Filed Pursuant to Rule 424(b)(4) Registration Statement No. 333-78065

PROSPECTUS		

3,100,000 Shares [VAXGEN LOGO]

Common Stock

VaxGen, Inc. is offering 3,100,000 shares of its common stock in an initial public offering. Prior to this offering, there has been no public market for VaxGen's common stock. The shares of VaxGen will be quoted on the Nasdaq National Market under the symbol "VXGN".

VaxGen is developing preventive vaccines for worldwide use against HIV. We are conducting two large-scale Phase III clinical trials, one in North America and one in Thailand.

Per

Share Total

VaxGen..... \$12.09 \$37,479,000

SEE "RISK FACTORS" ON PAGES 8 TO 12 FOR FACTORS THAT SHOULD BE CONSIDERED BEFORE INVESTING IN THE SHARES OF VAXGEN.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

The underwriters may, under certain circumstances, purchase up to 465,000 additional shares from VaxGen at the public offering price, less underwriting discounts and commissions. Delivery and payment for the shares will be on July 6, 1999.

PRUDENTIAL SECURITIES

PUNK, ZIEGEL & COMPANY

June 29, 1999

Inside Front Cover:

Introductory text: Preventing HIV infection with AIDSVAX

(AIDSVAX is still in the development stage and has not yet obtained FDA approval) $\,$

Graphics on blue background depicting:

(1) gp120 molecule, arrow pointing to gp120

TEXT: HIV virus, gp120

(2) creation of synthetic gp120

TEXT: Synthetic gp120 created by genetic engineering

(3) Injection of AIDSVAX in arm of vaccinee

TEXT: AIDSVAX vaccine, AIDSVAX induces antibodies in blood

(4) binding of antibodies to gp120

TEXT: Protection, Antibodies to gp120 block HIV infection

DESCRIPTION OF ARTWORK

INSIDE BACK COVER:

 $\hbox{Graphic depicting: Colored map of the world on blue background with vertical bars indicating number of people living with {\tt HIV/AIDS.}$

TEXT: People Living with HIV/AIDS

890,000
330,000
1,400,000
210,000
500,000
22,500,000
6,700,000
270,000
560,000
12,000

Source: UNAIDS, AIDS Epidemic Update, Dec. 1998

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AIDSVAX(R) is a registered trademark of VaxGen. Our web site address is www.vaxgen.com. Information contained on our web site is not a part of this prospectus.

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the front cover of this prospectus.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. Investors should read the entire prospectus carefully.

VAXGEN

We are developing preventive vaccines for worldwide use against HIV. We are conducting two large-scale Phase III clinical trials of our AIDSVAX vaccines, one principally in North America and one in Thailand. To date, we are the only company to advance an HIV vaccine into Phase III clinical trials. If the Phase III clinical trials are successful, we will apply to the United States Food and Drug Administration and foreign regulatory authorities for licenses to manufacture and sell AIDSVAX in the United States and abroad.

Initial development of AIDSVAX was funded by Genentech at a cost of over \$50 million during a period of nearly ten years. We were formed in November 1995 to complete the development of, and commercialize, AIDSVAX in partnership with Genentech. Genentech licensed to us the technology necessary for development and commercialization of AIDSVAX.

The HIV/AIDS Epidemic

HIV/AIDS is one of the largest epidemics in human history. According to the World Health Organization and UNAIDS:

- in just two decades, over 47 million people have been infected with HIV worldwide;
- 14 million lives have been claimed by AIDS;
- each day approximately 16,000 individuals become infected with HIV; and
- AIDS is the fourth leading cause of death worldwide, now exceeding cancer.

We believe that, because of the magnitude and severity of the epidemic, an HIV vaccine would have one of the largest population-based markets in the history of modern medicine.

Our Vaccines

Our vaccines are designed to prevent infection by HIV, rather than treat established infection. Because AIDSVAX contains synthetic copies of proteins from the surface of HIV, it is incapable of causing HIV infection. Humans vaccinated with AIDSVAX form antibodies against HIV which, in laboratory tests, bind to the virus and neutralize its infectivity. Vaccination with AIDSVAX also stimulates immune memory, training the immune system to mobilize rapidly in the event of future exposure to HIV.

We believe that AIDSVAX will be successful for the following reasons:

- EFFICACY: In Phase II clinical trials, all human volunteers vaccinated with AIDSVAX developed neutralizing antibodies to HIV. In chimpanzees, vaccination with AIDSVAX protected chimps against infection upon subsequent injection with infectious HIV. The level of neutralizing antibodies in humans vaccinated with AIDSVAX equaled or exceeded that observed in vaccinated chimps.
- SAFETY: In Phase I/II clinical trials, none of the 2,000 human volunteers vaccinated with AIDSVAX had serious side effects.
- HIV COVERAGE: AIDSVAX is designed to neutralize the majority of HIV subtypes and strains encountered during natural infection in the regions where we are conducting Phase III clinical trials.
- BROAD USE: AIDSVAX has no clinical impact on people previously infected with HIV. We believe, therefore, that AIDSVAX will be used without requiring the prescreening of recipients. This is particularly advantageous in populations where there is a high rate of HIV-infected people.
- MANUFACTURING: Genentech has manufactured AIDSVAX in commercial quantities.

 VACCINE RATIONALE: The design of AIDSVAX follows that of previous successful vaccines, such as hepatitis B vaccine. The blocking of HIV infection by neutralizing antibody conforms with generally accepted principles of vaccinology.

Our Clinical Trials

We are conducting Phase III clinical trials of AIDSVAX to determine whether AIDSVAX protects humans from HIV infection by sexual transmission or injection drug use. Phase III clinical trials are large-scale trials to test for efficacy and further safety. The North American Phase III trial is designed for 5,400 volunteers. It is being conducted in 56 clinics across the United States. It is also being tested in one clinic in Puerto Rico, one clinic in Canada and one clinic in The Netherlands. In Thailand, the Phase III clinical trial is designed for 2,500 volunteers and is being conducted in 17 clinical sites in Bangkok.

To gain regulatory approval for AIDSVAX, we believe the vaccine must demonstrate, at statistical significance, efficacy of at least 30%. This is based on meetings and documented discussions we have had with the FDA and its Vaccines and Related Biological Products Advisory Committee.

Our clinical protocol provides for two opportunities to measure efficacy:

- An independent monitoring board will conduct an interim analysis approximately midway through the observation period of each clinical trial. Should AIDSVAX demonstrate 30% efficacy, the independent monitoring board will recommend termination of, and we will terminate, the trial and we will submit an application for regulatory approval.
- If 30% efficacy has not been shown by the time of the interim analysis, we will have a second opportunity to determine the vaccine's efficacy at the completion of the trial.

Under the current timetable, the interim analysis for each clinical trial will be conducted in the second half of 2001.

Our Strategic Relationships

We intend to use Genentech as our partner to manufacture and distribute AIDSVAX. Genentech has exclusive options to manufacture and market AIDSVAX on specified financial terms. If Genentech does not exercise its options, we have the right to pursue third party arrangements, with Genentech providing the transfer of technology necessary to manufacture AIDSVAX.

We will work with two federal agencies in relation to our North American Phase III trial: the Centers for Disease Control and Prevention and the National Institute for Allergy and Infectious Diseases. The Centers for Disease Control and Prevention have proposed to co-sponsor the Phase III trial and to fund \$8.0 million over a period of four years. The National Institute for Allergy and Infectious Diseases is working with us on a \$4.6 million program related to the Phase III clinical trial. The purpose of this program is to obtain and store specimens for studies on the immune system.

We also intend to work selectively with other companies that are developing vaccines for HIV. For example, we are working with Pasteur Merieux Connaught to co-develop an alternative HIV vaccine. This vaccine will combine technologies and components provided by Pasteur Merieux Connaught and us. We anticipate that such a combination vaccine could enter Phase III clinical trials by 2001.

We believe we have a strong competitive lead in the development of an HIV vaccine. We are the only company worldwide with Phase III clinical trials of an HIV vaccine underway. In addition to having the advantage of lead-time, we also have an exclusive license from Genentech to a portfolio of U.S. and foreign patents on AIDSVAX and associated technology, consisting of 88 issued patents and 47 pending patent applications.

Our Management Team

Our management team, together with Genentech, has extensive experience in the international arena of HIV research, public health policy, and the practical aspects of developing, manufacturing and marketing biological products. Our President is Donald Francis, M.D. During his 20-year tenure at the Centers for Disease Control, he was involved in the control or eradication of several epidemics, including a major epidemic of cholera in Africa, smallpox in India and the first known outbreak of the Ebola virus. He subsequently was the lead clinician for the Phase III trial of the hepatitis B vaccine. Our Chairman of the Board and Chief Executive Officer is Robert Nowinski, Ph.D. Dr. Nowinski is a pioneering executive in the biotechnology industry, having founded three publicly-traded biotechnology companies: Genetic Systems

Corporation in 1981, ICOS Corporation in 1989, and PathoGenesis Corporation in 1991. Our Senior Vice President, Research & Development is Phillip Berman, Ph.D., who is an inventor of AIDSVAX and a former senior scientist at Genentech.

VaxGen, Inc. was incorporated in Delaware in November 1995. Our principal executive offices are located at 1000 Marina Boulevard, Suite 200, Brisbane, CA 94005, and our telephone number is (650) 624-1000.

THE OFFERING

(1) Reflects a one-for-two reverse stock split effective on April 9, 1999, and does not include: (a) 1,159,171 shares of common stock issuable on exercise of stock options outstanding at May 31, 1999 at a weighted average exercise price of \$8.60 per share; (b) 593,650 shares of common stock reserved for future issuance under our 1996 stock option plan; (c) 28,929 shares of common stock reserved for future issuance under our 1998 Director Stock Option Plan; (d) 459,825 shares of common stock issuable on exercise of warrants at May 31, 1999 at a weighted average exercise price of \$7.49 per share; and (e) exercise of the underwriters' over-allotment option.

SUMMARY FINANCIAL INFORMATION

The following tables reflect selected financial information since inception. The "as adjusted" column of the balance sheet data reflects the estimated net proceeds from the sale of 3,100,000 shares of common stock to be sold in this offering at an initial public offering price of \$13.00 per share.

	PERIOD FROM NOVEMBER 27, 1995 (INCEPTION) TO	I	YEAR ENDED DECEMBER 31,			THREE MONTHS ENDED MARCH 31,	
	DECEMBER 31, 1995		1997		1998	1999	
	(IN	THOUSANDS	S, EXCEPT E	PER SHARE DA	ATA)		
STATEMENT OF OPERATIONS DATA:							
Loss from operations	\$(30)	\$(2,054)	\$(3,946)	\$(10,176)	\$(1,163)	\$(4,044)	
Net loss	\$(30)	\$(2,082)	\$(3,060)	\$ (9,163)	\$ (857)	\$(3,760)	
	====	======	======	======	======	======	
Net loss per share basic							
and diluted	\$	\$ (1.90)	\$ (0.60)	\$ (1.48)	\$ (0.14)	\$ (0.49)	
	====	======	======	======	======	======	
Weighted average shares outstanding basic and							
diluted		1,093	5,096	6,185	6,066	7,619	

AT	AT MAR	RCH 31, 1999
DECEMBER 31,		
1998	ACTUAL	AS ADJUSTED(1)
	(IN THOUSANDS	3)

BALANCE SHEET DATA:			
Cash, cash equivalents and investment securities	\$19,468	\$20,607	\$57,086
Working capital	17,866	19,318	55,797
Total assets	21,472	22,693	59,172
Stockholders' equity	19,398	20,896	57,375

RISK FACTORS

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You should carefully consider the following risk factors, in addition to the other information set forth in this prospectus, before purchasing shares of common stock of VaxGen. Each of these risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our common stock.

