million. Revenue from the Aventis Pasteur agreement in 1996 was primarily the result of Aventis Pasteur's payment of licensing and option fees, and the addition of a new option, as well as the payment of fees for our performance of clinical and preclinical work. The Merck revenue resulted from milestone payments due under the 1991 Merck agreement. The Genzyme collaboration income was the result of Genzyme exercising its option to license our technology for the treatment of cystic fibrosis as well as payments for our performance of research and preclinical work.

Research and development expense increased to $12.1 million in 1998 from $11.9 million in 1997 and $11.3 million in 1996. The increases in research and development expense were generally due to expansion of our research and development activities. The increase in 1998 principally was due to increased clinical trial costs and additional royalty expense for license agreements. The increase in expenses in 1997 compared to 1996 included increased clinical and preclinical efforts which resulted in increases to staffing, increased facilities-related costs and increased expenditures on laboratory supplies. Clinical trials expense increased to $1.9 million during 1998 from $1.6 million in 1997. This increase was due to the commencement of the Phase II and Phase III clinical trials of ALLOVECTIN-7 for melanoma. Clinical trials expense increased to $1.6 million during 1997 from $1.2 million in 1996 primarily due to the commencement of the malaria clinical trial and increased clinical trials activity on LEUVECTIN. During 1996, we incurred expenses of approximately $1.2 million with the commencement and progression of the multi-center Phase I/II and Phase II clinical trials of LEUVECTIN and ALLOVECTIN-7 respectively. Research and development expense is expected to increase in 1999 and thereafter as our preclinical and clinical trial activities increase.

General and administrative expense decreased to $3.6 million in 1998 from $3.7 million in 1997 due to lower insurance and facilities expenses. The increase to $3.7 million in 1997 from $3.2 million during 1996 was due primarily 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 $2.5 million in 1998 from $2.4 million in 1997 due to higher rates of return on investments. Interest income of $2.4 million during 1997 declined from the $2.8 million in 1996, due to lower investment balances as we redeemed investments to fund operating expenses. Interest expense decreased during 1998 due to lower capital lease obligations, lower balance of bank note payable and lower interest rates on the newer capital lease obligations. Interest expense increased in 1997 compared to the previous year due to increased capital lease obligations to finance equipment needs and the addition of a debt instrument in 1996.

YEAR 2000 ISSUES

The Year 2000 issue is the result of computer programs being written using two digits rather than four to define the applicable year. Any computer programs or hardware that have date-sensitive software or embedded chips may recognize a date using 00 as the year 1900 rather than the year 2000. This could result in system failures or miscalculations causing disruptions of operations for any company using such computer programs or hardware, including, among other things, a temporary inability to process data or engage in normal business activities. As a result, many companies' computer systems may need to be upgraded or replaced in order to avoid Year 2000 issues.

STATE OF READINESS

We have completed our assessment of any potential Year 2000 issues for our internal computer applications, including embedded control systems in equipment, to determine whether they will function for the Year 2000 and beyond and what modifications would be required to ensure their continuing functionality. We implemented a new financial and accounting system and related hardware to meet our growing needs into the near future. This new system is Year 2000 compliant. We performed backups of the existing and previous versions of the computer system so that in the event our new financial and accounting system and related hardware do not function properly we can continue to operate under the old system. Given the relatively small size of our systems and the predominantly new hardware, software and operating systems, we do not anticipate any significant Year 2000 problems.

We are unable to control whether systems operated by our strategic partners or our suppliers of goods and services are Year 2000 compliant. The failure of systems operated by our strategic partners or suppliers could cause us to incur significant expenses to remedy any problems, or otherwise seriously damage our business. We have communicated with strategic partners and suppliers to assess the risk of Year 2000 issues. Based on these results, we do not expect any material Year 2000 issues regarding our dealings with our strategic partners or suppliers. We do not believe that Year 2000 issues will have a material impact on our business, financial condition or results of operations.

BUDGET

Our costs for Year 2000 compliance have been immaterial.

REASONABLY LIKELY WORST CASE SCENARIO

If we, our strategic partners, or our suppliers of goods and services fail to remedy any Year 2000 issues, the reasonably likely worst case scenario would be the interruption of our product development programs, which could have a material adverse effect on our business, financial condition and results of operations. We are unable to estimate the duration and extent of any such interruption, or estimate the effect such interruption may have on our future results of operations. However, we believe that the impact of any Year 2000 issue on our product development programs will be limited to the collection or communication of new data. We do not expect that any historical data will be affected.

CONTINGENCY PLANS

We have adopted contingency measures to ensure the uninterrupted operation of our business, including:

- the maintenance of a Year 2000-compliant backup accounting system,

- tape backup and paper archive copies of critical data, and

- availability of information systems staff to correct any isolated problems on January 1, 2000.

Additionally, most of our computer systems will be shut down between December 31, 1999, and January 2, 2000. This will allow the information systems staff to immediately identify and address any issues during systems startup on January 3, 2000.

LIQUIDITY AND CAPITAL RESOURCES

Since our inception, we have financed our operations primarily through private placements of preferred and common stock, three public offerings of common stock and revenues from collaborative agreements. As of September 30, 1999, we had working capital of approximately $36.4 million compared with $38.4 million at December 31, 1998. Cash and marketable securities totaled approximately $38.9 million at September 30, 1999, compared with $40.2 million at December 31, 1998. In November 1999, we entered into an unsecured line of credit agreement with a bank to provide financing for leasehold improvements. Under the terms of the agreement, we may borrow up to $1.0 million through

May 1, 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 and scale-up, and commercialization activities and arrangements. We intend to seek additional funding through research and development relationships with suitable potential corporate collaborators or through public or private financing. Additional funding may not be available on favorable terms or at all.

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

BUSINESS

OVERVIEW

We 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 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, 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 persistent or recurrent cancer of the head and neck. Our second immunotherapy product candidate, LEUVECTIN, is in Phase II clinical trials for patients with advanced metastatic kidney cancer and for high-risk patients with locally confined prostate cancer. VAXID, a cancer vaccine intended to prevent recurrence of low-grade, non-Hodgkin's B-cell lymphoma, is in a Phase I/II clinical trial. We are supporting clinical testing of a cancer vaccine for the treatment of advanced metastatic melanoma in a collaboration with the National Cancer Institute, NCI.

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

- Merck and Co., Inc.,
- Two divisions of Aventis S.A., formerly Rhone-Poulenc S.A.,
  - Aventis Pasteur, formerly Pasteur Merieux Connaught,
  - Aventis Pharma, formerly Rhone-Poulenc Rorer Pharmaceuticals, Inc.,
- Pfizer Inc,
- Merial, the animal health joint venture between Merck and Rhone Merieux,
- Centocor, a wholly-owned subsidiary of Johnson & Johnson, and
- Boston Scientific Corporation.

HISTORICAL APPROACHES TO GENE DELIVERY

A typical living cell in the body contains thousands of different proteins essential to cellular structure, growth, and function. Proteins are produced by the cell according to a set of genetic instructions encoded by DNA, which contains all the information necessary to control the cell's biological processes.

DNA is organized into segments called genes, with each gene containing the information required to produce a specific protein. Production of the protein encoded by a particular gene is known as gene expression. The improper expression of even a single gene can severely alter a cell's normal function, frequently resulting in a disease. Gene delivery is an approach to the treatment and prevention of diseases in which genes are introduced into cells to direct the production of specific proteins which have a desired biological effect.

Historically, gene delivery 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 delivery 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 delivery 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 dramatic 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 that facilitate direct absorption of DNA into cells.

A narrow definition of "naked DNA" includes only pure plasmid DNA. A broader definition includes plasmid DNA formulated with agents such as lipids or polymers. 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 which 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 over a prolonged period of time, which may be more cost-effective than administering the protein itself.

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. The large and rapidly growing market for cancer products is poorly addressed by existing treatment alternatives. In addition, 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 driven by objective clinical data, potentially reducing marketing costs, and

- 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.

PRODUCT DEVELOPMENT

The following table summarizes the status of our independent and collaborative product development programs and identifies corporate partners where relevant.

In the table below:

- "Research" indicates research related to identification and synthesis of lead compounds.

- "Preclinical" indicates that a specific compound is undergoing toxicology testing and manufacturing scale-up, among other things, in preparation for filing an application for an Investigational New Drug, IND.

In Phase I, trials are conducted with a small number of healthy volunteers to determine the safety profile, the pattern of drug distribution and metabolism. 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 the case of products for life-threatening diseases, the initial human testing is generally done in patients rather than in healthy volunteers. Since these patients are already afflicted with the target disease, it is possible that these studies may provide results traditionally obtained in Phase II trials. Such trials are frequently referred to as "Phase I/II" trials. 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 and efficacy required by the FDA and other regulatory authorities.

<TABLE>
<CAPTION>

PROJECT	TARGET INDICATION(S)	DEVELOPMENT STATUS	DEVELOPMENT RIGHTS
<S>	<C>	<C>	<C>
CANCER			
ALLOVECTIN-7	Melanoma,	Phase III	Vical
	Head and neck cancer	Phase II	Vical
LEUVECTIN	Renal cell carcinoma	Phase II	Vical
	Prostate cancer	Phase II	Vical
VAXID	B-cell lymphoma	Phase I/II	Vical

gp100	Melanoma	Phase I/II	Vical/NCI
Therapeutic DNA vaccines	Various cancers	Preclinical/Phase I	Centocor
INFECTIOUS DISEASES			
Preventive DNA vaccines	Influenza	Phase I	Merck
	Malaria	Phase I	Aventis Pasteur, formerly Pasteur Merieux Connaught
	Hepatitis B, hepatitis C, human immunodeficiency virus, human papilloma virus, herpes simplex, tuberculosis	Research/preclinical	Merck
	Cytomegalovirus, HELICOBACTER PYLORI, Lyme disease, respiratory syncitial virus, varicella zoster	Research/preclinical	Aventis Pasteur, formerly Pasteur Merieux Connaught
Therapeutic DNA vaccines	Hepatitis B, human immunodeficiency virus, human papilloma virus	Research/preclinical	Merck
OTHER DISEASES			
Therapeutic protein DNA	Cardiovascular diseases	Research/preclinical	Merck
Therapeutic protein DNA	Neurodegenerative diseases	Research/preclinical	Aventis Pharma, formerly Rhone-Poulenc Rorer
Catheter-based DNA therapy	Cardiovascular diseases	Research/preclinical	Boston Scientific
VETERINARY			
Preventive DNA vaccines	Various	Research	Merial
Therapeutic protein DNA	Various	Research/preclinical	Pfizer

DNA THERAPEUTICS FOR CANCER

Cancer is a group of diseases in which certain cells grow uncontrolled by the body's normal self-regulatory mechanisms. Surgery is the most effective therapy for locally confined cancers. But surgery is not practical or curative for invasive or metastatic disease that has spread beyond a few locations. Radiation therapy can shrink or eliminate individual tumors, but cannot effectively treat widespread metastases. In addition, high doses of radiation can destroy the healthy underlying tissue. Chemotherapy seeks to control cancer by killing rapidly dividing cells. However, a number of non-malignant cells in the body, such as bone marrow cells, also rapidly divide and are highly susceptible to chemotherapy. Thus, doses sufficient to eradicate the cancer often cause life-threatening side effects. None of these conventional approaches can eliminate all cancer cells in advanced disease, so recurrence after treatment is common.