IF WE ARE UNABLE TO COMMERCIALIZE OUR SOLE PRODUCT CANDIDATE, AIDSVAX, WE MAY NOT HAVE REVENUES TO CONTINUE OPERATIONS. AIDSVAX is our only product candidate. We do not know whether the current or planned formulations of AIDSVAX will be effective in preventing HIV infection. The overall scientific knowledge of HIV is limited. Although our research has indicated that AIDSVAX contains a protein that is critical in the infection process, other proteins may be necessary to develop an effective vaccine.

Our success will depend entirely on the success of AIDSVAX. In particular, we must be able to:

- establish the safety, purity and potency of AIDSVAX in humans;
- obtain regulatory approvals for AIDSVAX, including a preapproval inspection of the manufacturing facility; and
- successfully commercialize AIDSVAX through collaborative relationships.

If we are unable to commercialize AIDSVAX, we do not have other products from which to derive revenue.

IF WE ARE NOT ABLE TO DEMONSTRATE THE EFFICACY OF AIDSVAX IN OUR CLINICAL TRIALS OR OUR CLINICAL TRIALS ARE DELAYED, WE MAY NOT BE ABLE TO OBTAIN REGULATORY CLEARANCE TO MARKET AIDSVAX IN THE UNITED STATES OR ABROAD ON A TIMELY BASIS, OR AT ALL. Clinical testing is a long, expensive and uncertain process. We cannot assure you that the data collected from our clinical trials will be sufficient to support approval of AIDSVAX by the FDA or any foreign regulatory authorities, that the clinical trials will be completed on schedule or, even if the clinical trials are successfully completed and on schedule, that the FDA or any foreign regulatory authorities will ultimately approve AIDSVAX for commercial sale.

To gain FDA regulatory approval for the sale of AIDSVAX in the United States, we believe, based on discussions with the FDA and the vote of its Vaccine and Related Biological Products Advisory Committee, that we will need to demonstrate that the AIDSVAX vaccine reduces the level of HIV infection by at least 30% at a statistically significant level. These discussions and the vote of the Vaccine and Related Biological Products Advisory Committee, however, are not binding on the FDA. In the context of our United States clinical trial, which represents a small sampling from the entire population, this means that in order to establish 30% efficacy at a statistically significant level there must be an observed reduction in the incidence of HIV in the group receiving the vaccine compared to the control group of between 45% to 65%, or possibly a higher percentage, depending on various factors that will have a bearing on the statistical significance of the clinical trial results. These factors include the number of patients ultimately enrolled in the study, the rate of HIV infection in the control group and the length of time associated with the clinical observation period. We anticipate that the efficacy required to obtain regulatory approval to market AIDSVAX in foreign countries will vary from one country to another and may differ significantly from that required by the FDA. We cannot assure you that the data collected from our United States or Thai clinical studies will demonstrate the required level of efficacy to permit the commercialization of AIDSVAX in the Unites States, in Thailand or in any other foreign country.

Our trials could be delayed for a variety of reasons, including:

- delays in enrolling volunteers;
- lower than anticipated retention rate of volunteers in the trial; or
- serious adverse events related to the vaccine.

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Results of previous animal trials may not be relevant for determining the protective effect of AIDSVAX against HIV infection in humans. Preclinical and clinical data can be interpreted in different ways, which could delay, limit or prevent regulatory approval. Serious adverse events related to the vaccine during our Phase III clinical trials could cause the trials to be prematurely terminated. Negative or inconclusive results could cause the trials to be unacceptable for submission to regulatory authorities.

IF WE FAIL TO COMPLY WITH EXTENSIVE REGULATIONS ENFORCED BY DOMESTIC AND FOREIGN REGULATORY AUTHORITIES, THE COMMERCIALIZATION OF AIDSVAX COULD BE PREVENTED OR DELAYED. AIDSVAX is subject to extensive government regulations related to development, clinical trials, manufacturing and commercialization. The process of obtaining FDA and other regulatory approvals is costly, time consuming, uncertain and subject to unanticipated delays.

The FDA may refuse to approve an application if it believes that applicable regulatory criteria are not satisfied. The FDA may also require additional testing for safety and efficacy. Moreover, if regulatory approval of a product is granted, the approval may be limited to specific indications or limited with respect to its distribution. For instance, the FDA may approve the licenses for only high risk populations. Foreign regulatory authorities may apply similar limitations or may refuse to grant any approval.

There can be no assurance that the FDA will approve the AIDSVAX manufacturing processes or that manufacturing facilities will pass an FDA preapproval inspection for AIDSVAX. Should Genentech elect not to manufacture AIDSVAX, we must secure a third party manufacturer. We cannot assure you that we will successfully identify a third party manufacturer or that its facilities will pass an FDA preapproval inspection for AIDSVAX. At a minimum, the FDA will require equivalence testing between Genentech produced AIDSVAX and third party produced AIDSVAX. Depending upon differences in manufacturing processes, the FDA may also require additional clinical studies to establish the safety, purity and potency of AIDSVAX. Any failure to obtain or delay in obtaining such approvals would have a material adverse effect on our business, financial condition and results of operation.

Even after United States regulatory approval for AIDSVAX is obtained, the license will be subject to continual review, and newly discovered or developed safety or efficacy data may result in revocation of the marketing license. Moreover, if and when such approval is obtained, the marketing of AIDSVAX will be subject to extensive regulatory requirements administered by the FDA and other regulatory bodies, including adverse event reporting requirements and the FDA's general prohibition against promoting products for unapproved or "off-label" uses. The AIDSVAX manufacturing facilities are also subject to continual review and periodic inspection and approval of manufacturing modifications. Domestic manufacturing facilities are subject to biennial inspections by the FDA and must comply with the FDA's Good Manufacturing Practices regulations. In complying with these regulations, manufacturers must spend funds, time and effort in the areas of production, record keeping, personnel and quality control to ensure full technical compliance. The FDA stringently applies regulatory standards for manufacturing. Failure to comply with any of these postapproval requirements can, among other things, result in warning letters, product seizures, recalls, fines, injunctions, suspensions or revocations of marketing licenses, operating restrictions and criminal prosecutions. Any such enforcement action could harm our business. Unanticipated changes in existing regulatory requirements or the adoption of new requirements could also have a material adverse effect on VaxGen.

We plan to pursue marketing authorization in Thailand based on the results from the Thai trial. The Thai government also has a regulatory process that we will need to follow before we can commercialize AIDSVAX in that country. No assurances can be given that we will obtain marketing authorization from the Thai government.

VaxGen and the manufacturer of AIDSVAX also are subject to numerous federal, state and local laws relating to such matters as safe working conditions, manufacturing practices, environmental protection, fire hazard control and hazardous substance disposal. There can be no assurance that we will avoid incurring significant costs to comply with such laws and regulations in the future, or that such laws or regulations will not have a material adverse effect on VaxGen.

The European Union, Japan and other countries also extensively regulate pharmaceuticals, including biological drug products. No assurance can be given that we will be able to obtain other countries' approvals for AIDSVAX.

WE HAVE ONLY A LIMITED OPERATING HISTORY AND WE EXPECT TO CONTINUE TO GENERATE LOSSES. To date, we have engaged primarily in research, development and clinical testing. At March 31, 1999, we had an accumulated deficit of approximately \$18.1 million. We sustained net losses of approximately \$2.1 million in 1996, \$3.1 million in 1997 and \$9.2 million in 1998, and \$3.8 million for the three months ended March 31, 1999. We expect to incur substantial losses for at least an additional four to five years.

IF WE NEEDED ADDITIONAL FUNDS, AND ARE UNABLE TO RAISE THEM, WE WOULD HAVE TO CURTAIL OR CEASE OPERATIONS. We cannot be certain that our existing capital resources, together with the net offering proceeds and anticipated funding from the Centers for Disease Control and Prevention and the National Institute of Allergy and Infectious Diseases, will be sufficient to support our current and planned operations through commercialization of AIDSVAX. We do not expect AIDSVAX to be commercially available for at least four years. AIDSVAX has not received regulatory approval for commercial sale. If taken to completion, the Phase III clinical testing necessary before we can file an application with the FDA for product approval will take at least 36 months from the date of this prospectus. Once the testing is completed, we will need to analyze the data and prepare our biologics license application for submission to the FDA, which typically takes between three and six months to be accomplished. The FDA review process could take at least an additional six months. We anticipate that it will take at least six months after obtaining regulatory approval for Genentech or another third party to begin commercialization of AIDSVAX. As a result, we do not believe that AIDSVAX will be on the market before 2003.

We may need to raise additional funds if:

- AIDSVAX is not sufficiently safe, pure and potent to commercialize in its current formulation;
- our Phase III clinical trials are delayed, are not successful or are more costly than currently estimated;
- commercialization of AIDSVAX is delayed for any other reason;
- additional trials are required; or
- we do not receive the anticipated funding from the Centers for Disease Control and Prevention or the National Institute of Allergy and Infectious Diseases.

We cannot assure you that we will be able to raise sufficient funds in the future. If we fail to raise sufficient funds, we would have to curtail or cease operations.

WE RELY ON GENENTECH FOR THE MANUFACTURE OF AIDSVAX. OUR INABILITY TO MANUFACTURE AIDSVAX, AND OUR DEPENDENCE ON GENENTECH, MAY DELAY OR IMPAIR OUR ABILITY TO GENERATE REVENUES, OR ADVERSELY AFFECT OUR PROFITABILITY. We have no manufacturing facilities. We are entirely dependent on third parties to produce AIDSVAX. To date, we have relied on Genentech for this purpose. Genentech currently has an exclusive option to manufacture AIDSVAX. We believe that Genentech is the manufacturer best able to produce AIDSVAX. Our license agreement with Genentech does not specify the price we will be required to pay Genentech to manufacture AIDSVAX.

If Genentech does not manufacture AIDSVAX, we will need to locate and engage another manufacturer. The cost and time to establish manufacturing facilities to produce AIDSVAX would be substantial. As a result, using a manufacturer other than Genentech could delay bringing AIDSVAX to market. This delay could require us to raise additional funds.

We cannot assure you that we will be able to enter into an agreement with a third party to manufacture AIDSVAX. We also have no way to determine the price we would be charged by a third party to manufacture AIDSVAX if Genentech does not manufacture AIDSVAX. Any manufacturer other than Genentech would have to prove both to us and to the FDA and to other regulatory authorities that its manufacturing process, facilities, procedures, and personnel comply with government regulations and that it

consistently produces the same product that was made by Genentech and tested in the Phase III clinical trials. If manufacturing is done by a company other than Genentech, we may have to do additional clinical trials to show the therapeutic equivalence of the product made by the other company to the Genentech product.

WE RELY ON GENENTECH FOR THE SALE, MARKETING AND COMMERCIALIZATION OF AIDSVAX. OUR LACK OF SALES AND MARKETING PERSONNEL, AND OF DISTRIBUTION RELATIONSHIPS, MAY IMPAIR OUR ABILITY TO GENERATE REVENUES. We have no sales, marketing or commercialization capability. Genentech currently has an exclusive option to market and distribute AIDSVAX. We intend to rely on Genentech to provide an established distribution system and sales force to market AIDSVAX. If Genentech does not elect to exercise its option to market and distribute the product, we will need to locate and engage another partner to market and commercialize AIDSVAX. We cannot assure you that we will be able to establish marketing or commercialization arrangements with third parties in a timely manner or on favorable terms.

POLITICAL OR SOCIAL FACTORS MAY DELAY OR REDUCE REVENUES BY DELAYING OR IMPAIRING OUR ABILITY TO MARKET AIDSVAX. Products developed for use in addressing the HIV/AIDS epidemic have been, and will continue to be, subject to competing and changing political and social pressures. The political and social response to the HIV/AIDS epidemic has been highly charged and unpredictable. These pressures can transcend national barriers. They may delay or cause resistance to bringing our product to market or limit pricing of our product.

IF GENENTECH TERMINATES OUR LICENSE AGREEMENT, WE MAY NOT BE ABLE TO DEVELOP OR MARKET AIDSVAX ON COMMERCIALLY REASONABLE TERMS, OR AT ALL. We cannot conduct our business without the technology we license from Genentech. Our license agreement with Genentech permits Genentech to terminate the agreement, or terminate the exclusivity of our license, if we:

- fail to use due diligence in developing, seeking regulatory approval for, marketing or commercializing products covered by the Genentech license agreement;
- fail to file the first market approval application for AIDSVAX with the FDA prior to May 2002, subject to potential extension for up to two years in certain circumstances, any other extension being Genentech's sole decision;
- breach the license agreement and fail to cure the breach within the time period provided in the agreement;

and we are not able to cure these breaches within the period provided in the Genentech license agreement. Genentech may also terminate the agreement at any time if we fail to maintain a tangible net worth of at least \$1 million.

FAILURE TO RETAIN KEY MANAGEMENT EMPLOYEES COULD ADVERSELY AFFECT OUR ABILITY TO OBTAIN FINANCING, CONDUCT CLINICAL TRIALS, OR DEVELOP AIDSVAX. We are highly dependent on our senior management and scientific staff, particularly Dr. Donald Francis, our President, Dr. Robert Nowinski, our Chairman and Chief Executive Officer, and Dr. Phillip Berman, our Senior Vice President, Research & Development. These individuals have played a critical role in developing the vaccine, raising financing and conducting clinical trials. The loss of the services of any of these key members of senior management may prevent us from achieving our business objectives.

IF WE ARE UNABLE TO PROTECT OUR INTELLECTUAL PROPERTY, WE MAY BE UNABLE TO PREVENT OTHER COMPANIES FROM USING OUR TECHNOLOGY IN COMPETITIVE PRODUCTS. IF WE INFRINGE THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS, WE MAY BE PREVENTED FROM DEVELOPING OR MARKETING AIDSVAX. We rely on patent and other intellectual property protection to prevent our competitors from manufacturing and marketing AIDSVAX. Our technology, including technology licensed from Genentech, will be protected from unauthorized use by others only to the extent that it is covered by valid and enforceable patents or effectively maintained as trade secrets. As a result, our success depends on our ability, and Genentech's ability, to:

- obtain patents;
- protect trade secrets;
- operate without infringing upon the proprietary rights of others; and
- prevent others from infringing on our proprietary rights.

We cannot be certain that our patents or patents that we license from Genentech will be enforceable and afford protection against competitors. We cannot assure you that our operations or technology will not infringe intellectual property rights of others. If we infringe the intellectual property of others, there can be no assurance that we would be able to obtain licenses to use the technology on commercially reasonable terms or at all.

IF WE BECOME SUBJECT TO PRODUCT LIABILITY CLAIMS, THEY MAY REDUCE DEMAND FOR AIDSVAX OR RESULT IN DAMAGES THAT EXCEED OUR INSURANCE LIMITATION. We face an inherent risk of exposure to product liability suits in connection with AIDSVAX vaccines being tested in human clinical trials and products that may be sold commercially. We may become subject to a product liability suit if AIDSVAX causes injury, or if vaccinated individuals subsequently become infected with HIV. Regardless of merit or eventual outcome, product liability claims may result in decreased demand for a vaccine, injury to our reputation, withdrawal of clinical trial volunteers and loss of revenues.

THIS OFFERING'S NET PROCEEDS MAY BE ALLOCATED IN WAYS WITH WHICH YOU AND OTHER STOCKHOLDERS MAY NOT AGREE. Management will have significant flexibility in applying the net proceeds of this offering and could be used for purposes other than those contemplated at the time of the offering.

PURCHASERS OF COMMON STOCK IN THIS OFFERING WILL EXPERIENCE IMMEDIATE AND SUBSTANTIAL DILUTION. You will experience an immediate and substantial dilution in net tangible book value of \$7.68 per share.

FUTURE SALES OF OUR COMMON STOCK IN THE PUBLIC MARKET COULD LOWER OUR STOCK PRICE AND IMPAIR OUR ABILITY TO RAISE FUNDS IN NEW STOCK OFFERINGS. The market price of our common stock could drop due to sales of a large number of shares of our common stock or the perception that these sales could occur. These factors could also make it more difficult to raise funds through future offerings of common stock.

After this offering, we will have 10,785,161 shares of common stock outstanding. If the underwriters exercise their over-allotment option in full, we will have 11,250,161 shares outstanding. All shares of common stock sold in this offering will be freely tradeable without restrictions under the securities act, except for any shares purchased by one of our affiliates, which will be limited by Rule 144 under the Securities Act. Our officers and directors and a majority of stockholders holding common stock have entered into lock-up agreements pursuant to which they have agreed not to offer or sell any shares of common stock currently held by them for a period of 180 days after this offering. Also, Prudential Securities may, at any time and without notice, waive the terms of these lock-up agreements. Upon expiration of this lock-up period shares may be sold in the future without registration. See Underwriting for a more detailed discussion. The remaining 7,685,161 shares are "restricted securities," which means that the shares are subject to restrictions on free transfer imposed by federal securities rules.

USE OF PROCEEDS

The net proceeds to VaxGen from the sale of the common stock in this offering are approximately \$36.5 million after deducting underwriting discounts and commissions and offering expenses. If the underwriters exercise their over-allotment option in full, this figure will increase to approximately \$42.1 million. We intend to use these net proceeds as follows:

- to complete Phase III clinical trials of AIDSVAX, including the costs to engage medical clinics to perform the clinical trials;
- development and operation of laboratory and data management systems;
- costs of obtaining regulatory approvals; and
- administrative costs and general corporate purposes.

We have not determined the amount of net proceeds to be used for each of the specific purposes indicated. Accordingly, we will have broad discretion to use the proceeds as we see fit. Pending such uses, we will invest the net proceeds in short-term, investment grade, interest-bearing securities or guaranteed obligations of the United States government.

DIVIDEND POLICY

We have not declared or paid dividends. We do not anticipate declaring or paying dividends in the foreseeable future.

FORWARD-LOOKING STATEMENTS

This prospectus includes forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends affecting the financial condition of our business. These forward-looking statements are subject to a number of risks, uncertainties and assumptions about VaxGen, including, among other things:

- general economic and business conditions;
- our expectations and estimates concerning future financial performance, financing plans and the impact of competition;
- anticipated trends in our business;
- existing and future regulations affecting our business; and
- other risk factors set forth under "Risk Factors" in this prospectus.

In addition, in this prospectus, the words "believe", "may", "will", "estimate", "continue", "anticipate", "intend", "expect" and similar expressions, as they relate to VaxGen, our business or our management, are intended to identify forward-looking statements.

DILUTION

Purchasers of common stock will experience immediate and substantial dilution in the net tangible book value of the common stock from the initial public offering price. Net tangible book value per share is equal to the amount of total net tangible assets less total liabilities divided by the number of outstanding shares. After giving effect to the application of the sale of 3,100,000 shares of common stock at an initial public offering price of \$13.00 per share and after the deduction of underwriting discounts and commissions and estimated offering expenses, VaxGen would have had a net tangible book value at March 31, 1999 of \$57.4 million, or \$5.32 per share. This is an immediate increase in net tangible book value of \$2.60 per share to existing stockholders and an immediate and substantial dilution of \$7.68 per share to new investors purchasing common stock in this offering. The following table illustrates the per share dilution.

Initial public offering price	\$13.00
Increase attributable to new investors	
Net tangible book value after the offering	5.32
Dilution in net tangible book value to new investors	\$ 7.68 =====

The following table summarizes, at March 31, 1999, the differences between existing stockholders and new investors in this offering with respect to the number of shares of common stock purchased from VaxGen, the total consideration paid to VaxGen, and the average consideration paid per share before the deduction of underwriting discounts and commissions and estimated offering expenses paid by VaxGen.

	SHARES PURCHASED(1)(2)		TOTAL CONSIDERATION		AVERAGE PRICE	
	NUMBER	PERCENT	AMOUNT	PERCENT	PER SHARE	
Existing stockholders		71.3%	\$42,239,000	51.2%	\$ 5.50	
New investors		28.7%	\$40,300,000	48.8%	\$13.00	
Total	10,785,161	100.0% =====	\$82,539,000 ======	100.0% =====		

⁽¹⁾ If the underwriters' over-allotment option is exercised in full, the number of shares purchased by investors in the offering will be increased to 3,565,000.

⁽²⁾ Reflects a one-for-two reverse stock split effective on April 9, 1999, and does not include: (a) 1,159,171 shares of common stock issuable on exercise of stock options outstanding at May 31, 1999 at a weighted average exercise price of \$8.60 per share; (b) 593,650 shares of common stock reserved for future issuance under our 1996 stock option plan; (c) 28,929 shares of common stock reserved for future issuance under our 1998 Director Stock Option Plan; (d) 459,825 shares of common stock issuable on exercise of warrants at May 31, 1999 at a weighted average exercise price of \$7.49 per share; and (e) exercise of the underwriters' over-allotment option.

CAPITALIZATION

The following table sets forth at March 31, 1999, the capitalization of VaxGen on an actual basis and as adjusted to reflect the application of net proceeds of approximately \$36.5 million from the sale of 3,100,000 shares of common stock offered by us at an initial public offering price of \$13.00 per share. This table should be read in conjunction with the financial statements and related notes appearing elsewhere in this prospectus.

	AT MARCH	I 31, 1999
		AS ADJUSTED
	(IN TH	HOUSANDS)
Cash, cash equivalents and investment securities	\$ 20,607	\$ 57,086
Long-term obligations	66	66
Preferred stock, \$0.01 par value, 20,000,000 shares authorized, none outstanding		
adjusted(1)	38,886 28	108 75,334 28 (18,095)
Total stockholders' equity	20,896	57,375
Total capitalization	\$ 20,962 ======	\$ 57,441 ======

⁽¹⁾ Reflects a one-for-two reverse stock split effective on April 9, 1999, and does not include: (a) 1,159,171 shares of common stock issuable on exercise of stock options outstanding at May 31, 1999 at a weighted average exercise price of \$8.60 per share; (b) 593,650 shares of common stock reserved for future issuance under our 1996 stock option plan; (c) 28,929 shares of common stock reserved for future issuance under our 1998 Director Stock Option Plan; (d) 459,825 shares of common stock issuable on exercise of warrants at May 31, 1999 at a weighted average exercise price of \$7.49 per share; and (e) exercise of the underwriters' over-allotment option.

SELECTED FINANCIAL DATA

PERIOD FROM

This selected financial information should be read with the financial statements, related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere in this prospectus. The statement of operations data for the years ended December 31, 1996, 1997 and 1998 and the balance sheet data at December 31, 1996, 1997 and 1998 are derived from our audited financial statements. The statement of operations data and balance sheet data for and at the periods ended December 31, 1995 and March 31, 1999 and for the period ended March 31, 1998 are derived from our unaudited financial statements.

	DECEMBER 31,	YEAR EN		BER 31,		ARCH 31,
		1996				
		(IN THOUSAN	IDS, EXCEPT	PER SHARE	DATA)	
STATEMENT OF OPERATIONS DATA: Operating expenses Research and development General and administrative		\$(1,683) (371)				
Loss from operations Total other income (expense), net	(30)	. , ,	. , ,	(10,176)	. , ,	
Net loss	\$(30) ====	\$(2,082)		\$ (9,163)	\$ (857)	
Net loss per share basic and diluted	\$ ====			\$ (1.48)		\$ (0.49)
Weighted average shares outstanding basic and diluted		1,093	5,096	6,185	6,066	7,619

	AT DEC	EMBER 31,		AT
				MARCH 31,
1995	1996	1997	1998	1999

BALANCE SHEET DATA:

Cash, cash equivalents and investment					
securities	\$	\$ 38	\$23,880	\$19,468	\$20,607
Working capital (deficiency)	(15)	(1,458)	19,843	17,866	19,318
Total assets	11	229	24,301	21,472	22,693
Long-term obligations	15	795			66
Total stockholders' equity (deficit)	(30)	(2,069)	19,882	19,398	20,896

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with the "Selected Financial Data," financial statements and related notes included elsewhere in this prospectus.