A therapeutic approach that selectively kills tumor cells would be far superior to currently available therapies. One approach would be to generate a specific immune response targeting cancer cells without damaging other normal tissues. It is generally believed that the immune system can selectively recognize cancer cells as abnormal and destroy them. However, the vast majority of cancers arise spontaneously in patients with an otherwise normal immune system. This observation suggests that cancer cells somehow escape the normal immune defense mechanisms or that the killer T-cell response produced by cancer patients is not powerful enough to kill all of the abnormal cells. A variety of methods can augment the immune response against tumor cells, including the systemic administration of natural immune-enhancing proteins such as interleukin-2, IL-2, and interferon-alpha either alone or in combination with other agents. These methods have shown encouraging results in some patients with some tumor types. However, systemic administration of these agents requires large and frequent doses that also cause serious side effects.

Our scientists are developing novel gene-based cancer immunotherapies to address the shortcomings of existing therapies. These immunotherapeutic product candidates are summarized below.

ALLOVECTIN-7

ALLOVECTIN-7 is a DNA/lipid complex containing the human gene encoding HLA-B7 antigen which is found infrequently in the human population. ALLOVECTIN-7 is designed to be injected directly into a tumor, where malignant cells absorb it and express the HLA-B7 antigen. This antigen alerts the immune system to the

presence of foreign tissue, inducing the type of powerful immune response seen in organ transplant rejection. In addition, 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 is currently in advanced clinical testing for patients with metastatic melanoma and for patients with persistent or recurrent tumors of the head and neck.

METASTATIC MELANOMA

Melanoma is a skin cancer found predominantly in Caucasians, particularly in fair-skinned individuals who have experienced repeated sunburn. According to American Cancer Society, ACS, statistics, 44,200 new cases of melanoma will be diagnosed in the U.S. and 7,300 patients will die from this disease in 1999. NCI estimates that about 480,000 Americans currently suffer from malignant melanoma. If detected when the disease is still limited to one site, known as stage I and II, melanoma usually can be treated successfully by surgery. If untreated, the disease frequently spreads to the lymph glands, lungs, liver, brain and other organs. Stage III is defined as metastatic disease limited to one region and is treated with a combination of surgery and chemotherapy. Stage IV disease involves advanced regional or any distant tumors and treatment normally includes

some combination of chemotherapy, radiotherapy, and surgery. The five-year survival of patients with stage III and stage IV disease is 59 percent and 12 percent, respectively. In patients whose disease continues to progress after they have received all available treatments, the average survival is seven to nine months.

We believe ALLOVECTIN-7 will provide an effective, well-tolerated alternative or supplement to available therapies. In multi-center Phase I/II and Phase II trials, ALLOVECTIN-7 was well-tolerated, and provided durable reductions in overall tumor burden or maintained stable disease in some patients. Combined results from three Phase I/II trials, summarized in May 1998 at the Annual Meeting of the American Society of Clinical Oncology, included seven out of 36 evaluable patients, or 19 percent, who had achieved clinical partial or complete responses with a duration of at least eight months. We believe results from two Phase II melanoma trials indicated the potential efficacy of ALLOVECTIN-7 in treating melanoma patients, and suggested a negative correlation between disease spread and such potential efficacy. Among the 50 evaluable patients with widespread advanced disease affecting multiple internal organs, combined results from the two Phase II trials included:

- two patients who had achieved a clinical response lasting two to 12 months and continuing at the time of the announcement, and

- ten patients who had achieved stable disease lasting two to 11 months and continuing at the time of the announcement.

In patients with soft-tissue metastases in lymph nodes, lungs or tissues located directly beneath the skin, combined Phase II results included four of 23 evaluable patients, or 17 percent, who had achieved clinical partial responses with an average duration of 11 months. We believe the latter results compare favorably to available clinical data on other FDA-approved biological agents such as interferon-alpha and interleukin-2.

Updated data from the Phase I/II and Phase II trials, were presented in December 1999 at the Eighth International Gene Therapy of Cancer Conference. Of 90 evaluable end-stage patients, 24, or 26 percent, demonstrated clinical benefit. Tumor regression was noted more often in patients with soft-tissue metastatic disease than in patients with multiple-internal organs affected. In the 32 patient soft-tissue subgroup 12 patients, or 37 percent, demonstrated clinical benefit. The median time to disease progression was 24 weeks in patients who responded to ALLOVECTIN-7, compared with nine weeks in all patients. The median length of survival was 99 weeks for responders compared with 38 weeks in all patients.

Side effects from ALLOVECTIN-7 were primarily mild with the most common complaint being temporary pain at the injection site. No serious side effects related to ALLOVECTIN-7 were reported in these trials.

This side-effect profile for ALLOVECTIN-7 compares favorably with available clinical data on other FDA-approved biological agents. Treatment with interferon-alpha or interleukin-2 frequently causes serious side effects requiring hospitalization, and occasionally causes life-threatening or fatal complications.

Based on this promising data, and following discussions with the FDA, we began registration trials in May 1998. These trials are ongoing in multiple centers across the United States. In our Phase II trial we are actively recruiting patients with soft-tissue metastatic melanoma who have exhausted conventional therapies. For our Phase III trial we are actively recruiting patients that have metastatic melanoma and who have not received chemotherapy. The objective of this trial is to compare treatment with dacarbazine, the only chemotherapeutic agent approved by the FDA for metastatic melanoma, to treatment

with a combination of dacarbazine plus ALLOVECTIN-7. Positive results from either or both of these trials could allow us to apply to the FDA for approval to market ALLOVECTIN-7. We announced in December 1999 that we would continue to recruit patients as

planned in our two ongoing registration trials with ALLOVECTIN-7 in patients with metastatic melanoma, based on the recommendations of an independent Drug Safety Review Board.

HEAD AND NECK CANCER

Head and neck cancer describes any of several types of localized tumors affecting the oral cavity, the pharynx or larynx. Head and neck cancers occur more frequently in men than in women, and most often in men over age 40. Risk factors vary with the particular location, but can include use of tobacco and excessive consumption of alcohol. The ACS estimates that, in 1999, 41,400 new cases of head and neck cancers will occur and that 12,300 individuals will die from this disease. NCI estimates that about 345,000 Americans currently suffer from head and neck cancer. Most head and neck cancers are treated by surgical removal and/or localized radiation therapy, with widely ranging degrees of success depending on the number of tumors, their size, and their specific location. In advanced disease, standard treatment may be preceded by systemic chemotherapy to improve outcomes, or followed by systemic chemotherapy to attack remaining cancer cells, most often with a combination of agents. The five-year survival rate for head and neck cancer patients, if treated, varies from more than 80 percent for localized, accessible disease to less than 20 percent for widespread malignancies not curable by surgery.

Treatment with ALLOVECTIN-7 in a Phase I/II and an early Phase II study yielded encouraging results, reported in May 1998 at the Annual Meeting of the American Society of Clinical Oncology, that included both partial and complete responses. Of the 11 patients treated in an investigator-sponsored Phase I/II clinical trial, four achieved complete or partial responses lasting at least five months. Preliminary results for 23 evaluable patients in a Vical-sponsored multi-center Phase II trial yielded one clinical complete response lasting four months and continuing, and 10 patients with stable disease after two to four months and continuing. A multi-center Phase II study is ongoing.

LEUVECTIN

LEUVECTIN is a DNA/lipid complex designed for direct injection into a tumor. LEUVECTIN contains the gene encoding IL-2. Systemic IL-2 protein therapy is the only FDA-approved treatment for metastatic kidney disease, but its administration is associated with serious toxicity in the majority of patients. The LEUVECTIN kidney cancer program seeks to match IL-2's efficacy without major adverse events. We expect that LEUVECTIN, when injected into tumors, will cause the malignant cells to produce IL-2. Local expression of IL-2 may stimulate the patient's immune system to attack and destroy the tumor cells. Because LEUVECTIN delivers IL-2 locally rather than throughout the body, it may provide efficacy comparable to the protein treatment with fewer side effects. LEUVECTIN is being tested in Phase II clinical trials for patients with kidney cancer and prostate cancer.

KIDNEY CANCER

The most common type of kidney cancer, renal cell carcinoma, occurs more frequently in males than in females, and predominantly in people over 35. The greatest single risk factor is cigarette smoking. Other risk factors include exposure to asbestos, cadmium, or gasoline, and the use of some former pain medications containing phenacetin. According to ACS statistics, 29,900 new cases of kidney cancer will be diagnosed in the U.S. and 11,600 patients will die from the disease in 1999. NCI estimates that about 200,000 Americans currently suffer from kidney cancer. Primary kidney cancer frequently spreads to adjacent tissues and ultimately to other internal organs, most often the lungs, bone, brain or liver. About 30 percent of patients have metastatic disease when first diagnosed. Treatment of regional metastatic kidney cancer involves surgical removal of the affected kidney and surrounding tissue, and frequently is combined with radiation therapy to alleviate pain. There are few treatment alternatives for metastatic kidney cancer and where surgery cannot be curative the five year survival rate is less than 10 percent.

Initial results from Phase I/II and Phase II testing in kidney cancer indicated that LEUVECTIN was well-tolerated and effective in delivering the IL-2 protein, with a favorable risk-benefit profile in these patients. A multi-center Phase II study initiated in May 1998 is ongoing. Initial results from the Phase II trial were reported in May 1999 at the Annual Meeting of the American Society of Clinical Oncology. Four of the 22 evaluable patients, or 18 percent, experienced significant tumor reductions of 25 percent or more, including one patient who experienced 90 percent and 100 percent reductions in two non-injected tumors. Twelve additional patients, or 55 percent, had stabilization of the injected tumor for six to 28 weeks and continuing at the time of the meeting. Six of the 22 patients, or 27 percent, experienced clinical stable disease for five to seven months and continuing at the time of the

meeting. Side effects from the LEUVECTIN treatment were primarily mild, with the most common complaint being flu-like symptoms of chills, low-grade fever, body aches and fatigue. The only serious side effects reported were two incidents of severe pain at the injection site. Both were resolved with pain medication during brief hospital stays.