OVERVIEW

Initial development of AIDSVAX was funded by Genentech at a cost of over \$50 million over a period of nearly ten years. In November 1995, we were formed to continue development of AIDSVAX in partnership with Genentech. In connection with our formation, Genentech licensed to us the technology necessary for completing development and commercialization of AIDSVAX.

Since our formation, we have focused on developing and testing AIDSVAX. We recently commenced two Phase III clinical trials, one principally in North America and one in Thailand to determine efficacy of AIDSVAX. The North American Phase III clinical trial is being conducted in 59 clinical centers and is designed for 5,400 trial volunteers. The Thai Phase III clinical trial is being conducted in 17 clinical centers in Bangkok and is designed for 2,500 trial volunteers.

In 1996, we entered into two agreements with Genentech: a services agreement and a license agreement. The services agreement defines the parties' day-to-day working relationship. Pursuant to this agreement, Genentech provides limited research and development, regulatory filings, and other administrative assistance. The services agreement was extended in January 1999 for two years.

Under the license agreement, among other things, Genentech has committed to make limited amounts of AIDSVAX, and may elect to manufacture more AIDSVAX. Genentech has an option to manufacture AIDSVAX on specified financial terms. If Genentech does not exercise its option to manufacture, then we have the right to pursue third party manufacturing and marketing arrangements. Genentech also has a marketing option to obtain an exclusive worldwide license to use, market and sell AIDSVAX. The option is exercisable for 90 days after we submit our first filing with the FDA to obtain a license for AIDSVAX.

- If Genentech exercises the marketing option:
- Genentech is required to pay us a fee equal to 33% of our total development costs including clinical testing, to date for the licensed product; and
- we and Genentech will share net profits from sales of the licensed products, 30% and 70%, respectively, for sales within the United States and 70% and 30%, respectively, for sales outside the United States.

In the event that Genentech does not exercise the marketing option, we will retain the right to market AIDSVAX and will pay Genentech a royalty on all sales of licensed products equal to:

- 25% of our net sales and our sublicensees' net sales of the licensed products worldwide, so long as any commercial vaccine component has been manufactured and supplied by Genentech; or otherwise
- 15% of our total net sales and our sublicensees' net sales of the licensed products worldwide.

To date, we have generated no operating revenues. We anticipate only modest revenues from government or other grants or from collaborations with other entities over the next three to five years. We have incurred losses since inception as a result of research and development and general and administrative expenses in support of our operations. As of March 31, 1999, we had a deficit accumulated during the development stage of \$18,095,000. We anticipate incurring substantial losses over at least the next four to five years as we complete our clinical trials, apply for regulatory approvals, continue development of our technology and expand our operations.

We believe that the net proceeds from this offering together with anticipated funding from the Centers for Disease Control and Prevention and the National Institute for Allergy and Infectious Diseases will be sufficient to complete our Phase III clinical trials, apply for regulatory approval in the United States and Thailand, and bring AIDSVAX to market. However, we may require additional funds. We do not currently have other sources of financing. Our future capital requirements depend on several factors, including:

- the progress of our Phase III clinical trials;
- the progress of other internal research and development projects;
- the need for leasehold improvements to facilities and the purchase of additional capital equipment;
- the availability of government research grants; and
- whether the timing of revenue from AIDSVAX is delayed.

Our employment agreements with three of our executive officers provide for issuance of an aggregate of 325,757 shares of common stock if:

- our stock trades at an average price of \$28.00 per share over a 30-day period; or
- we are acquired in a transaction at a price greater than \$28.00 per share.

If the shares are issued, we will record a one-time, non-cash expense equal to the aggregate value of the shares on the date the \$28.00 per share condition is met.

In April 1999 the terms of an officer's options were modified in connection with his resignation. This modification will result in a second quarter non-cash charge to compensation expense of approximately \$600,000 representing the difference between the exercise price of the options which otherwise would have expired and the fair value of the underlying stock.

In May 1999 we issued warrants to purchase common stock to an individual in connection with settling a dispute over an employment agreement. As a result of the warrant issuance, we will record a non-cash compensation expense of approximately \$2,000,000 in the second quarter of 1999.

RESULTS OF OPERATIONS

THREE MONTHS ENDED MARCH 31, 1999 COMPARED TO THE THREE MONTHS ENDED MARCH 31, 1998

Research and development expense

Research and development expense increased 324% from \$716,000 for the three months ended March 31, 1998 to \$3,038,000 for the three months ended March 31, 1999. This increase was primarily due to the ramping up of our North American and Thai Phase III clinical trials, including fees paid to third parties associated with conducting the trials and an increase in our internal staff for the purposes of working on the trials.

General and administrative expense

General and administrative expense increased 125% from \$447,000 for the three months ended March 31, 1998 to \$1,006,000 for the three months ended March 31, 1999. This increase was primarily due to additional personnel, professional service fees and costs associated with maintaining our larger office facilities.

Total other income (expense), net

Other income (expense), net, consisting primarily of interest income, decreased slightly from \$306,000 for the three months ended March 31, 1998 to \$284,000 for the three months ended March 31, 1999. This was primarily attributable to lower average balances of cash, cash equivalents and investment securities.

YEAR ENDED DECEMBER 31, 1998 COMPARED TO YEAR ENDED DECEMBER 31, 1997

Our activities in 1998 were focused on preparing for and commencing our Phase III clinical trials of AIDSVAX, developing data management systems, continuing research and development of AIDSVAX, and private financing activities.

Research and development expense

Research and development expense increased 117% from \$3,146,000 in 1997 to \$6,831,000 in 1998. This increase was primarily due to additional personnel, retaining consultants and contracting with clinics to facilitate the North American Phase III clinical trial that began in June 1998. The increase was partially offset by decreased vaccine production costs, as no vaccine production was required in 1998.

General and administrative expense

General and administrative expense increased 318% from \$800,000 in 1997 to \$3,345,000 in 1998. This increase was primarily due to an additional \$900,000 in costs associated with efforts to increase public awareness of the North American Phase III clinical trial, an additional \$800,000 in compensation expense associated with additional personnel and, an additional \$345,000 in higher rent and related insurance costs associated with our move to larger facilities in September 1998.

Total other income (expense), net

Other income (expense), net, consisting primarily of interest income increased 14% from \$886,000 in 1997 to \$1,013,000 in 1998. This increase was due to higher average balances of cash, cash equivalents, and investment securities throughout the year resulting from our private placement completed in May 1997.

YEAR ENDED DECEMBER 31, 1997 COMPARED TO YEAR ENDED DECEMBER 31, 1996

Our activities in 1997 were focused on working with Genentech to develop and produce bivalent vaccine for use in our AIDSVAX clinical trials and on private financing activities.

Research and development expense

Research and development expense increased 87% from \$1,683,000 in 1996 to \$3,146,000 in 1997. This increase was primarily due to an additional \$913,000 in payments to Genentech for development and production of bivalent vaccine, an additional \$319,000 in compensation expense as we added clinical and data management personnel in preparation of human clinical trials, and an additional \$155,000 in costs associated with Phase I and Phase II clinical trials for our bivalent AIDSVAX vaccine.

General and administrative expense

General and administrative expense increased 116% from \$371,000 in 1996 to \$800,000 in 1997. This increase was primarily due to higher compensation expense associated with additional personnel necessary to support operations.

Total other income (expense), net

Other income (expense), net in 1996 of (\$28,000) represents interest expense on outstanding long term debt. In 1997, we earned other income (expense), net of \$886,000, which represents primarily income earned on investments of cash, cash equivalents and investment securities.

LIQUIDITY AND CAPITAL RESOURCES

Cash, cash equivalents and investment securities were \$20,607,000 at March 31, 1999. We have financed our operations since inception through capital commitments from Genentech and private placements of equity securities. Genentech has provided us \$1,000,000 since inception through a line of

credit, which was subsequently converted to equity, and invested an additional \$1,002,000 through purchases of common stock in 1997. Genentech has no obligation to fund our operations in the future. In the quarter ended March 31, 1999, we received net proceeds of \$5,273,000 from private financing activities. In 1998, we received net proceeds of \$8,604,000 from private financing activities. In 1997, we received net proceeds of \$25,001,000 from private financing activities including funds received from Genentech. To date, inflation has not had a material effect on our business.

Since our inception, investing activities, other than purchases and sales of investment securities, have consisted entirely of equipment acquisitions. At March 31, 1999, our investment in equipment and leasehold improvements was \$1,508,000, and we had committed to the expenditure of more than \$1,400,000 for leasehold improvements and equipment to develop laboratory space. Net cash used in the three months ended March 31, 1999 for operating activities was \$3,999,000. Net cash used in 1998 for operating activities was \$11,810,000. Expenditures in both periods were a result of increased research and development costs and general and administrative expenses.

We anticipate that the net proceeds from this offering will enable us to meet our anticipated expenditures over the next three years, including, among other things:

- expanding our facilities;
- supporting our clinical trial efforts; and
- continuing internal research and development.

We anticipate receiving an aggregate of approximately \$12,600,000 from the Centers for Disease Control and Prevention and the National Institute for Allergy and Infectious Diseases commencing in September 1999. We believe these funds will enable us to meet anticipated operating expenditures for an additional year. In addition to covering general operating expenditures, the funds will be used to fund research costs and costs associated with obtaining and storing clinical specimens, as part of the sponsored programs. These funds would be received as reimbursements for expenses to be incurred over the duration of the trials. The timing and procedures for payment are to be determined pursuant to further discussions with each agency.

At December 31, 1998, we had net operating loss carryforwards of approximately \$14,000,000 to offset any future federal taxable income. If not utilized, the tax net operating loss carryforwards will begin to expire in 2010. We also had research and development tax credit carryforwards at December 31, 1998, of approximately \$440,000 for federal income tax purposes.

YEAR 2000 COMPLIANCE

Many computer systems and software products are coded to accept only two digit entries in the date code field. Beginning in the year 2000 these date code fields will need to accept four digit entries to distinguish 21st century dates from 20th century dates. Systems that are not year 2000 compliant may cease to function. As a result, in less than one year computer systems and software used by many companies may need to be upgraded to be year 2000 compliant.

We have completed the process of determining whether there are any critical areas of our business that are not year 2000 compliant. We presently estimate that the total cost of addressing any year 2000 problems will be less than \$5,000. In arriving at this conclusion, we assumed that the year 2000 assessment, remediation and contingency plans of our third party suppliers will be fulfilled in a timely manner and without significant cost to us.

Based on web site information published by Genentech, our only material third party supplier, we do not believe that their year 2000 compliance will have a material adverse effect on us.

BUSINESS

We were formed in November 1995 to complete the development of, and commercialize, AIDSVAX, a preventive HIV vaccine. The original AIDSVAX technology was developed by Genentech and then licensed exclusively to us. We are currently testing AIDSVAX in humans in two large-scale Phase III clinical trials. These are the first Phase III clinical trials ever conducted for an HIV vaccine. If the Phase III clinical trials are considered successful, we plan to apply to the United States FDA, the Thai FDA and other foreign regulatory authorities for licenses to manufacture and sell AIDSVAX in the United States, Thailand and abroad.

Our vaccine is designed to prevent infection by HIV, rather than treat established infection. AIDSVAX contains synthetic copies of the proteins from the surface of HIV. Since the vaccine contains no genetic material, vaccination with AIDSVAX is incapable of causing HIV infection. Instead, humans vaccinated with AIDSVAX form antibodies against HIV. In laboratory tests these antibodies bind to the virus and neutralize its infectivity. Vaccination with AIDSVAX stimulates immune memory, training the immune system to mobilize rapidly upon exposure to HIV.

We are conducting two Phase III clinical trials of AIDSVAX to determine if AIDSVAX will prevent infection by HIV. Our North American Phase III clinical trial of AIDSVAX is being conducted in 56 clinics across the United States, as well as in one clinic in Puerto Rico, one clinic in Canada and one clinic in The Netherlands. This trial is designed for 5,400 volunteers. In Thailand, we are conducting a second Phase III clinical trial designed for 2,500 volunteers in 17 clinical sites in Bangkok. Based on meetings and documented discussions with the FDA and its Vaccines and Related Biological Products Advisory Committee, we believe that the requirement for FDA regulatory approval is 30% efficacy, at statistical significance, of HIV infection in volunteers vaccinated with AIDSVAX.