PROSTATE CANCER

Prostate cancer is the most frequently diagnosed type of cancer and is the second leading cause of cancer fatalities among men in the United States. Men over age 65 account for over 75 percent of all diagnoses and African Americans are at significantly greater risk than Caucasians. According to ACS statistics, 179,300 new cases of prostate cancer will be diagnosed in the U.S. and 37,000 patients will die from this disease in 1999. NCI estimates that more than one million American men currently suffer from prostate cancer. Early detection is increasing the number of annual diagnoses and improving overall survival rates. All patients diagnosed while the disease is confined to the prostate gland have a five-year survival rate. If the disease is discovered after it spreads to connective tissue, lymph nodes, or other internal organs, survival rates decline. Treatment options include "watchful waiting" for older patients with no symptoms or with other more serious illnesses, radiation therapy or cryosurgery, and surgical removal of the prostate gland and/or affected lymph nodes. Symptoms may also be relieved by hormone therapy or surgery.

A Phase I/II pilot trial tested LEUVECTIN in patients with prostate cancer. The data indicated that the treatment was safe and well-tolerated, that it may stimulate an immune response against the disease, and that it may result in an increased time to disease progression. Results of the trial were presented in May 1999 at the Annual Meeting of the American Urological Association. In eight of 12 patients scheduled for surgery, pre-surgical serum PSA levels decreased significantly after treatment with LEUVECTIN. 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. In four of five patients receiving a second treatment course of LEUVECTIN, 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.

CANCER VACCINES

In collaboration with Stanford University Medical Center, we are developing a naked DNA vaccine, VAXID, against low-grade, non-Hodgkin's, B-cell lymphoma. Non-Hodgkin's B-cell lymphoma is a disease in which cells in the lymph nodes or other lymphatic tissue grow abnormally. Low-grade non-Hodgkin's B-cell lymphoma exhibits a slow growth rate and excellent initial response to current treatments. However, a regular pattern of relapse to a widespread, aggressive lymphoma occurs for which no curative therapy has been identified. According to ACS statistics, 56,800 new cases of B-cell lymphoma will be diagnosed in the U.S. and 25,700 patients will die from this disease in 1999. NCI estimates that about 300,000 Americans currently suffer from B-cell lymphoma.

VAXID contains a patient-specific gene encoding a characteristic molecule of cancerous B-cells. Preclinical studies showed that the injection into mice of a DNA vaccine that encoded 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 the relapse of disease. An initial Phase I/II study of VAXID is ongoing.

In collaboration with the NCI we are supporting the development of another 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 protein in combination with IL-2 protein therapy. These data indicated a 42 percent response rate in end-stage melanoma patients after treatment with systemic IL-2 and the gp100 protein. This study is being repeated with a gp100 naked DNA vaccine provided by us. We believe a DNA vaccine may be more generally applicable and may provide advantages in manufacturing and administration.

DNA VACCINES FOR INFECTIOUS DISEASES

According to the World Health Organization, infectious and parasitic diseases cause approximately one-third of all deaths worldwide, making it 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.

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

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.

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:

<TABLE>
<CAPTION>

<S>
- - hepatitis B virus, HBV,

- - hepatitis C virus, HCV,

- - human immunodeficiency virus, HIV,

- - human papilloma virus, HPV,

<C>
- herpes simplex virus, HSV,

- influenza virus, and

- tuberculosis, TB.

</TABLE>

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

In August 1999, Merck disclosed its plans to initiate a clinical trial with a naked DNA vaccine to prevent AIDS. This candidate vaccine product is being developed by Merck under the license agreement with us. 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.

AVENTIS PASTEUR, FORMERLY PASTEUR MERIEUX CONNAUGHT

We also have a license and option agreement with Aventis Pasteur, formerly Pasteur Merieux Connaught, for a total of six preventive vaccine targets:

<TABLE>
<CAPTION>

<S>
- - cytomegalovirus, CMV,

- - HELICOBACTER PYLORI,

- - Lyme disease,

<C>
- malaria,

- respiratory syncytial virus, RSV, and

- varicella zoster virus, VZV.

</TABLE>

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 an 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. As a result of these encouraging data, further clinical development is planned.

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.

In 1997, we licensed our patented naked DNA technology to Merck for the delivery of certain angiogenic growth factors that may be useful in cardiovascular applications such as coronary artery disease and peripheral vascular disease. Coronary artery disease, a narrowing of the blood vessels supplying the heart, can lead to severe chest pain and heart attack. Coronary artery disease is the single largest cause of death in the United States. Peripheral vascular disease affects the blood vessels in the limbs, most commonly narrowing of the blood vessels of the lower extremities for which therapy is very limited.

In 1998, we licensed our catheter-based intravascular gene delivery technology, with potential angiogenesis applications, to Boston Scientific.

We licensed our naked DNA gene delivery technology to Rhone-Poulenc Rorer, now 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.

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 Rhone Merieux. Merial has options to acquire exclusive licenses to our gene delivery technologies to develop and commercialize DNA-based vaccines to prevent infectious diseases in domesticated animals. Through September 30, 1999, we had received $3.2 million under this agreement. In December 1999, Merial paid us $1.6 million for the initial exercise of options under the agreement. If Merial exercises additional license options and markets these vaccines, cash payments and royalties on sales would be due to us.

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. Pfizer made an initial investment of $6.0 million in our common stock, paid an initial fee of $1.0 million, and agreed to fund our research totaling $1.5 million for the first three years of the collaboration. We may receive milestone payments and royalties if products are successfully developed under the agreement. In addition, we may manufacture products resulting from the collaboration for Pfizer.

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 35 patent applications in the United States and have made over 280 additional counterpart foreign filings in foreign countries relating to our technology. Our patent applications seek to cover naked DNA gene delivery for immunization and to deliver 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 and LEUVECTIN. 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 and LEUVECTIN.

- 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.

Two of our allowed U.S. patent applications and one U.S. patent application that we have licensed have been suspended from issuance by the United States Patent & Trademark Office pending possible interference proceedings with one or more parties unknown to us. The suspension may be lifted or the application(s) may be drawn into interference.

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 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.

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 also entered into an option and license agreement granting Merck the rights to use our naked DNA technology to deliver certain growth factors. The agreement resulted in an initial payment to us of $2.0 million. Merck has the right to terminate this agreement without cause on 90 days written notice.

In connection with these agreements, Merck has paid us $19.1 million as of September 30, 1999. 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. 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, FORMERLY PASTEUR MERIEUX CONNAUGHT. In September 1994, we entered into a research, option and license agreement with the vaccine manufacturer Pasteur Merieux Connaught, now Aventis Pasteur, granting Aventis Pasteur 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. 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. Through September 30, 1999, 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.

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 Rhone Merieux. 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. Through September 30, 1999, we had received $3.2 million under this agreement. In December 1999, Merial paid us $1.6 million for the initial exercise of options under the 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.

AVENTIS PHARMA, FORMERLY RHONE-POULENC RORER PHARMACEUTICALS, INC. In October 1997, we entered into an agreement with Rhone-Poulenc Rorer Pharmaceuticals, Inc., now Aventis Pharma, granting Aventis Pharma 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.

CENTOCOR, INC. In February 1998, we entered into an exclusive license and option agreement allowing Centocor, Inc., recently 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 and Pfizer 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."

RESEARCH INSTITUTIONS

OFFICE OF NAVAL RESEARCH. In September 1998, we entered into an agreement with the Office of Naval Research for the development work on a potential multi-gene DNA vaccine to prevent malaria. This agreement could provide total funding of up to $2.7 million through 2000, of which $2.2 million was recognized as revenue through September 30, 1999.

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, Maxim Pharmaceuticals, Inc. and Corixa Corp. 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 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.

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, and 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. 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 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 recombinant DNA molecules. These guidelines apply to all recombinant DNA research which is conducted at or supported by the NIH, including proposals to conduct clinical research involving DNA therapeutics. The NIH review of clinical trial proposals is a public process and usually 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 September 30, 1999, we had 108 full-time employees, 22 of whom hold degrees at the doctorate level. Of these employees, 80 are engaged in, or directly support, research and development activities, and 28 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 43,000 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 these three leases for an additional five-year period.

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.

MANAGEMENT

Our executive officers and directors are as follows:

NAME	AGE	POSITION
Alain B. Schreiber, M.D.	44	President, Chief Executive Officer and Director
Deirdre Y. Gillespie, M.D.	43	Executive Vice President and Chief Business Officer
Martha J. Demski	47	Vice President, Chief Financial Officer, Treasurer and Secretary
Jon A. Norman, Ph.D.	51	Vice President, Research
George J. Gray	53	Vice President, Operations
Robert H. Zaugg, Ph.D.	50	Vice President, Business Development
R. Gordon Douglas, Jr., M.D.(2)(4)	65	Chairman of the Board of Directors
M. Blake Ingle(1)(3)	57	Director
Patrick F. Latterell(1)(3)	41	Director
Gary A. Lyons(1)(3)	48	Director
Dale A. Smith(2)(4)	67	Director
Philip M. Young(2)(4)	59	Director

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

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

(3) Member of Stock Plan Committee of the Board of Directors.

(4) Member of the Nominating Committee of the Board of Directors.

ALAIN B. SCHREIBER, M.D., has been our President, Chief Executive Officer and a director since May 1992. Prior to joining us, Dr. Schreiber held various executive level positions at Rhone-Poulenc Rorer Inc. from July 1985 to April 1992, lastly as Senior Vice President of Discovery Research. From October 1982 to June 1985, Dr. Schreiber served as Biochemistry Department Head at Syntex Corp. Dr. Schreiber is a director of Spiros Development Corp. II Inc. and is also an appointed adviser for foreign trade of the Belgian Foreign Trade Counsel in the United States. He received his undergraduate degree and M.D. from the Free University of Brussels, after which he was awarded a fellowship in immunology at the Weizmann Institute.

DEIRDRE Y. GILLESPIE, M.D., joined us as Executive Vice President and Chief Business Officer in March 1998. 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.

ROBERT H. ZAUGG, PH.D., joined us in July 1991 as the Senior Director, Business Development and has served as the Vice President of Business Development since January 1994. Prior to joining us, Dr. Zaugg served as Director of Business Development & Licensing for Triton Biosciences from 1988 to 1991 and in various business development positions with Sandoz Pharmaceuticals Corporation from 1982 to 1988. He holds a B.A. from the University of California at Los Angeles, a Ph.D. in Biochemistry from Northwestern University and an M.B.A. from New York University. He was awarded a post-doctoral fellowship in immunology at the Massachusetts Institute of Technology.

R. GORDON DOUGLAS, JR., M.D., is Chairman of our Board of Directors and has been one of our directors since May 1999. Dr. Douglas retired in April 1999 from Merck & Co., Inc., where he had been President of Merck Vaccines since 1991, and a member of the Merck Management Committee. Prior to joining Merck in 1989, Dr. Douglas was a physician and academician. His teaching and administrative affiliations included Baylor College of Medicine, University of Rochester School of Medicine, and Cornell University Medical College. His medical practice included affiliations with The New York Hospital, Memorial Sloan-Kettering Cancer Center, The Rockefeller University Hospital and North Shore University Hospital. He has served as a visiting professor at a number of medical schools and as a consultant to several pharmaceutical and biomedical companies. Dr. Douglas is a graduate of Princeton University and Cornell University Medical College. He received his medical staff training at The New York Hospital and Johns Hopkins Hospital and is Board Certified in Internal Medicine. He is a member of the Institute of Medicine, the Association of American Physicians, the Infectious Diseases Society of America and numerous other organizations.

M. BLAKE INGLE, PH.D., has been one of our directors since June 1996. Dr. Ingle is a partner in Inglewood Ventures. From 1993 to 1996 Dr. Ingle was Chief Executive Officer of Canji Inc., a privately held gene therapy company acquired by Schering Plough in 1996, and he served from 1995 to 1996 as Acting Chief Executive Officer of Telios Pharmaceuticals, Inc., subsequently acquired by Integra Life Sciences. Dr. Ingle previously worked with Bayer. From 1980 to 1993, Dr. Ingle held a variety of positions with IMCERA Group, Inc., subsequently Mallinckrodt, Inc., including Chief Scientific Officer, Chief Financial Officer and President of its Pittman Moore division and most recently as President and Chief Executive Officer of IMCERA Group, Inc. Dr. Ingle also serves as a member of the Board of Directors of Corvas International, Inc., Inex Pharmaceuticals and Burnham Institute. He received his B.S. degree from Fort Lewis College and his M.S. and Ph.D. from Colorado State University.

PATRICK F. LATTERELL has been one of our directors since February 1992. He has been a General Partner with Venrock Associates since 1989. From 1985 to 1989, he was a General Partner at Rothschild Ventures Inc., "Rothschild," where he was responsible for Rothschild's healthcare ventures. Prior to joining Rothschild, Mr. Latterell was Manager of Corporate Development with Syntex Corporation from 1983 through 1985. Mr. Latterell currently serves as a director of several privately held biomedical companies. He received S.B. degrees in Biological Sciences and

Economics from the Massachusetts Institute of Technology and an M.B.A. from the Stanford University Graduate School of Business.

GARY A. LYONS has been one of our director since March 1997. He has been President, Chief Executive Officer and Director of Neurocrine Biosciences, Inc. since 1993. From 1983 to 1993, Mr. Lyons held various executive positions at Genentech, Inc., including Vice President of Business Development, Vice President of Sales, and Director of Sales and Marketing. From 1973 to 1983, Mr. Lyons worked with American Critical Care, serving as Director of Sales from 1980 to 1983. Mr. Lyons holds a B.A. in Marine Biology from the University of New Hampshire and an M.B.A. from Northwestern University, JL Kellogg Graduate School of Management.

DALE A. SMITH has been one of our directors since August 1995. From 1979 until his retirement in July 1995, Mr. Smith was Group Vice President of Baxter International Inc., where he was responsible for the biotechnology group and various corporate research groups including applied sciences, blood substitutes, venture technology and Baxter International Inc.'s European research center. Currently he serves as a business advisor to several companies and as a Board Member of Cerus Corporation. Mr. Smith holds a B.A. in Business Administration from the University of Washington, Seattle.

PHILIP M. YOUNG has been one of our directors since February 1992. He has been a general partner of U.S. Venture Partners, a venture capital firm, since April 1990. Mr. Young is a director of The Immune Response Corporation, Zoran Corporation, 3Dfx Interactive, Inc. and several privately held companies. He received a B.M.E. from Cornell University, an M.S. from George Washington

University and an M.B.A. from the Harvard Business School.

UNDERWRITING

Vical and the underwriters for the offering (the "Underwriters")named below have entered into an underwriting agreement with respect to the shares being offered. Subject to certain conditions, each underwriter has severally agreed to purchase the number of shares indicated in the following table. Goldman, Sachs & Co., FleetBoston Robertson Stephens Inc., SG Cowen Securities Corporation, and First Union Securities, Inc. are the representatives of the underwriters.

Underwriters	Number of Shares
Goldman, Sachs & Co.	
FleetBoston Robertson Stephens Inc.	
SG Cowen Securities Corporation	
First Union Securities, Inc.	
Total	2,500,000

If the underwriters sell more shares than the total number set forth in the table above, the underwriters have an option to buy up to an additional 375,000 shares from Vical to cover such sales. They may exercise that option for 30 days. If any shares are purchased pursuant to this option, the underwriters will severally purchase shares in approximately the same proportion as set forth in the table above.

The following table shows the per share and total underwriting discounts and commissions to be paid to the underwriters by Vical. Such amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase 375,000 additional shares.

Paid by Vical

	No Exercise	Full Exercise
Per Share	$	$
Total	$	$

Shares sold by the underwriters to the public will initially be offered at the initial price to public set forth on the cover of this prospectus. Any shares sold by the underwriters to securities dealers may be sold at a discount of up to $ per share from the initial price to public. Any such securities dealers may resell any shares purchased from the underwriters to certain other brokers or dealers at a discount of up to $ per share from the initial price to public. If all the shares are not sold at the initial price to public, the representatives may change the offering price and the other selling terms.

Vical has agreed with the underwriters not to dispose of or hedge any of Vical's common stock or securities convertible into or exchangeable for shares of common stock during the period from the date of this prospectus continuing through the date 90 days after the date of this prospectus, except with the prior written consent of the representatives. This agreement does not apply to any existing employee benefit plans.

In connection with the offering, the underwriters may purchase and sell shares of common stock in the open market. These transactions may include short sales, stabilizing transactions and purchases to cover positions created by short sales. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. Stabilizing transactions consist of certain bids or purchases made for the purpose of preventing or retarding a decline in the market price of the common stock while the offering is in progress.

The underwriters also may impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

These activities by the underwriters may stabilize, maintain or otherwise affect the market price of the common stock. As a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If these activities are commenced, they may be discontinued by the

underwriters at any time. These transactions may be effected in the over-the-counter market or otherwise.

Vical estimates that its share of the total expenses of the offering, excluding underwriting discounts and commissions, will be approximately $500,000.

Vical has agreed to indemnify the several underwriters against certain liabilities, including liabilities under the Securities Act of 1933.

LEGAL MATTERS

The validity of the common stock offered hereby will be passed upon for us by Pillsbury Madison & Sutro LLP, San Francisco, California. A member of Pillsbury Madison & Sutro LLP owns 12,755 shares of common stock. Cooley Godward LLP, San Diego, California, is acting as counsel for the underwriters in connection with certain legal matters relating to the sale of the common stock offered hereby.

EXPERTS

The audited financial statements included in this prospectus and elsewhere in the registration statement have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their report, with respect to such financial statements, and are included in this prospectus in reliance upon the authority of Arthur Andersen LLP as experts in accounting and auditing in giving said report.

The statements in this prospectus under the captions "Risk Factors--Our Patents and Proprietary Rights May Not Provide Us With Any Benefit and the Patents of Others May Prevent Us From Commercializing 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," and "Business--Intellectual Property," have been reviewed and approved by Sterne, Kessler, Goldstein & Fox P.L.L.C., (SKGF) patent counsel for Vical, as experts on such matters, and are included herein in reliance upon that review and approval with the exception that, because a number of matters were or are handled by different patent counsel, SKGF cannot confirm that Vical has filed or participated as licensee in the filing of more than 35 patent applications in the United States and more than 280 additional counterpart foreign filings in Foreign countries.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the reporting requirements of the Securities Exchange Act of 1934 and in accordance file annual and quarterly reports, proxy statements and other information with the Securities and Exchange Commission. These reports, proxy statements and other information may be inspected and copies of these materials may be obtained upon payment of fees at the public reference facilities maintained by the Commission at 450 Fifth Street, NW, Washington, D.C. 20549, as well as the regional offices of the Commission located at 500 West Madison Street, Chicago, Illinois, and Seven World Trade Center, New York, New York. You may obtain information on the operation of the public reference facilities by calling the Commission at 1-800-SEC-0330. In addition, we are required to file electronic versions of these materials with the Commission through the Commission's Electronic Data Gathering, Analysis and Retrieval (EDGAR) system. The Commission maintains a World Wide Web site at http://www/sec/gov that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Commission. Our common stock is quoted on the Nasdaq National Market, and reports and

other information concerning us may be inspected at the National Association of Securities Dealers, Inc. at 1725 K Street, NW, Washington, D.C. 20006-1500.

We have filed with the Commission a registration statement on Form S-3 under the Securities Act of 1933 with respect to the common stock offered in this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information with respect to us and our common stock, you should read the registration statement and its exhibits and schedules. Statements contained in this prospectus as to the contents of any contract or any other document are not necessarily complete and, in each instance, reference is made to the copy of such contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference. Copies of the registration statement, including all exhibits thereto, may be obtained from the Commission's principal office in Washington, D.C. upon the payment of the fees prescribed by the Commission, or may be examined without charge at the offices of the Commission described above. Copies of these materials may also be obtained from the EDGAR database.

INCORPORATION BY REFERENCE

The Commission allows us to incorporate by reference information into this

prospectus. This means we can disclose important information to you by referring you to another document filed separately with the Commission. The information incorporated by reference is deemed to be part of this prospectus, except for any information superseded by information contained directly in this prospectus. This prospectus incorporates by reference the documents set forth below that we have previously filed with the Commission. These documents contain important information about us and our financial condition.

The following documents previously filed with the Commission are hereby incorporated by reference into this prospectus:

- our Annual Report on Form 10-K for the year ended December 31, 1998 (File No. 0-21088),

- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 1999, June 30, 1999, and September 30, 1999,

- the description of our common stock contained in our registration statement on Form 8-A filed on January 8, 1993, and

- the description of the rights to purchase Series A Participating Preferred Stock $0.01 par value set forth in the registration statement on Form 8-A filed on March 23, 1995.