Our strategy is to develop, test and obtain regulatory approval for various formulations of AIDSVAX. The first two approvals we plan to obtain are in the United States for the formulation being tested in the United States trial and in Thailand for the formulation being tested in the Thai trial. We intend to use Genentech as our partner for manufacturing and distribution. Genentech has exclusive options to manufacture and market AIDSVAX products. If Genentech does not exercise its options, we have the right to pursue third party arrangements, with Genentech providing the transfer of technology necessary for manufacturing the vaccine.

VACCINES

Vaccines are preventive, not curative. As a result, vaccines are particularly suited to address epidemics, even those the magnitude of HIV/AIDS.

Vaccines prevent infection by activating the immune system to neutralize infectious viruses. The immune system's initial response to a virus is to produce antibodies. The antibodies bind to the virus and prevent it from entering cells. If a virus cannot enter a cell, it is unable to multiply and dies within a few hours in the host. This protection against infection is called neutralization.

Most virus infections cause lifelong immunity after natural infection. This is because the immune system remembers that it has encountered the virus before. Upon a subsequent encounter, it mounts such a rapid immune response that it kills the virus before it can establish a productive infection.

Vaccines also induce long term memory against viruses. The immune system is trained by vaccination with viral proteins or live viruses to rapidly respond to and prevent subsequent viral infection.

HIV AND AIDS

HIV is the virus that causes AIDS, a lethal disease characterized by the gradual deterioration of the human immune system. Although the disease is manifested in many ways, the problem common to all patients is the destruction of essential immune cells known as T lymphocytes, or T cells. Destruction of

these T cells by HIV makes the body particularly vulnerable to opportunistic infections and cancers that typify AIDS and ultimately cause death. Blocking HIV infection would prevent AIDS.

HIV is transmitted by three predominant means. One is sexual contact. The second is exposure to blood from an infected person, such as sharing needles in drug use. The third is transmission from infected mothers to their newborns.

The HIV/AIDS epidemic is one of the largest epidemics in human history. Its spread across the world has been documented by UNAIDS and the World Health Organization. According to UNAIDS and the World Health Organization:

- in 1998, 1.1% of the world's adult population was living with HIV/AIDS;
- approximately 16,000 new infections occur each day worldwide;
- in Sub Saharan Africa, 8.0% of the adult population is infected with HIV;
 and
- in several African countries, HIV has infected between 20% and 26% of the adult population.

In Thailand, initial infections with HIV were not reported until the mid-1980s. It is now estimated that almost 800,000 people (2.3% of the country's adult population) have already been infected. HIV infection has now penetrated China, India and Indonesia, some of the most populated areas of the world. AIDS is currently one of the top five fatal diseases worldwide.

An estimated 860,000 people in North America are currently infected with HIV. In North America, 44,000 new infections occur each year. According to an earlier independent report, AIDS is one of the leading causes of death in adults ages 25 to 44 in the United States.

Table 1 presents the UNAIDS/WHO estimates on total population, adults, and estimated number of HIV infections throughout the world. These statistics lead us to believe that a market for an HIV vaccine could reach three billion people. Should this market include pediatric use, the number could exceed four billion.

TABLE 1. REPORT ON GLOBAL HIV/AIDS EPIDEMIC

	POPULATION			
	1997 TOTAL	ADULTS 15-49	ESTIMATED CURRENT HIV INFECTION	
		(THOUSANDS)		
GEOGRAPHICAL AREA North America. Latin America. Western Europe. Eastern Europe &Central Asia. East Asia &Pacific. South &Southeast Asia. North Africa &Middle East. Sub Saharan Africa.	302,000 455,000 400,000 373,000 1,452,000 1,860,000 322,000 593,000	156,000 241,000 201,000 193,000 815,000 955,000 164,000 268,000	860 1,300 480 190 420 5,800 210 21,000	
WORLD TOTAL	5,757,000 ======	2,993,000	30,260	

Progress has recently been made in treating HIV infection. Current HIV therapies slow multiplication of the virus and delay onset of AIDS. They do not cure HIV infection or AIDS. Costs of these drugs generally exceed \$12,000 per year per patient. Considering costs, difficulties in compliance with complex drug regimens and the development of resistance to these drugs, we believe such therapies will be available only to a small fraction of the HIV-infected population. Thus, we believe they will probably have a minimal impact on the worldwide epidemic.

THE HIV INFECTION PROCESS

A virus cannot replicate without entering a host cell. To make new infectious virus particles, a virus must enter a cell and overtake its metabolic machinery. If a virus cannot gain entry into a cell, it is incapable of surviving for more than a few hours in the body.

Viruses are varied in their structure and use different ways to enter cells. HIV is a spherical virus that maintains its genetic information inside its protein core. This core is surrounded by an outer coat called the envelope (Figure 1). The envelope has protein projections, called glycoproteins, that extend out from its surface. Glycoproteins enable HIV to bind to, and subsequently enter, human cells. The principal glycoprotein on the envelope of HIV is called gp120. To present the proper orientation for infection, the gp120 proteins are organized on the virus surface in clusters of three.

FIGURE 1. DIAGRAMMATIC REPRESENTATION OF HIV

[GRAPHIC DEPICTING HIV VIRUS WITH GP120 PROTEINS]

HIV uses gp120 to bind to the surface of cells through a specific sequence of interactions between the virus and its target cell (Figure 2). This involves a two-step "lock and key" mechanism. The first step in this process involves the attachment of gp120 onto a part of the target cell's surface called the CD4 receptor (Panel 2, below). A second step occurs soon thereafter, as the gp120 protein changes shape and then interacts with another target cell molecule called the chemokine receptor (Panel 3). When this two-step process has been completed, the virus gains entry by fusing through the target cell membrane (Panel 4).

FIGURE 2. INFECTION OF CELLS BY HIV [FOUR GRAPHICS DEPICTING THE STAGES OF INFECTION OF CELLS BY HIV]

Once inside the cell, the viral envelope opens and the core of the virus is released. The release of the viral core into the cell initiates a replication cycle that produces thousands of new virus particles per infected cell. As it multiplies, HIV kills infected T cells and releases new infectious virus into fluid or blood surrounding the cell. This cycle of:

- T cell infection;
- viral multiplication;
- T cell death; and
- re-infection of new T cells

leads to the destruction of an essential line of immunologic defense. Substantial reduction of T cells ultimately causes increased susceptibility to the opportunistic infections and cancers that are characteristic of AIDS.

In addition to T cells, HIV also infects, and may reside in, blood scavenger cells called macrophages. While infection of macrophages is not a primary cause of AIDS, it is important in the biology of HIV and in our strategy to prevent infection by the virus.

GENETIC VARIATION IN HIV

AIDS is a single disease throughout the world. At the beginning of the epidemic, probably all HIV was limited to Africa. HIV, like any other virus, underwent mutation to create distinct subtypes. People infected with a single subtype of HIV then exported their infection to other places, such that different subtypes became predominant in different geographical areas. Subsequently, HIV underwent further mutation to create individual strains of each subtype.

Although the potential genetic variation in HIV might appear limitless, only a small number of mutations confer advantage to the virus. As a result, there are a limited number of viral subtypes and strains. We believe these fall into particular patterns providing a logical basis to formulating a vaccine for HIV. We also believe that the major subtypes of gp120 have been identified. Although minor subtypes are identified periodically, no new major subtypes have been identified in the last 15 years.

SUBTYPES. There are five major subtypes of HIV. These are labeled "A" through "E," according to their order of discovery. The major difference between each subtype is a genetic variation in a region of the gp120 protein known as the chemokine-binding site.

The major subtypes of HIV tend to be distributed along geographical lines. This is consistent with the general understanding of how HIV has spread throughout the world. Virtually all HIV in the Americas, Europe, the Caribbean and Australia is subtype B. The vast majority of HIV in Thailand and in the Pacific Rim countries is subtype E. Subtype C virus has emerged as the most rapidly expanding HIV in Africa, China and India. The remaining subtypes A and D occur primarily in Africa and in limited areas around the world.

STRAINS. Each subtype of HIV is further subdivided into strains. Four strains arise from two mutations in specific regions of the gp120 protein: a subregion in the chemokine-binding site and a subregion in the CD4-binding site. These strains are of key importance in that they have different patterns of infection and they each react with different antibodies.

- Chemokine-binding site. HIV has mutated at the chemokine-binding site to yield two distinct strains, known as T-tropic and M-tropic. Each of these strains binds to a chemokine receptor on a target cell. In the T-tropic strains, the gp120 protein binds to a chemokine receptor on T cells. In the M-tropic strains, the gp120 protein binds to a chemokine receptor found on macrophages, as well as on T cells.
- CD4-binding site. HIV has also mutated at the CD4-binding site to yield two additional strains: CD4(a) and CD4(b). Each of these strains binds with slight differences to the CD4 receptor which occurs on human T cells.

SUBTYPE/STRAIN COMBINATIONS. In summary, there are five major worldwide subtypes of HIV: A through E. Each subtype has two different strains that bind to chemokine receptors on T cells and macrophages. These strains are further subdivided by two variations in the CD4-binding site on gp120. Each of these strains requires different antibodies for neutralization.

As shown in Figure 3, a single subtype of HIV may have at least four different strains. We believe other subtypes of HIV have similar types of variations at their receptor-binding sites.

FIGURE 3. GENETIC VARIATION IN SUBTYPE B HIV THAT INFLUENCE INFECTION

[Graphic depicting subtype B strains]

To construct a successful vaccine, we need to consider the entire range of variation in gp120 and assure that we cover each of the sites on the gp120 protein that are open to attack by antibodies. Fortunately, as indicated above, most of the variable sites on gp120 have only one or two principal forms. By careful examination, we have been able to identify pairs of HIV viruses whose gp120 proteins, when combined together in a vaccine, enhance the overall antibody response. We believe this antibody response covers virtually the entire range of HIV genetic variations currently known in North America and in countries of South Asia and the Pacific Rim.

THE DESIGN OF AIDSVAX

AIDSVAX is designed to stimulate antibodies to cell receptor-binding sites on gp120. Figure 4 shows how we believe antibodies block the HIV infection process. As depicted in Panels 2 and 3 below, there are several sites on gp120 that bind to individual cell receptors. The attachment of antibodies to these specific gp120 sites blocks the binding of the virus to these receptors on the cell surface (Panels 3 and 4). The result is that HIV cannot attach to the cell surface and its infectivity is neutralized.

FIGURE 4. DEPICTION OF ANTIBODIES BLOCKING HIV INFECTION [Four graphics depicting the stages of antibodies blocking HIV infection]

In 1992, Genentech genetically engineered a version of the gp120 protein. Antibodies to this gp120 protein bound to a neutralizing site found on 65% of subtype B viruses. This virus was labeled B(MN) and was believed to represent the majority of HIV in the United States. Subsequently, synthetic gp120 of HIV B(MN) was incorporated into a monovalent AIDSVAX formulation, designated AIDSVAX B. The monovalent formulations contain synthetic gp120 of a single type of HIV.

Genentech used this AIDSVAX B formulation to vaccinate humans in Phase I and Phase II clinical trials. Phase I trials were used to test for dosage and safety. Phase II trials were used to determine whether the vaccine stimulated the desired immune system response.

Antibodies obtained from 100% of those vaccinated with AIDSVAX B neutralized the B(MN) virus in laboratory tests. Further tests demonstrated that these antibodies bound to the gp120 protein of all HIV subtype B viruses tested. However, in laboratory tests and Phase II clinical trials, antibodies to B(MN) neutralized, to a greater extent, HIV of T-tropic strains as compared to HIV of M-tropic strains.