All documents filed by us pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act subsequent to the date of this prospectus and prior to the completion of the offering of the common stock will be deemed to be incorporated by reference into this prospectus and to be part of this prospectus from the date of filing of these documents.

Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus and the registration statement of which it is a part to the extent that a statement contained herein or in any other subsequently filed document which is also incorporated herein modifies or replaces such statement. Any statement so modified or superseded shall not be deemed, in its unmodified form, to constitute a part of this prospectus or such registration statement.

We will provide without charge to each person to whom a copy of the prospectus has been delivered, and who makes a written or oral request, a copy of any and all of the information that has been incorporated by reference in the registration statement (other than exhibits unless such exhibits are specifically incorporated by reference therein). Requests should be submitted in writing or by telephone to Investor Relations, Vical Incorporated, at our offices located at 9373 Towne Centre Drive, Suite 100, San Diego, CA 92121-3088, telephone (858) 646-1100.

VICAL INCORPORATED

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VICAL INCORPORATED

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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, 1998 and 1997, and the related statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 1998. 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 generally accepted auditing standards. 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, 1998 and 1997, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles.

ARTHUR ANDERSEN LLP

San Diego, California
February 8, 1999

VICAL INCORPORATED

BALANCE SHEETS

<TABLE>
<CAPTION>

	DECEMBER 31,	
	1998	1997
<S>	<C>	<C>
ASSETS		
Current Assets:		
Cash and cash equivalents (Note 2)	$ 13,567,817	$ 12,157,149
Marketable securities--available-for-sale (Note 2)	26,615,939	33,397,482
Receivables and other	1,432,711	1,566,532
Total current assets	41,616,467	47,121,163
Property and Equipment (Note 5):		
Equipment	5,139,944	4,966,955
Leasehold improvements	1,558,554	1,587,554
	6,698,498	6,554,509
Less--accumulated depreciation and amortization	(4,992,121)	(4,334,224)
	1,706,377	2,220,285
Patent costs, net of accumulated amortization of $126,638 and $74,063 (Note 1)	1,387,936	1,247,059
Other assets	133,385	102,500
	$ 44,844,165	$ 50,691,007
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts payable and accrued expenses (Note 4)	$ 2,281,252	$ 1,424,603
Current portion of capital lease obligations (Note 5)	473,466	448,261
Current portion of notes payable (Note 5)	213,773	213,773
Deferred revenue (Note 3)	250,000	178,261
Total current liabilities	3,218,491	2,264,898
Long-Term Obligations:		
Long-term obligations under capital leases (Note 5)	747,807	911,794
Notes payable (Note 5)	53,443	320,660
Total long-term obligations	801,250	1,232,454
Commitments (Note 5)		
Stockholders' Equity (Note 6):		
Preferred stock, $.01 par value--5,000,000 shares authorized--none outstanding	--	--
Common stock, $.01 par value--40,000,000 shares authorized--15,866,544 and 15,731,316 shares issued and outstanding in 1998 and 1997, respectively	158,665	157,313

Additional paid-in capital	78,332,483	77,267,971
Accumulated other comprehensive income (Note 2)	69,440	24,028
Accumulated deficit	(37,736,164)	(30,255,657)
Total stockholders' equity	40,824,424	47,193,655
	$ 44,844,165	$ 50,691,007

</TABLE>

See accompanying notes.

VICAL INCORPORATED
STATEMENTS OF OPERATIONS

<TABLE>
<CAPTION>

	YEAR ENDED DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
Revenues (Note 3):			
Contract revenue	$ 875,773	$ 1,325,925	$ 1,060,557
License/Royalty revenue	5,044,607	6,477,244	5,679,542
	5,920,380	7,803,169	6,740,099
Expenses:			
Research and development	12,054,367	11,936,068	11,317,908
General and administrative	3,649,841	3,733,290	3,168,331
	15,704,208	15,669,358	14,486,239
Loss from operations	(9,783,828)	(7,866,189)	(7,746,140)
Other income (expense):			
Interest income	2,465,545	2,447,139	2,772,845
Interest expense	(162,224)	(192,181)	(107,296)
Net loss	$(7,480,507)	$(5,611,231)	$(5,080,591)
Net loss per share (basic and diluted--Note 1)	$ (0.47)	$ (0.36)	$ (0.33)
Weighted average shares used in computing net loss per share	15,797,585	15,484,952	15,382,848

</TABLE>

See accompanying notes.

VICAL INCORPORATED

STATEMENTS OF STOCKHOLDERS' EQUITY

FOR THE THREE YEARS ENDED DECEMBER 31, 1998

<TABLE>
<CAPTION>

	COMMON STOCK		ADDITIONAL		ACCUMULATED OTHER	TOTAL
	SHARES	AMOUNT	PAID-IN CAPITAL	DEFERRED COMPENSATION	COMPREHENSIVE INCOME	ACCUMULATED DEFICIT	STOCKHOLDERS' EQUITY
<S>	<C>	<C>	<C>	<C>	<C>	<C>	<C>
BALANCE, December 31, 1995	15,364,265	$153,643	$72,728,484	$(158,427)	$ 104,176	$(19,563,835)	$53,264,041
Stock option exercises	32,317	323	175,988	--	--	--	176,311
Deferred compensation	--	--	--	158,427	--	--	158,427
Unrealized loss on marketable securities arising during holding							

period.....							
Reclassification of realized gain included in net loss.....							
Unrealized gain (loss) on marketable securities.....	--	--	--	--	(152,961)	--	(152,961)
Net loss.....	--	--	--	--	--	(5,080,591)	(5,080,591)
BALANCE, December 31, 1996.....	15,396,582	153,966	72,904,472	--	(48,785)	(24,644,426)	48,365,227
Issuance of common stock at $15.28 per share (Note 3).....	261,812	2,618	3,992,143	--	--	--	3,994,761
Stock option exercises.....	72,922	729	371,356	--	--	--	372,085
Unrealized gain on marketable securities arising during holding period.....							
Reclassification of realized loss included in net loss.....							
Unrealized gain (loss) on marketable securities.....	--	--	--	--	72,813	--	72,813
Net loss.....	--	--	--	--	--	(5,611,231)	(5,611,231)
BALANCE, December 31, 1997.....	15,731,316	157,313	77,267,971	--	24,028	(30,255,657)	47,193,655
Stock option exercises.....	135,228	1,352	1,064,512	--	--	--	1,065,864
Unrealized gain on marketable securities arising during holding period.....							
Reclassification of realized gain included in net loss.....							
Unrealized gain (loss) on marketable securities.....	--	--	--	--	45,412	--	45,412
Net loss.....	--	--	--	--	--	(7,480,507)	(7,480,507)
BALANCE, December 31, 1998.....	15,866,544	$158,665	$78,332,483	$ --	$ 69,440	$(37,736,164)	$40,824,424

<CAPTION>

	TOTAL COMPREHENSIVE LOSS
<S>	<C>
BALANCE, December 31, 1995.....	
Stock option exercises.....	
Deferred compensation.....	
Unrealized loss on marketable securities arising	

during holding period	$ (136,199)
Reclassification of realized gain included in net loss	(16,762)
Unrealized gain (loss) on marketable securities	(152,961)
Net loss	(5,080,591)
BALANCE, December 31, 1996	(5,223,552)
Issuance of common stock at $15.28 per share (Note 3)	
Stock option exercises	
Unrealized gain on marketable securities arising during holding period	87,763
Reclassification of realized loss included in net loss	(14,950)
Unrealized gain (loss) on marketable securities	72,813
Net loss	(5,611,231)
BALANCE, December 31, 1997	(5,538,418)
Stock option exercises	
Unrealized gain on marketable securities arising during holding period	57,041
Reclassification of realized gain included in net loss	(11,629)
Unrealized gain (loss) on marketable securities	45,412
Net loss	(7,480,507)
BALANCE, December 31, 1998	$(7,435,095)

</TABLE>

See accompanying notes.

VICAL INCORPORATED

STATEMENTS OF CASH FLOWS

<TABLE>
<CAPTION>

	YEAR ENDED DECEMBER 31,		
	1998	1997	1996
<S>	<C>	<C>	<C>
OPERATING ACTIVITIES:			
Net loss	$(7,480,507)	$(5,611,231)	$(5,080,591)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	920,695	939,956	620,033
Compensation expense related to stock purchases	--	--	158,427
Write-off of abandoned patent application costs	94,800	80,994	3,247
Changes in operating assets and liabilities:			
Receivables and other	133,821	359,463	(1,397,906)

Accounts payable and accrued expenses	856,649	614,219	282,087
Deferred revenue	71,739	(1,013,043)	512,137
Net cash used in operating activities	(5,402,803)	(4,629,642)	(4,902,566)
INVESTING ACTIVITIES:			
Marketable securities	6,826,955	912,645	10,963,363
Capital expenditures	(34,292)	(418,507)	(980,709)
Other assets	(1,885)	210,400	221,288
Patent expenditures	(288,252)	(280,778)	(269,682)
Net cash provided from investing activities	6,502,526	423,760	9,934,260
FINANCING ACTIVITIES:			
Principal payments under capital lease obligations	(487,702)	(506,205)	(414,176)
Proceeds from (payments on) notes payable	(267,217)	(106,887)	641,320
Issuance of common stock, net	1,065,864	4,366,846	176,311
Net cash provided from financing activities	310,945	3,753,754	403,455
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	1,410,668	(452,128)	5,435,149
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	12,157,149	12,609,277	7,174,128
CASH AND CASH EQUIVALENTS AT END OF YEAR	$13,567,817	$12,157,149	$12,609,277
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Interest Paid	$ 167,622	$ 184,191	$ 107,296
NONCASH INVESTING AND FINANCING ACTIVITIES:			
Equipment acquired under capital leases	$ 348,920	$ 434,416	$ 1,200,022

</TABLE>

See accompanying notes.

VICAL INCORPORATED

NOTES TO FINANCIAL STATEMENTS

DECEMBER 31, 1998

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 direct gene transfer and related technologies.

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 several 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 several 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 generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

PROPERTY AND EQUIPMENT

Equipment is stated at cost and depreciated over the estimated useful lives of the assets (3-5 years) using the straight-line method. Leasehold improvements are stated 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, commencing at the time the patents are issued. Costs related to patent applications are written off to expense at the time such costs are deemed to have no continuing value.

RESEARCH AND DEVELOPMENT COSTS

All research and development costs are expensed as incurred.

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

REVENUE UNDER COLLABORATIVE AGREEMENTS

Revenue under collaborative agreements is generally recognized over the term of the agreement or on the achievement of certain milestones. 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, 1998, has been computed using the weighted average number of shares of common stock outstanding during the periods pursuant to Statement of Financial Accounting Standards No. 128, "Earnings Per Share." Diluted loss per share does not include any stock options as the effect would be antidilutive. See Note 6 for information on the number of options outstanding and the weighted average exercise price at December 31, 1998, 1997 and 1996.

INCOME TAXES

The Company accounts for income taxes in accordance with Statement of Financial Accounting Standards No. 109 ("SFAS 109"), "Accounting for Income Taxes."

FAIR VALUE OF FINANCIAL INSTRUMENTS

The carrying amounts of financial instruments such as accounts receivable, 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 INCOME

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 income (loss) under the current rules, the Company was required to display the impact of any unrealized gain or loss on marketable securities as a component of comprehensive income and to display an amount representing total comprehensive income for each period presented. The Company has presented the required information in the Statements of Stockholders' Equity.

RECENT ACCOUNTING PRONOUNCEMENTS

In March 1998, the Accounting Standards Executive Committee issued AICPA Statement of Position 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use" ("SOP 98-1"). This statement provides guidance on accounting for the costs of computer software developed or obtained for internal use. The statement identifies characteristics of internal use software and assists in determining when computer software is for internal use. SOP 98-1 is

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (CONTINUED)

effective for fiscal years beginning after December 15, 1998, with earlier application permitted. The Company has not determined the impact of the adoption of SOP 98-1 as this is highly dependent upon the nature, timing and extent of future internal use software development.

The Company has adopted Statement of Financial Accounting Standards 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.

2. 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 at December 31, 1998 and 1997, consist primarily of $11,671,743 and $12,080,473, respectively, in commercial paper, federal agency discount notes and money market funds.

The Company has adopted Statement of Financial Accounting Standards No. 115 ("SFAS 115"), "Accounting for Certain Investments in Debt and Equity Securities," which requires that the Company's marketable securities be classified as available-for-sale and that unrealized holding gains or losses are recorded 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, 1998, 1997 and 1996.

At December 31, 1998, marketable securities consisted of the following:

<TABLE>
<CAPTION>

	AMORTIZED COST	MARKET VALUE	UNREALIZED GAIN
<S>	<C>	<C>	<C>
U.S. Government Obligations.....	$ 5,508,897	$ 5,529,915	$21,018
Commercial Paper.....	21,037,602	21,086,024	48,422
Total Marketable Securities.....	$26,546,499	$26,615,939	$69,440

</TABLE>

Approximately 60%, 36% and 4% of these securities mature within one, two and three years, respectively, of December 31, 1998.

At December 31, 1997, marketable securities consisted of the following:

<TABLE>
<CAPTION>

	AMORTIZED COST	MARKET VALUE	UNREALIZED GAIN
<S>	<C>	<C>	<C>
U.S. Government Obligations.....	$12,978,062	$12,982,090	$ 4,028
Commercial Paper.....	20,395,392	20,415,392	20,000
Total Marketable Securities.....	$33,373,454	$33,397,482	$24,028

</TABLE>

3. SIGNIFICANT CONTRACTS AND LICENSE AGREEMENTS

MERCK & CO., INC.

The Company has entered into three separate agreements 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 1996, the Company received a $1,000,000 payment from Merck upon the initiation of a Phase I clinical trial of an experimental DNA vaccine against influenza virus, one of the seven infectious disease targets covered by the agreement. Also in 1996, Vical accrued a $500,000 payment from Merck in conjunction with the issuance of the patent technology covering the agreement. The payment was subsequently received in 1997. 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 $5,000,000 for approximately 262,000 shares of the Company's common stock

including a twenty-five percent premium over the average per share closing price for the twenty trading days prior to the date of the agreement. The premium of $1,000,000 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. The agreement resulted in an initial payment to the Company of $2,000,000. Through December 31, 1998, the Company had received a total of $19,130,000 (including the payment for the investment for common stock) under these agreements of which $0, $3,000,000, and $1,500,000 was recognized as revenue in 1998, 1997, and 1996, respectively. All three agreements provide for the Company to receive additional payments based upon achievement of certain defined milestones and royalty payments based on net product sales.

PASTEUR MERIEUX CONNAUGHT

In September 1994, the Company entered into an agreement with Pasteur Merieux Connaught ("PMC") that includes a research collaboration and options for PMC to take exclusive licenses to Vical's naked DNA vaccine technology for each of five vaccine targets. In order to maintain the options, PMC will be required to pay Vical option fees as specified in the agreement. In addition, Vical was paid an annual research fee through September 1997 by PMC for expenses incurred in performing certain preclinical work as defined in the agreement. PMC renewed options and exercised an option in 1995. In 1996, PMC exercised three options, extended one option, and added a new option. In 1997, PMC paid the Company $1,000,000 as a milestone payment under the agreement because the Company and PMC began a Phase I clinical trial of an experimental vaccine against the parasite that causes malaria. The Company and PMC are sponsoring the trial which is being conducted by the U.S. Naval Medical Research Institute and the U.S. Army Medical Research Institute of Infectious Diseases. Through December 31, 1998, Vical has received $7,816,000 of which $239,000, $2,399,000, and $2,746,000, was recognized as revenue in 1998,

3. SIGNIFICANT CONTRACTS AND LICENSE AGREEMENTS (CONTINUED)
1997, and 1996, respectively. 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.

RHONE-POULENC RORER PHARMACEUTICALS, INC.

In October 1997, the Company and Rhone-Poulenc Rorer Pharmaceuticals. Inc. ("RPR") entered into an agreement granting RPR 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 $1,000,000 which was recognized as revenue in 1997. This agreement provides 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 $2,200,000, which was recognized as revenue in 1998. The payment represented an initial payment of $2,000,000 under the license agreement and reimbursement of $200,000 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 $1,100,000 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 for funding of up to $2,700,000 to develop a multi-gene

malaria DNA vaccine and test its ability to protect humans against malaria. The Company recognized $697,000 of contract revenue under this agreement in 1998.

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 $1,585,000, $1,404,000, and $2,494,000, was recognized as revenue during the years ended December 31, 1998, 1997, and 1996, respectively. Included in these amounts is revenue recognized for a corporate alliance

3. SIGNIFICANT CONTRACTS AND LICENSE AGREEMENTS (CONTINUED)
entered into in March 1995 relating to DNA vaccines in the animal health area with Merial (a joint venture between Merck and Rhone Merieux), a leading manufacturer and marketer of animal health products worldwide. The agreement includes options for Merial to take exclusive licenses to Vical's naked DNA vaccine technology and the cytofectin technology to develop and commercialize certain gene-based products for use in the prevention of infectious diseases in domesticated animals. In 1996, the agreement was extended to March 1998. In 1997, a patent milestone payment was made to the Company pursuant to the agreement. In 1998 a payment was made to the Company and the agreement was extended to March 1999. If Merial exercises its license options, cash payments and royalties on net sales would be due to the Company.

In 1996, the Company received $1,100,000 and recognized revenue of $1,300,000, under a 1993 agreement with Genzyme Corporation. This agreement was for the exercise of an option to obtain exclusive worldwide license rights related to the use of the Company's lipid technology in the treatment of cystic fibrosis. No cash was received and no revenue was recognized under this agreement in 1998 or 1997. Under a U.S. government agreement that commenced in the first quarter of 1996 and ended June 30, 1997, the Company and the Naval Medical Research Institute were awarded a grant that provided $1,000,000 to support further development of a malaria vaccine based on Vical's naked DNA vaccine technology. In December 1996, the Company also recognized $92,000 of revenue under an agreement which expired in December 1996 with Baxter International, Inc.

Under separate agreements, the Company is obligated to pay third parties 10 percent of certain payments received by the Company under the Merck, PMC, RPR, Merial, Centocor, Boston Scientific Corporation and Pfizer, Inc. (see "Note 10--Subsequent Event") agreements.

4. OTHER FINANCIAL DATA

Accounts payable and accrued expenses consisted of the following at December 31, 1998 and 1997:

<TABLE>
<CAPTION>

	1998	1997
<S>	<C>	<C>
Employee compensation	$ 692,716	$ 678,588
Accounts payable	768,796	327,617
Accrued clinical trials costs	492,914	310,891
Other accrued liabilities	326,826	107,507
	$2,281,252	$1,424,603

</TABLE>

5. 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. The equipment capital leases are secured by substantially all

equipment of the Company.

	OPERATING LEASES	CAPITAL LEASES
<S>	<C>	<C>
Years ended December 31,		
1999	$1,076,700	$ 566,014
2000	460,788	538,482
2001	116,241	186,781
2002	--	84,896
2003	--	--
Total minimum lease payments	$1,653,729	1,376,173
Less amount representing interest		(154,900)
Present value of capital lease payments		1,221,273
Less current portion		(473,466)
Long-term obligations under capital leases		$ 747,807

Rent expense for the years ended December 31, 1998, 1997, and 1996, was $998,195, $969,899, and $807,713, respectively.

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

	COST	ACCUMULATED DEPRECIATION	NET
<S>	<C>	<C>	<C>
December 31, 1998	$2,163,877	$1,109,781	$1,054,096
December 31, 1997	2,312,876	1,066,488	1,246,388

NOTES PAYABLE

The Company has a term loan which bears interest at the bank's prime rate (8.25% at December 31, 1998) plus .5%, or the Company may alternatively choose to have its borrowings bear interest at the LIBOR rate plus 3.25%. The term loan is secured by any Company deposits at the bank, however, the Company is not required to, and does not, maintain any deposits at the bank. The term loan has a fifteen-month remaining amortization period. At December 31, 1998, the loan balance was $267,216, including $213,773 reflected in current liabilities.

5. COMMITMENTS (CONTINUED)
RESEARCH AND LICENSE AGREEMENTS

In 1998 and 1997, 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 and future obligations on these agreements are not significant.

6. STOCKHOLDERS' EQUITY

PREFERRED STOCK

The Company's certificate of incorporation, as amended, authorizes the issuance of up to 5,000,000 preferred shares. No shares of preferred stock were outstanding at December 31, 1998 or 1997.

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 15,866,544, and 15,731,316 were outstanding at December 31, 1998 and 1997, respectively.