To improve the breadth of the immune response, we identified a second virus, B(GNE8), from the M-tropic strain, and a synthetic version of its gp120 protein was added to the vaccine. The resulting bivalent vaccine, AIDSVAX B/B', which is designed to address two HIV strains, considerably expanded the vaccine's breadth of neutralization. While the monovalent vaccine could stimulate the production of four different types of antibodies that reacted with binding-sites to cell receptors, the bivalent vaccine

could stimulate the production of seven. We believe that these seven antibodies cover virtually all known strains of HIV in North America.

As a general strategy, we plan to develop AIDSVAX formulations that will stimulate antibodies against multiple binding sites on gp120. Our goal is to expand the range of antibodies that are stimulated by a vaccine to neutralize a broader group of HIV. A practical application of this strategy has been the conversion of AIDSVAX from a monovalent to a bivalent formulation.

STATISTICAL MODEL OF MONOVALENT AND BIVALENT AIDSVAX

We generated a statistical model based on the known distribution of the four receptor-binding sites on gp120 and their frequency in different HIV strains in the United States (Figure 5). A comparison was then made between the neutralizing antibodies which could be stimulated by vaccination with either a monovalent or bivalent formulation of AIDSVAX.

FIGURE 5. RELATIVE ADVANTAGE OF BIVALENT VS. MONOVALENT VACCINES [GRAPHIC DEPICTING NEUTRALIZATION OF MONOVALENT VACCINES (B(MN) AND B(GNE8)) AND BIVALENT VACCINE (B(MN) PLUS B(GNE8))]

Each pie chart in Figure 5 represents the statistical equivalent of 100% of currently known HIV, or the virus population, in the United States. Each chart also reflects the calculated frequency at which antibodies stimulated by the monovalent or bivalent vaccines would bind with HIV in this virus population. According to this statistical model, the percentage of HIV in the virus population that would fail to bind antibody is depicted by the white area. The percentage of HIV which would bind one neutralizing antibody is lightly shaded, while viruses which would bind two, three or four different neutralizing antibodies are shown in darker shaded areas.

This analysis indicates that the monovalent B(MN) vaccine would fail to stimulate antibodies against 14% of HIV in the statistical virus population. The bivalent vaccine, which combines the gp120 proteins from B(MN) and B(GNE8), covers more than 99% of the statistical virus population, with at least two different neutralizing antibodies binding to each virus particle. According to this model, over 50% of the HIV

viruses would react with four neutralizing antibodies, each antibody stimulated against different cell-binding sites on gp120 proteins.

While the statistical model indicates that bivalent AIDSVAX would induce a broader range of antibodies than monovalent AIDSVAX, there can be no assurance that the statistical model will predict the actual efficacy of AIDSVAX in human trials.

FORMULATIONS OF AIDSVAX

AIDSVAX consists of two biologically active ingredients: antigens and an adjuvant. An antigen is the ingredient in vaccines that activates the human immune system response. The antigen in AIDSVAX is synthetic gp120 protein. An adjuvant is an active ingredient in vaccines that improves the human immune system response by attracting immune cells into the region where the vaccine is injected. The adjuvant in AIDSVAX is alum, or aluminum hydroxide. Since the vaccine contains only a synthetic fragment of the virus and no genetic material, it is incapable of causing HIV infection.

Three different formulations of the AIDSVAX vaccine have been developed and clinically tested in Phase I/II trials. These include: monovalent AIDSVAX B for HIV infections in North America and Europe bivalent AIDSVAX B/B for HIV infections in North America and Europe, and bivalent AIDSVAX B/E for HIV infections in Southeast Asia.

INITIAL TESTING OF AIDSVAX IN CHIMPANZEES

The chimpanzee is the only laboratory animal susceptible to HIV infection. In the initial protection trials conducted by Genentech, chimpanzees were vaccinated with three doses of monovalent AIDSVAX B. The vaccinated animals, along with unvaccinated control animals, were then injected intravenously with high doses of infectious HIV of the same strain that was used for the preparation of the vaccine. None of the AIDSVAX vaccinated animals became infected with HIV. All of the unvaccinated control chimpanzees became infected with HIV.

In subsequent trials, chimpanzees were vaccinated with AIDSVAX B(MN) and then infected with a different strain of HIV known as B(SF2). Despite this difference, vaccination with AIDSVAX B(MN) conferred immunity and protection against infection with the B(SF2) strain, while vaccination of control animals with a placebo had no protective effect. The cross-protection observed in this experiment documented that AIDSVAX could successfully protect animals from infectious HIV having a genetic composition distinctly different from the virus used to make the vaccine. Based on the results of the chimpanzee trials, Genentech sought and received regulatory approval to commence human clinical trials to test the safety and efficacy of AIDSVAX in humans.

HUMAN CLINICAL TRIALS

Human clinical trials for vaccines involve three steps:

- Phase I -- tests for dosage and safety;
- Phase II -- larger-scale tests for safety, as well as a determination of whether the vaccine stimulates antibodies and immune memory; and
- Phase III -- multi-center, placebo-controlled, double-blind tests to determine protection conferred by vaccination. These efficacy tests are performed in volunteers who have a high risk of HIV infection.

PHASE I TRIALS -- DOSAGE AND SAFETY, MONOVALENT AIDSVAX B

Phase I trials with monovalent AIDSVAX B vaccine were conducted by Genentech. AIDSVAX B was clinically evaluated in 671 HIV-negative volunteers and 662 HIV-positive volunteers. None of the vaccinees reported serious side effects. Some vaccinees occasionally experienced pain at the injection site, as is common with many vaccines.

AIDSVAX B was tested at three doses: 100 [u]g, 300 eg and 600 [u]g of gp120. The 300 [u]g dose was consistently found to be most effective, stimulating a higher antibody response without serious side effects.

The clinical trial results also indicated that monovalent AIDSVAX B, at all three doses tested, did not alter the progression of ongoing HIV infection. We intend to apply to the FDA for broad use of the vaccine in high-risk groups without prescreening for HIV infection.

PHASE II TRIALS -- ANTIBODY STIMULATION, MONOVALENT AIDSVAX B

One hundred forty HIV-negative volunteers were vaccinated and boosted three times with monovalent AIDSVAX B vaccine. Vaccinations were given at time 0, 1 month and 6 months with an additional booster at 12 or 15 months. Antibodies stimulated by vaccination with AIDSVAX B were measured for their ability to neutralize HIV in culture tests. All of the vaccinated volunteers produced antibody in their blood that neutralized infectivity of HIV B(MN), the strain that was used for preparation of AIDSVAX. These neutralization tests were considered of key importance since they measured the actual biological activity of the vaccine-stimulated antibodies.

Memory of the immune response to HIV in the same volunteers was measured by examination of neutralizing antibody levels stimulated by sequential booster shots. All vaccine recipients produced high levels of neutralizing antibody with boosting. These antibody levels gradually declined with time. Each booster shot, however, resulted in a rapid antibody response of even higher concentration, demonstrating a memory recall of the antibody response. This is strong evidence of immune memory being stimulated by the vaccine. We believe that such memory will be key for protection, enabling the educated immune system to ward off HIV infection before it establishes itself.

PHASE I/II TRIALS -- BIVALENT AIDSVAX

We believe that, since an antibody to a single receptor-binding site can cause neutralization, antibodies to multiple receptor-binding sites will result in yet broader neutralization. On this basis we developed and tested two formulations of bivalent AIDSVAX.

We conducted two Phase II trials in the United States and Thailand in 214 HIV-negative volunteers. The trials used two bivalent formulations of AIDSVAX. The volunteers were vaccinated and then given one booster one month later. The vaccine tested in the United States was AIDSVAX B/B'. The vaccine tested in Thailand was AIDSVAX B/E. Each of the vaccines was selected for the known prevalence of these virus subtypes in the particular countries tested. The trials were also designed to compare the results of bivalent AIDSVAX to those of monovalent AIDSVAX. Four factors were monitored:

- safety;
- dosage;
- antibody stimulation; and
- production of antibodies that would neutralize strains used in bivalent AIDSVAX.

The vaccine did not cause any serious side effects. Vaccinees occasionally experienced pain at the injection site, as is common with many vaccines. In a dose response study, the bivalent AIDSVAX demonstrated the same results as those observed with the monovalent vaccine.

The Phase II studies also demonstrated the stimulation of antibodies to receptor-binding sites on gp120 proteins that were contained in the respective vaccines. AIDSVAX B/B' stimulated antibodies to M-tropic and T-tropic HIV found in the United States. AIDSVAX B/E stimulated antibodies to M-tropic and T-tropic HIV found in Thailand. In contrast, the monovalent vaccine stimulated a narrower range of antibodies, primarily to T-tropic strains.

We believe these findings support our hypothesis that a combination of gp120 proteins in the bivalent vaccine would stimulate antibodies to a broader range of HIV strains.

PHASE III CLINICAL TRIALS FOR AIDSVAX

In June 1996, we met with the FDA and its Vaccine and Related Biological Products Advisory Committee to review the statistical protocol and conduct of our North American Phase III clinical trial. At this meeting, a discussion and vote was conducted on the issue of whether the interim analysis could be used to determine vaccine efficacy. By a vote of 12-0 in favor, it was agreed ". . . that the data safety monitoring board will . . recommend that the study be terminated if the trial detects an efficacy of greater than 30%." In such a case, the halt of the trial would be followed by vaccination of the placebos and application for licensure of the vaccine.

In May 1998, the FDA informed us that the data from our Phase I/II studies were acceptable and that we could proceed to Phase III clinical trials principally in North America. The first volunteers in the Phase III clinical trial were vaccinated in June 1998.

The Thai FDA is the governmental body involved in final approval to manufacture and market medical products. As part of the Thai FDA review, the Thai Ministry of Public Health has several subcommittees involved in making key decisions. In the area of HIV/AIDS, this includes the Technical Subcommittee on AIDS Vaccine, the Ethical Review Committee of the Research Committee, Ministry of Public Health, and the National Committee on Prevention and Reduction of AIDS, which includes the Institutional Review Boards from the participating institutions in the clinical trial.

In May 1998, we outlined our plans for Phase III clinical trials in Thailand and in February 1999, we received an import license from the Thai FDA with approval to begin Phase III clinical trials. In March 1999, the first volunteers in Bangkok were vaccinated, initiating the Phase III clinical trial.

The formulation of AIDSVAX that we are testing in the United States is different from the formulation being tested in Thailand. Different formulations are necessary because the strains of HIV virus are different in the two locations. The FDA has indicated that it may be possible to use data from a successful outcome in the Thai study to support licensure of AIDSVAX in the United States. It is currently unclear, however, how the data from the Thai formulation of the vaccine will support licensure in the United States, if at all.

Trial Design

We are currently conducting two large, placebo-controlled, double-blind, Phase III clinical trials, one principally in North America and the other in Thailand. A placebo-controlled, double-blind trial is one in which one group of volunteers receives a placebo and the other group receives the experimental vaccine, and neither the volunteers nor the clinicians knows whether a volunteer is receiving the placebo or the experimental vaccine. The test group of volunteers receives AIDSVAX while the placebo group receives a comparable-appearing placebo containing alum alone. All vials of vaccine and placebo are coded. During the trials, neither volunteers nor researchers know which volunteers are given the vaccine or placebo until the Phase III clinical trials are completed or stopped by the independent review board. Each volunteer is vaccinated a total of seven times, including six boosters, during a 30-month period. The purpose of the six boosters, one each six months, is to stimulate high antibody levels throughout the entire trial period. During each visit, the volunteers receive counseling on how to avoid the risk of HIV infection. Follow-up with volunteers will continue for at least six months after the last vaccination is administered.

Volunteers in North America consist of HIV-negative homosexual men and HIV-negative women who have HIV-infected sexual partners or high risk sexual behavior. Volunteers in Thailand consist of HIV-negative intravenous drug users with a high risk for blood-borne transmission of HIV. In both North America and Thailand, the volunteers are recruited, vaccinated and monitored by clinics with HIV expertise and experience with these particular population groups.

The size of each Phase III clinical trial was established by a statistical model that included: (1) the probability of demonstrating a 30% efficacy at statistical significance in inhibiting HIV infection; (2) the rate of infection of the volunteer group; and (3) assumptions concerning the rate of retention of the volunteers in the trial for a 36 month clinical observation period.

Within these parameters, the clinical trial in North America is designed for 5,400 volunteers, randomized 2:1 for vaccine:placebo recipients. The trial in Thailand is designed for 2,500 volunteers, randomized 1:1 for vaccine:placebo recipients. The trial in North America is occurring in 56 clinical sites across the United States. It is also being conducted in one clinic in Puerto Rico, one clinic in Canada and one clinic in The Netherlands. The trial in Thailand is occurring in 17 methadone clinics under direction of the Bangkok Metropolitan Administration.

Each Phase III clinical trial is conducted in two overlapping steps:

- (1) recruitment of volunteers during an estimated 12 to 14 month period; and
- (2) a 36 month clinical observation period.

For each individual, the 36 month observation period begins on the day of their first vaccination. As a result, the entire clinical trial will be completed upon recruitment of the volunteers and completion of their collective 36 month observation periods.

As part of the study design, an interim efficacy analysis will be performed in each clinical trial. In the Thai trial, the interim analysis will be conducted 18 months after recruitment has been completed. In our North American trial, the interim analysis will be conducted 24 months after recruitment has been completed (Figure 6). Under the current timetable, the interim analysis for each clinical trial will be conducted in the second half of 2001.

FIGURE 6. DESIGN OF THE PHASE III CLINICAL TRIALS OF BIVALENT AIDSVAX

[GRAPHIC DEPICTING TIMING OF PHASE III CLINICAL TRIALS]

Enlistment of Clinical Sites and Volunteers

We enlist clinical sites based on their ability to perform clinical trials, and to recruit the appropriate type and number of volunteers for the Phase III clinical trials. Our North American trial calls for approximately 1,700 HIV-negative volunteers to be recruited from an already established group of at-risk

individuals at 12 clinical centers. These centers, currently sponsored by the National Institutes of Health as part of a vaccine preparedness trial, have over the past four years established a system for the recruitment of at-risk volunteers. The trial design further calls for the remaining 3,700 HIV-negative volunteers to be recruited by the 47 additional clinical sites. Based on experience at the 12 clinical centers, we are assuming an incidence of 1.5% HIV infection per year, and a retention rate of at least 80% for volunteers for the entire 36 month observation period.

In Thailand, a group of injection drug users is being recruited through a combined effort of the Bangkok Metropolitan Administration, Mahidol University and the Centers for Disease Control and Prevention. The trial design calls for an estimated 600 HIV-negative volunteers to be recruited from an already established group and for the remaining 1,900 HIV-negative volunteers to be recruited from injection drug users in the Bangkok population. Based on prior experience, we are assuming a 6% to 8% incidence of HIV in these groups, with a retention rate of over 75% during the 36 month observation period.

Conduct of the Phase III Clinical Trials

We have a clinical team of 24 full-time employees who assist and monitor the 59 clinical sites that are engaged in the North American AIDSVAX trials. This clinical team organizes and monitors:

- the clinical testing sites;
- data management;
- the central contract laboratory for HIV testing;
- sample handling and shipping; and
- biostatistics.

Audit and monitoring functions are conducted by an outside clinical research organization, which audits the clinical sites for compliance with the Phase III procedures, data recording, medical records and the use of good clinical practice, as defined by the FDA.

In Thailand, we have employed or have on contract a full-time staff of three. Our Bangkok office is directed by a project manager and a Thai physician who provide interface between us and Thai institutions involved in the Phase III clinical trials. An additional 51 people in Thailand are involved in administration and conduct of the trials.

Each clinical site has agreed to conduct its activities according to the United States and Thai FDA-reviewed Phase III protocol. The protocol sets standard procedures for all sites and laboratories. Following each visit of volunteers to the clinical site, data are recorded in both the volunteers' permanent medical chart, as well as on a case report form, which is forwarded to us. The trial design calls for over 600,000 case report forms to be gathered and entered into the database for the North American Phase III clinical trial alone.

The Phase III protocol also requires clinical sites to report any serious adverse event to us within 24-hours. Any serious adverse events are to be immediately examined in detail by our clinical monitors. If deemed a serious event related to the vaccine, the event is to be promptly reported to the FDA. The protocol requires all other adverse events to be recorded on the case report forms and provided to the FDA for review on a periodic basis.

Interim Analysis and Completion of the Phase III Clinical Trials

A single independent data and safety monitoring board oversees the clinical trials in North America and Thailand. The ten-person monitoring board consists of prominent clinicians, AIDS specialists, vaccinologists and statisticians. The board contains seven members from the United States and three from Thailand. A former Deputy Director of the Centers for Disease Control and Prevention serves as Director of the monitoring board.

The monitoring board will periodically evaluate the safety of the trial at 6, 12, 24 and 36 months. The initial six-month safety review was conducted in March 1999. No serious adverse events related to the vaccine were observed.

The monitoring board will conduct an interim efficacy analysis approximately midway through the observation period of each clinical trial. If the trial results demonstrate 30% or greater efficacy, at statistical significance, at the time of the interim analysis, the monitoring board will recommend that we, and we will, terminate the trial. We will then vaccinate the placebo group in order to conform with ethical requirements. We are in the process of preparing the mandate for the monitoring board. If the interim efficacy analysis does not demonstrate sufficient statistical power to halt the trial, it will continue until its scheduled completion.

Following the close of the Phase III clinical trials, either at the time of the interim efficacy analysis or at the conclusion of the complete trial, the code for vaccine/placebo will be released. Analysis of the database will be performed independently by the external statistician. In addition to examining the data, the external statistician will prepare the final report which will be entered into the biologics license application.

Determination of Efficacy

The primary endpoint of the Phase III clinical trials will be to determine the quantitative effect of AIDSVAX in high risk volunteers. To gain FDA regulatory approval for the sale of AIDSVAX in the United States, we believe, based on discussions with the FDA and the recommendations of its Vaccine and Related Biological Products Advisory Committee, that we will need to demonstrate that the AIDSVAX vaccine reduces the level of HIV infection by at least 30% at a statistically significant level. Statistical significance means that if the clinical trial were repeated, an efficacy of greater than 30% would be observed 95 times out of 100. While these discussions and the vote of the Vaccine and Related Biological Products Advisory Committee are not binding on the FDA, they are generally followed. In the context of our United States clinical trial, which represents a small sampling from the entire population, this means that in order to establish a 30% efficacy at a statistically significant level there must be an observed reduction in the incidence of HIV in the group receiving the vaccine compared to the control group of between 45% to 65%, or possibly a higher percentage, depending on various factors that will have a bearing on the statistical significance of the clinical trial results. These factors include the number of patients ultimately enrolled in the study, the rate of HIV infection in the control group and the length of time associated with the clinical observation period. We anticipate that the efficacy required to obtain regulatory approval to market AIDSVAX in foreign countries will vary from one country to another and may differ significantly from that required by the FDA.

A secondary endpoint of the Phase III clinical trials will be to determine qualitative effects of AIDSVAX on potential HIV infections. This is performed in case the vaccine induces meaningful immunity, but the immune response is not of sufficient strength to fully prevent infection. For this purpose, multiple blood samples are drawn from each volunteer throughout the Phase III clinical trials. This allows us to determine more precisely the time of infection. Each of the blood samples also can be examined for levels of circulating virus, or viral load. From this, we can determine if vaccinated individuals have suppressed their HIV infections relative to those in the placebo group.

If the infection is transient, or if the level of HIV is maintained in vaccine recipients at low levels, this might indicate that the vaccine is slowing the progression of HIV infection. In therapeutic studies it is known that suppression of viral load correlates with an extension of life. Therefore, should we find that AIDSVAX causes a qualitative reduction in HIV infection, we might submit this data to support our primary regulatory application or, if justified, as a stand-alone submission.

In addition to HIV antibody testing of all blood samples, a subset of volunteers, 5% of the total, will be monitored throughout the trial period with a variety of immunological tests. These tests will be performed to determine details of the immune response, with the goal of identifying an immune correlate of protection against infection. Such a correlate might include, for example, a determination of the

minimum antibody level required to obtain protection. We believe the finding of a correlate of protection both supports the scientific rationale of the vaccine and provides a measurement by which the vaccine may be improved. We believe finding a correlate of protection would be viewed favorably in the context of any regulatory applications submitted to the FDA.

THE MARKET FOR AIDSVAX

We have developed formulations of AIDSVAX which focus on HIV found in some of the major regions of the world. Our first bivalent vaccine, AIDSVAX B/B9, is directed against the predominant HIV subtype in the Americas, Europe, the Caribbean and Australia. Our second bivalent vaccine, AIDSVAX B/E, is directed against the predominant HIV subtypes in Southeast Asia, the Pacific Rim, Indonesia and southern portions of China (Figure 7). Based on the populations of these regions, the market for the two current formulations of AIDSVAX could cover approximately half of the world's population, or nearly three billion people.

FIGURE 7. POTENTIAL MARKETS FOR THE AIDSVAX B/B' AND AIDSVAX B/E VACCINES [GRAPHIC DEPICTING MAP OF THE WORLD AND WORLDWIDE MARKETS FOR AIDSVAX B/B' AND AIDSVAX B/E]

We also have plans to develop two additional AIDSVAX vaccines -- one for subtype C virus, which would be directed against viruses in China, India and Africa, and one for subtype A and D viruses, which are commonly found in Sub Saharan Africa and parts of South America. We believe that four vaccines directed against the A, B, C, D and E subtypes of HIV would effectively address the worldwide spread of the HIV/AIDS epidemic.

Influence of Vaccine Improvements

We believe we will be able to rapidly develop new formulations of AIDSVAX. This would enhance our ability to address geographically defined markets. This process provides for a continued basis of product improvement. We have accomplished this with our two bivalent formulations of AIDSVAX.

We expect successive formulations of AIDSVAX to improve product efficacy, as well as the breadth of protection against different HIV subtypes. In addition, we will seek to create vaccines that require fewer booster shots and that can be used over larger areas of the world. Thus, we expect that an initial vaccine could be gradually enhanced, resulting in corresponding increases in the size of the market for the vaccine.

On the basis of our ongoing discussions with the FDA, we believe that improvements will be accomplished as amendments to our initial regulatory license, rather than as applications for entirely new products. This approach, if successful, would result in considerable savings of time and cost associated with future product development.

Comparison to Other Vaccines

We believe that hepatitis B vaccine serves as a useful model to predict demand for a prospective HIV vaccine. Hepatitis B is one of the most recent vaccines to be introduced on a worldwide basis. The pattern of infection and the at-risk groups with hepatitis B are comparable to those with HIV. Hepatitis B and HIV are transmitted by sexual contact and blood products. In the United States, the highest risk groups for hepatitis B and HIV are injection drug users and homosexual men.

The hepatitis B vaccine received FDA approval in 1981. Since its introduction, more than 20 million people in the United States and 500 million worldwide have received the hepatitis B vaccine. Considering that hepatitis B vaccination requires three doses for full immunization, we calculate that 1.5 billion doses of hepatitis B vaccine have been used worldwide. The Centers for Disease Control and Prevention, the World Health Organization, the American Medical Association and most other major health organizations have supported adding a hepatitis B vaccine to the regimen of childhood vaccines. Forty-two states in the United States now require it for school admission. Approximately 1.2 million people annually received hepatitis B shots in the United States, with a cost for children of approximately \$25.00 to \$55.00 per dose, or \$75.00 to \$165.00 for the entire vaccination.

We believe that, given the relative healthcare needs, the market for an HIV vaccine will be considerably larger than the market for hepatitis B vaccine. Further, we believe that adoption of an HIV vaccine will occur more rapidly, both domestically and worldwide. This conclusion is supported by a UNAIDS study, which predicts that, within a decade, the worldwide need for HIV vaccine will exceed 650 million doses annually.