STOCK PLAN AND DIRECTORS OPTION PLAN

The Company has a stock plan ("Stock Incentive Plan of Vical Incorporated") under which 2,450,000 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% 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. The initial grant to a director of options under this plan generally vests 25% on the first anniversary of the date of grant, with the balance vesting quarterly over the remaining three years. In 1997, the stockholders approved an amendment to the Stock Incentive Plan of Vical Incorporated allowing non-employee directors to receive grants under that plan and, accordingly, it is not anticipated that there will be any future grants under the Directors Plan.

6. STOCKHOLDERS' EQUITY (CONTINUED)

The following table summarizes stock option transactions for the Company's stock option plans for the years ended December 31, 1998, 1997 and 1996:

<TABLE>
<CAPTION>

	SHARES	WEIGHTED AVE. EXERCISE PRICE	WEIGHTED AVE. FAIR VALUE OF GRANTS
<S>	<C>	<C>	<C>
OUTSTANDING, DECEMBER 31, 1995	749,912	$ 7.60	
Granted	456,350	$15.99	$11.95
Exercised	(32,317)	$ 5.48	
Forfeited	(14,264)	$10.97	
OUTSTANDING, DECEMBER 31, 1996	1,159,681	$10.92	
Granted	403,845	$14.14	$10.17
Exercised	(72,922)	$ 5.10	
Forfeited	(48,106)	$13.25	
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	

</TABLE>

The following table summarizes information about stock options outstanding under the Company's stock option plans at December 31, 1998:

<TABLE>
<CAPTION>

OPTIONS OUTSTANDING				OPTIONS EXERCISABLE	
RANGE OF EXERCISE PRICES	NUMBER OUTSTANDING AS OF 12/31/98	WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE	WEIGHTED AVERAGE EXERCISE PRICE	NUMBER EXERCISABLE AS OF 12/31/98	WEIGHTED AVERAGE EXERCISE PRICE
<S>	<C>	<C>	<C>	<C>	<C>
0$.1600 - $13.2500...	457,284	6.1	$ 7.50	376,850	$ 6.75
1$3.3750 - $15.0000..	455,050	7.8	$14.00	241,363	$13.82
1$5.1875 - $15.5000..	582,238	9.1	$15.36	96,838	$15.20
1$5.6250 - $20.5000..	320,473	8.5	$17.40	129,778	$18.39
0$.1600 - $20.5000...	1,815,045	7.9	$13.39	844,829	$11.53

</TABLE>

The number of shares and weighted average price of options exercisable at

December 31, 1998, 1997 and 1996 were 844,829 shares at $11.53, 688,126 shares at $9.90, and 487,750 shares at $6.82, respectively.

The Company has adopted the disclosure-only provisions of SFAS 123. Accordingly, no compensation cost has been recognized for the stock option plans. Had compensation cost for the Company's stock option plans been determined consistent with the provisions of SFAS 123, the

6. STOCKHOLDERS' EQUITY (CONTINUED)
Company's net loss and loss per share would have increased to the pro forma amounts indicated below:

<TABLE>
<CAPTION>

	1998	1997	1996
<S>	<C>	<C>	<C>
Net loss--as reported.....	$ 7,480,507	$5,611,231	$5,080,591
Net loss--pro forma.....	$11,645,607	$8,878,712	$6,497,447
Net loss per share--as reported.....	$ .47	$ .36	$ .33
Net loss per share--pro forma.....	$ .74	$ .57	$ .42

</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 5.09% (1998), 5.99% (1997) and 6.57% (1996) and, expected volatility of 71% (1998), 70% (1997) and 74% (1996). An expected option life of 5 years and a dividend rate of zero is assumed for all years presented.

Because SFAS 123 has not been applied to options granted prior to January 1, 1995, the resulting pro forma compensation cost may not be representative of that to be expected in future years.

7. RELATED PARTIES

Included in other assets at December 31, 1998 and 1997, 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 $60,000 and $25,000 at December 31, 1998 and 1997, respectively. The current portion, included in receivables and other, is $55,000 and $25,000 at December 31, 1998 and 1997, respectively.

8. INCOME TAXES

As of December 31, 1998, the Company has available net operating loss carryforwards of approximately $36,700,000 and research and development credit carryforwards of approximately $1,700,000 to reduce future federal income taxes, if any. These carryforwards expire through 2018 and are subject to review and possible adjustment by the Internal Revenue Service.

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%, as defined. The Company has completed numerous financings that have resulted in a change in ownership in excess of 50%, 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 $17,400,000 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.

9. EMPLOYEE BENEFIT PLANS

The Company has a 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 $95,000,

$94,000, and $78,000, in 1998, 1997, and 1996, respectively.

10. SUBSEQUENT EVENT

In January 1999, Pfizer Inc. entered into a license and option agreement and a stock purchase agreement with the Company. Under the terms of the agreements Pfizer Inc. paid the Company $1,000,000 in license fees and $6,000,000 for the purchase of approximately 318,000 shares of common stock at $18.87 per share, reflecting a 25% premium. The license fee and the $1,200,000 premium on the purchase of stock will be recognized as revenue in 1999, and the balance of the common stock investment, net of any cost to issue the shares of stock, will be reflected in common stock and additional paid-in capital in 1999.

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, 1998 and 1997 (in thousands, except per share amounts):

<TABLE>
<CAPTION>

	QUARTER ENDED			
	MARCH 31	JUNE 30	SEPTEMBER 30	DECEMBER 31
<S>	<C>	<C>	<C>	<C>
1998				
Revenues	$ 2,732	$ 560	$ 1,696	$ 932
Research and development costs	3,095	3,058	3,158	2,743
Total operating costs and expenses	4,062	4,072	4,012	3,558
Net loss	(721)	(2,935)	(1,750)	(2,075)
Net loss per common share (basic and diluted)	(.05)	(.19)	(.11)	(.13)
Shares used in per share calculation	15,753	15,789	15,817	15,892

<CAPTION>

	MARCH 31	JUNE 30	SEPTEMBER 30	DECEMBER 31
1997				
<S>	<C>	<C>	<C>	<C>
Revenues	$ 1,126	$ 867	$ 3,480	$ 2,330
Research and development costs	2,794	2,797	3,319	3,026
Total operating costs and expenses	3,691	3,678	4,247	4,054
Net loss	(2,002)	(2,267)	(225)	(1,117)
Net loss per common share (basic and diluted)	(.13)	(.15)	(.01)	(.07)
Shares used in per share calculation	15,423	15,448	15,458	15,609

</TABLE>

VICAL INCORPORATED

BALANCE SHEETS

<TABLE>
<CAPTION>

	SEPTEMBER 30, 1999	DECEMBER 31, 1998
	(UNAUDITED)	
<S>	<C>	<C>
ASSETS		
Current Assets:		
Cash and cash equivalents	$ 11,186,838	$ 13,567,817
Marketable securities--available-for-sale	27,748,337	26,615,939
Receivables and other	1,797,903	1,432,711
Total current assets	40,733,078	41,616,467
Property and Equipment:		
Equipment	5,468,711	5,139,944
Leasehold improvements	1,646,023	1,558,554
	7,114,734	6,698,498
Less--accumulated depreciation and amortization	(5,487,129)	(4,992,121)
	1,627,605	1,706,377
Patent costs, net of accumulated amortization	1,371,529	1,387,936
Other assets	147,377	133,385
Total Assets	$ 43,879,589	$ 44,844,165
LIABILITIES AND STOCKHOLDERS' EQUITY		
</TABLE>

Current Liabilities:		
Accounts payable and accrued expenses	$ 2,881,079	$ 2,281,252
Current portion of capital lease obligations	613,460	473,466
Current portion of notes payable	106,887	213,773
Deferred revenue	710,637	250,000
Total current liabilities	4,312,063	3,218,491
Long-Term Obligations:		
Long-term obligations under capital leases	712,360	747,807
Notes payable	--	53,443
Total long-term obligations	712,360	801,250
Stockholders' Equity:		
Preferred stock, $0.01 par value--5,000,000 shares authorized--none outstanding	--	--
Common stock, $0.01 par value--40,000,000 shares authorized--16,198,723 and 15,866,544 shares issued and outstanding at September 30, 1999 and December 31, 1998, respectively	161,987	158,665
Additional paid-in capital	83,259,509	78,332,483
Accumulated other comprehensive income (loss)	(116,123)	69,440
Accumulated deficit	(44,450,207)	(37,736,164)
Total stockholders' equity	38,855,166	40,824,424
Total Liabilities and Stockholders' Equity	$ 43,879,589	$ 44,844,165

</TABLE>

See accompanying notes.

VICAL INCORPORATED

STATEMENTS OF OPERATIONS

(UNAUDITED)

<TABLE>
<CAPTION>

	THREE MONTHS ENDED SEPTEMBER 30,		NINE MONTHS ENDED SEPTEMBER 30,	
	1999	1998	1999	1998
<S>	<C>	<C>	<C>	<C>
Revenues:				
License/royalty revenue	$ 495,024	$ 1,536,992	$ 3,770,731	$ 4,617,138
Contract revenue	733,817	158,834	1,991,750	370,694
	1,228,841	1,695,826	5,762,481	4,987,832
Expenses:				
Research and development	3,514,247	3,157,774	10,866,310	9,310,700
General and administrative	1,066,402	854,716	3,201,137	2,836,114
	4,580,649	4,012,490	14,067,447	12,146,814
Loss from operations	(3,351,808)	(2,316,664)	(8,304,966)	(7,158,982)
Interest income	548,490	607,846	1,687,750	1,879,342
Interest expense	33,489	41,057	96,827	126,051
Net loss	$(2,836,807)	$(1,749,875)	$(6,714,043)	$(5,405,691)
Net loss per share (basic and diluted--Note 2)	$ (0.18)	$ (0.11)	$ (0.42)	$ (0.34)
Weighted average shares used in computing net loss per share (Note 2)	16,196,078	15,817,412	16,114,024	15,786,838

</TABLE>

See accompanying notes.

VICAL INCORPORATED

STATEMENTS OF CASH FLOWS

(UNAUDITED)

<TABLE>

<CAPTION>

	NINE MONTHS ENDED SEPTEMBER 30,	
	1999	1998
<S>	<C>	<C>
OPERATING ACTIVITIES:		
Net loss	$(6,714,043)	$(5,405,691)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	795,742	694,653
Write-off of abandoned patent application costs	--	94,800
Change in operating assets and liabilities:		
Receivables and other	(365,192)	(769,729)
Accounts payable and accrued expenses	599,827	152,134
Deferred revenue	460,637	321,739
Net cash used in operating activities	(5,223,029)	(4,912,094)
INVESTING ACTIVITIES:		
Marketable securities	(1,317,960)	5,045,860
Capital expenditures	(182,509)	(25,388)
Deposits and other	15,008	(2,854)
Patent expenditures	(53,800)	(155,509)
Net cash provided from (used in) investment activities	(1,539,261)	4,862,109
FINANCING ACTIVITIES:		
Principal payments under capital lease obligations	(388,707)	(369,375)
Payments on notes payable	(160,329)	(213,773)
Issuance of common stock, net	4,930,347	888,378
Net cash provided from financing activities	4,381,311	305,230
Net increase (decrease) in cash and cash equivalents	(2,380,979)	255,245
Cash and cash equivalents at beginning of period	13,567,817	12,157,149
Cash and cash equivalents at end of period	$11,186,838	$12,412,394
Supplemental Disclosure of Non-Cash Investing and Financing Activities:		
Equipment acquired under capital leases	$ 493,254	$ 273,792

</TABLE>

See accompanying notes.

VICAL INCORPORATED

NOTES TO FINANCIAL STATEMENTS

SEPTEMBER 30, 1999

(UNAUDITED)

1. ORGANIZATION AND BASIS OF PRESENTATION

ORGANIZATION

Vical was incorporated in April 1987 and has devoted substantially all of its resources since that time to its research and development programs. The Company is currently focusing its resources on the development of its naked DNA and related technologies.

BASIS OF PRESENTATION

The information contained herein has been prepared in accordance with instructions for Form 10-Q. The information at September 30, 1999, and for the three-month and nine-month periods ended September 30, 1999 and 1998, is unaudited. In the opinion of management, the information reflects all adjustments necessary to present fairly the financial position and results of operations for the interim periods. All such adjustments are of a normal recurring nature. Interim results are not necessarily indicative of results for a full year. The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and

disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. For a presentation including all disclosures required by generally accepted accounting principles, these financial statements should be read in conjunction with the audited financial statements for the year ended December 31, 1998, included elsewhere in this prospectus.

2. NET LOSS PER SHARE

Net loss per share (basic and diluted) for the three-month and nine-month periods ended September 30, 1999 and 1998, has been computed using the weighted average number of common shares outstanding during the respective periods. Diluted loss per share does not include any assumed exercise of stock options as the effect would be antidilutive.

3. COMPREHENSIVE INCOME (LOSS)

Accumulated other comprehensive income (loss) represents unrealized gain or loss on marketable securities. For the three-month periods ended September 30, 1999 and 1998, other comprehensive income (loss) was ($23,641) and $148,889, respectively, and total comprehensive loss was $2,860,448 and $1,600,986, respectively. For the nine-month periods ended September 30, 1999 and 1998, other comprehensive income (loss) was ($185,563), and $129,433, respectively, and total comprehensive loss was $6,899,608 and $5,276,558, respectively.

4. COMMITMENTS

Vical renewed leases on three facilities. Two leases were scheduled to terminate on November 30, 1999, but will now both expire on December 1, 2004. Vical has the option to renew both leases for an additional five-year period. Under one lease, Vical increased its office space by approximately 5,100 square feet effective August 1, 1999. A third lease was amended in

4. COMMITMENTS (CONTINUED)
November 1999 and now extends to November 30, 2004. This lease can be extended for two additional five-year periods. Total leased space effective August 1, 1999, was approximately 43,000 square feet. Total monthly rental on all facilities, including common area maintenance costs, was approximately $107,000 effective August 1, 1999. Minimum lease payments for operating leases are as follows:

Years ending December 31,

<TABLE>
<S> <C>

1999	$1,208,000
2000	1,340,000
2001	1,384,000
2002	1,431,000
2003	1,479,000
2004	1,395,000
Total minimum lease payments for operating leases	$8,237,000

</TABLE>

5. SUBSEQUENT EVENTS

On November 3, 1999, Vical received a $2 million payment from Merck in accordance with a 1997 license agreement. The payment extends Merck's exclusive worldwide rights to use Vical's patented naked DNA technology to develop and market therapeutic vaccines against human immunodeficiency virus (HIV) and hepatitis B virus (HBV).

In November 1999, Vical entered into an unsecured line of credit agreement with a bank to provide financing for leasehold improvements. Under the terms of the agreement, Vical may borrow up to $1,000,000 through May 1, 2000. Interest is payable monthly for any borrowings beginning November 1, 1999. Commencing June 1, 2000, the outstanding principal and interest will be repaid in 42 equal monthly payments. Interest under this agreement is at the bank's reference rate minus .25 percentage points. The borrowings can be prepaid without penalty. The agreement contains certain financial covenants.

- ---

No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representations. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date.

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<TABLE>
<CAPTION>

</TABLE>

2,500,000 Shares
VICAL INCORPORATED
Common Stock

[LOGO]

GOLDMAN, SACHS & CO.
ROBERTSON STEPHENS
SG COWEN
FIRST UNION SECURITIES, INC.

Representatives of the Underwriters

- ---
- ---

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the various expenses in connection with the sale and distribution of the securities being registered hereby, other than underwriting discounts and commissions. All amounts are estimated except the Securities and Exchange Commission registration fee and the Nasdaq National Market listing fee.

<TABLE>
<CAPTION>

	AMOUNT
<S>	<C>
SEC registration fee	$ 28,463
NASD fee	6,440
Blue Sky fees and expenses	7,500
Accounting fees and expenses	75,000
Legal fees and expenses	100,000
Printing and engraving	250,000
Registrar and transfer agent's fees	10,000
NNM listing fee	17,500
Miscellaneous fees and expenses	5,097
Total	$500,000
</TABLE>

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</TABLE>

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 145 of the Delaware General Corporation Law (the "Delaware GCL") permits our board of directors to indemnify any person against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with any threatened, pending or completed action, suit or proceeding in which such person is made a party by reason of his or her being or having been a director, officer, employee or agent of ours, in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended (the "Act"). The Delaware GCL provides that indemnification pursuant to its provisions is not exclusive of other rights of indemnification to which a person may be entitled under any by-law, agreement, vote of stockholders or disinterested directors, or otherwise.

Article X of our Restated Certificate of Incorporation, as amended, and Article V of our Bylaws, provide for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by law.

As permitted by Sections 102 and 145 of the Delaware GCL, our Restated Certificate of Incorporation eliminates a director's personal liability for monetary damages to us and our stockholders arising from a breach or alleged breach of the director's fiduciary duty, except for liability under Section 174 of the Delaware GCL or liability for any breach of the director's duty of loyalty to us or our stockholders, for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law or for any transaction in which the director derived an improper personal benefit. In addition, we have entered into separate indemnification agreements with our directors and officers that will require us, among other things, to indemnify them against certain liabilities that may arise by reason of their status or service as directors or officers to the fullest extent not prohibited by law.

The Underwriting Agreement (Exhibit 1.1) provides for indemnification by the underwriters of us, our directors and officers, and by us of the underwriters, for certain liabilities arising under the Act and affords certain rights of contribution with respect thereto.

ITEM 16. EXHIBITS

<TABLE>
<CAPTION>

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
<C>	<S>
1.1(3)	Form of Underwriting Agreement.
4.1(1)	Specimen Common Stock Certificate.
4.2(2)	Rights Agreement dated as of March 20, 1995 between us and First Interstate Bank of California.
5.1(3)	Opinion of Pillsbury Madison & Sutro LLP.
23.1	Consent of Arthur Andersen LLP.
23.2(3)	Consent of Pillsbury Madison & Sutro LLP (included in its opinion filed as Exhibit 5.1 to this Registration Statement).
23.3	Consent of Sterne, Kessler, Goldstein & Fox P.L.L.C.
24.1(3)	Power of Attorney.

</TABLE>

- ------------------------

(1) Incorporated by reference to the exhibit of the same number included in our registration statement on Form S-3 filed as of August 15, 1995 (File No. 33-95812).

(2) Incorporated by reference to the exhibit of the same number in our Annual Report on Form 10-K for the fiscal year ended December 31, 1994 (File No. 0-21088).

(3) Previously filed.

ITEM 17. UNDERTAKINGS

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, (the "Act"), may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by us of expenses incurred or paid by a director, officer or controlling person of ours in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, we will, unless in the opinion of our counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by us is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

We hereby undertake:

(1) For purposes of determining any liability under the Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430(A) and contained in a form of prospectus filed by us pursuant to Rule 424(b) (1) or (4) or 497(h) under the Act shall be deemed to be part of this registration statement as of the time it was declared effective

(2) That, for the purpose of determining any liability under the Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, we certify that we have reasonable grounds to believe that we meet all of the requirements for filing on Form S-3, and have duly caused this amendment to registration statement to be signed on our behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, January 19, 2000.

<TABLE>
<S> <C> <C>

VICAL INCORPORATED

By /s/ MARTHA J. DEMSKI
Martha J. Demski
VICE PRESIDENT, CHIEF FINANCIAL OFFICER, SECRETARY AND TREASURER

</TABLE>

Pursuant to the requirements of the Securities Act of 1933, this amendment to registration statement has been signed by the following persons in the capacities and on the dates indicated:

<TABLE>
<CAPTION>

SIGNATURE	TITLE	DATE
<C>	<S>	<C>
* Alain B. Schreiber	President, Chief Executive Officer, and Director (Principal Executive Officer)	January 19, 2000
/s/ MARTHA J. DEMSKI Martha J. Demski	Vice President, Chief Financial Officer, Secretary and Treasurer (Principal Financial and Principal Accounting Officer)	January 19, 2000
* R. Gordon Douglas, Jr.	Chairman of the Board of Directors	January 19, 2000
* M. Blake Ingle	Director	January 19, 2000
* Patrick F. Latterell	Director	January 19, 2000
*	Director	

Gary A. Lyons		January 19, 2000

</TABLE>

<TABLE>
<CAPTION>

SIGNATURE	TITLE	DATE
<C>	<S>	<C>
*		
Dale A. Smith	Director	January 19, 2000
*		
Philip M. Young	Director	January 19, 2000

</TABLE>

<TABLE>
<S> <C> <C> <C>

*By: /s/ MARTHA J. DEMSKI

Martha J. Demski
ATTORNEY-IN-FACT

</TABLE>

EXHIBIT INDEX

<TABLE>
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(3) Previously filed.

EXHIBIT 23.1

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the use of our report, and to all references to our Firm, included in or made a part of this registration statement.

Arthur Andersen LLP

San Diego, California
January 19, 2000

EXHIBIT 23.3

CONSENT OF PATENT COUNSEL

We hereby consent to the use of our name under the caption "Experts" in this registration statement and prospectus included herein.

/s/ Sterne, Kessler, Goldstein & Fox P.L.L.C.

Washington, D.C.
January 19, 2000