SALES AND MARKETING

We intend to rely on third parties for sales and marketing of AIDSVAX. We believe that our resources are better utilized developing new formulations of AIDSVAX, rather than developing and maintaining a sales and marketing organization. Genentech currently has an option to obtain an exclusive worldwide license to use, market and sell AIDSVAX. If AIDSVAX is approved for sale and Genentech does not exercise its option to market AIDSVAX, we intend to enter into agreements for marketing and distribution with other partners and will pay a predetermined royalty to Genentech.

We anticipate that AIDSVAX will be sold by Genentech or a licensed third party through existing vaccine distribution channels in the United States and the rest of the world. This would result in several tiers of pricing that range from private reimbursement in the United States to government reimbursement in Europe to purchase by the World Health Organization for distribution to nations with underdeveloped economies. In the United States, vaccine distribution is further divided among pediatricians, general practitioners and the public health service.

Currently 83% of children worldwide receive the basic schedule of pediatric vaccines through a network of for-profit and non-profit institutions. We expect that an effective HIV vaccine will also be broadly distributed worldwide in a similar manner.

Apart from distribution, a number of variables will influence price, including:

- efficacy of the vaccine;
- safety;
- manufacturing cost;
- recommendations from expert medical panels;

- the perceived need in a particular population; and
- in some cases, government regulations requiring vaccination.

Due to these and other factors, we have not yet determined a pricing schedule for ${\tt AIDSVAX}$.

Several non-profit and government organizations have begun efforts to prepare for the eventual distribution of an HIV vaccine. For example, the State of California passed a bill committing the state to spend \$20 million to purchase one million doses of HIV vaccine if and when developed. In addition, the International AIDS Vaccine Initiative has started a campaign to fund the development and purchase of an HIV vaccine for the developing world.

MANUFACTURING

We do not have any manufacturing facilities of our own. We intend to rely on third parties to manufacture AIDSVAX. We believe that our resources are better utilized developing new vaccines, rather than entering into the capital intensive business of manufacturing.

Our license agreement with Genentech gives Genentech an option to manufacture any AIDSVAX formulation supplied beyond those it has already agreed to supply. If Genentech does not exercise its option to manufacture AIDSVAX, the license agreement allows us to enter into manufacturing agreements with third parties and pay a predetermined royalty to Genentech. If we utilize a third party, the license agreement provides that Genentech must transfer the required manufacturing technology and know-how to the third party.

Genentech has developed a proprietary method for producing synthetic gp120 protein. This method has enabled Genentech to clone and express gp120 genes from two dozen HIV strains. Utilizing genetic engineering, a fragment of coding information from HIV, consisting of the gp120 gene, is cloned from HIV into mammalian cells. We have an exclusive license from Genentech to all of these genes and the technical know-how to produce the synthetic gp120 proteins.

Specifically, for any formulation of AIDSVAX, the gp120 gene is inserted into Chinese hamster ovary cells which act as cellular factories that can produce commercial quantities, measured in kilograms, of gp120 protein. The production of gp120 in Chinese hamster ovary cells assures both genetic consistency and structural integrity of the synthetic product. As a result, the synthetic form is virtually identical to the natural form of gp120 that occurs in HIV viral particles. Since only a fragment of HIV is used in this process, there is no production of infectious HIV, and the final product is incapable of causing infection or disease.

LICENSE AND SERVICES AGREEMENTS WITH GENENTECH

We have entered into a license agreement with Genentech which in part defines the working relationship between the companies. The licensed technology relates to the development of a vaccine based on, containing, incorporating or using the recombinant gp120 subunit protein developed by Genentech for use to prevent, but not treat, HIV infection and/or AIDS. Genentech has granted us an exclusive license to all patents and patent applications directly related to this technology and proprietary know-how necessary for this technology that Genentech is free to license or sublicense. Certain of the licensed technology is sublicensed to us under licenses from third parties to Genentech. The initial term of the license agreement is 15 years from the commercial introduction date of a licensed product and will be determined on a country-by-country, product-by-product basis.

In addition to granting us rights to use Genentech's gp120 technology and certain adjuvant technology for developing a licensed product, the license agreement provides for Genentech to have rights to elect to manufacture and supply AIDSVAX for clinical testing and commercial sale. In addition to its rights to elect to manufacture vaccine, Genentech supplied us, cost-free, with its stock of approximately 300,000 doses of the B(MN) gp120 protein for testing in our Phase III clinical trials. We will use the B(MN) gp120 protein following successful completion of formulation with alum, vialing and quality assurance/control

testing, for which we will bear Genentech's costs and expenses. Genentech also supplied us with agreed-upon amounts of up to two additional gp120 proteins, B(GNE8) and E(244) for use in combination with the currently manufactured B(MN) gp120 for clinical trials. For the additional antigens, we paid Genentech its fully burdened manufacturing costs.

The license agreement provides for flexibility related to manufacturing. Should Genentech elect not to manufacture any vaccine supplies beyond those it has already agreed to supply, we may elect to use a third party for our manufacturing and marketing requirements. If we utilize a third party, Genentech must transfer the required manufacturing technology and know-how to the third party.

Genentech also has an option, to obtain an exclusive worldwide license to use, market and sell licensed products. This option is exercisable for 90 days after we make our first filing with the FDA for marketing approval of a licensed product. If Genentech exercises the marketing option:

- Genentech is required to pay us a fee equal to 33% of our total development costs including clinical testing, to date for the licensed product;
- we and Genentech will share net profits from sales of the licensed products, 30% and 70%, respectively, for sales within the United States and 70% and 30%, respectively, for sales outside the United States;
- the parties will establish a committee with an equal number of representatives from each company to oversee the development and commercialization of licensed products.

While the agreement specifies the formula used to calculate net profits, the calculation of individual components of the formula are subject to future negotiations and/or determination.

In the event that Genentech does not exercise the marketing option, then, in lieu of sharing net profits from the licensed products, we will pay Genentech a royalty on all sales of licensed products equal to:

- 25% of our net sales and our sublicensees' net sales of the licensed products worldwide, so long as any commercial vaccine component has been manufactured and supplied by Genentech; or otherwise
- 15% of our total net sales and our sublicensees' net sales of the licensed products worldwide.

Under the license agreement, we are required to use due diligence in developing, seeking regulatory approval for, marketing and commercializing licensed products. Development and commercialization of licensed products will be our sole business goal. In connection with reaching this goal, we are required to achieve the filing of the first market approval for a licensed product with the FDA no later than the fifth anniversary of the closing of our 1997 private placement. If we are unable to meet this milestone due to certain agreed-upon events or circumstances, we may request an extension from Genentech and we and Genentech can agree to a new date for the milestone, subject to a two-year limit on such extensions. If we are unable to meet a milestone for any reason other than the agreed-upon events or circumstances, any extension granted will be at Genentech's sole discretion. If we fail to exercise our due diligence, Genentech has the right to convert our exclusive license to a non-exclusive license, and may be entitled to terminate the license.

Either party may terminate the license agreement upon the other party's default or bankruptcy. In addition, Genentech may terminate the license agreement if we fail to:

- maintain a tangible net worth of at least \$1 million; or
- to meet a due diligence milestone within two years of the date originally set for such milestone, unless Genentech waives such two-year limit in its sole discretion.

We have also entered into a services agreement with Genentech pursuant to which Genentech has agreed to provide us with administrative, research, process science, manufacturing, clinical and regulatory support, primarily by making the services of certain Genentech personnel available to us. We will reimburse Genentech for all of Genentech's costs and expenses relating to the provision of these services. Either party may terminate the services agreement upon a breach which continues uncured for more than

60 days or upon the occurrence of bankruptcy or similar events. In addition, the services agreement will automatically terminate upon any termination of the license agreement. The term of the services agreement was recently extended until December 31, 2000.

LICENSED PATENTS

Under the license agreement, we have licensed from Genentech exclusive rights to a portfolio of United States and foreign patents. These patents cover nine families of subject matter. We have six issued United States patents and nine pending United States patent applications. With foreign filings, we have 82 issued patents and 38 are still pending. The technology claimed in these patents and applications involves a range of HIV vaccine product development activities, including the cloning and expression of recombinant virus glycoproteins for use as vaccine products and sustained release formulations of HIV gp120. Also claimed by patent filings are specific compositions of matter for the components of our vaccine products, and proprietary production, recovery and purification process technology. Together, these filings provide intellectual property that we believe will enhance the value of our products.

Under the license agreement, Genentech has retained title to the licensed patents and patent applications and other licensed technology previously owned by Genentech, while we will retain title to any improvements developed by us. Both parties will jointly own any improvements to the licensed patents and patent applications or other licensed technology developed or invented jointly. If Genentech exercises its marketing option under the license agreement, Genentech will have a fully paid-up, non-exclusive, worldwide license under all improvements to the licensed knowhow or patent rights that we own. Furthermore, Genentech will have such a license if Genentech terminates the license agreement before the expiration of the 15-year term or if we voluntarily terminate the license agreement. Genentech will remain responsible for the filing, prosecution and maintenance of all licensed patent rights, in consultation with us, at our expense.

We have been informed that Chiron Corporation has filed oppositions against two of Genentech's European patents that are licensed to us. Genentech, with our assistance, has filed responses to both oppositions, but the outcome of each opposition has yet to be determined. We have also been informed by the United States Department of Health that we may need to obtain a license under one or more of its United States and foreign patents involving molecular clones of HIV-1 viral strains MN-STI and BA-L. We are currently exploring the advisability of obtaining such a license. In the interim, we have recently filed an opposition to a European equivalent of the United States Department of Health patent and are awaiting the outcome of the opposition.

GOVERNMENT COLLABORATIONS

We have established collaborative relationships with two federal government agencies: (1) The Centers for Disease Control and Prevention; and (2) National Institute of Allergy and Infectious Diseases. We are in the process of negotiating grants with both of these agencies.

Our collaboration with the Centers for Disease Control and Prevention would be conducted in both the United States and Thailand. In the United States, the Centers for Disease Control have proposed to co-sponsor our Phase III clinical trial, starting in the Fall of 1999. The proposal provides that the Centers for Disease Control would fund \$8.0 million over four years to support our Phase III clinical trial sites, as well as to provide funds for new research into our HIV vaccine trials. In Thailand, the Centers for Disease Control are assisting in the measurement of viral loads in vaccinees and placebos, as well as examining HIV subtypes and strains in the at-risk population.

The National Institute of Allergy and Infectious Diseases is forming a collaboration with us to obtain and store clinical specimens from our North American Phase III clinical trial. The proposal provides that it would fund \$4.6 million for this program. We also have an ongoing collaboration with the AIDS Vaccine Evaluation Group, a clinical consortium financed by the National Institute of Allergy and Infectious Disease. In this collaboration we are providing AIDSVAX to clinical sites for Phase I/II clinical trials of new combination vaccines.

COMMERCIAL RELATIONSHIP WITH PASTEUR MERIEUX CONNAUGHT

On April 10, 1998, we signed a non-binding letter of intent with Pasteur Merieux Connaught to co-develop an alternative vaccine regimen, called the prime/boost. The letter of intent has recently been extended through November 1999. The prime/boost utilizes two independent vaccines administered sequentially. A Pasteur Merieux Connaught vaccine would be administered initially, followed by a bivalent gp120 vaccine. Should it prove efficacious, the alternative vaccine regimen would be developed, clinically tested, and if approved by regulatory agencies, marketed by Pasteur Merieux Connaught. We would serve as a scientific co-developer and a source for bivalent formulations of AIDSVAX, a critical component of the regimen. We would share significantly in profits made from the sale of both vaccine components — the Pasteur Merieux Connaught vaccine, as well as AIDSVAX.

Phase I human trials of the initial Pasteur Merieux Connaught prime/boost vaccine regimen have been conducted by the AIDS Vaccine Evaluation Group, an NIH-sponsored clinical consortium. In early studies of the Pasteur Merieux Connaught product, the combination vaccine incorporated monovalent gp120 provided by Chiron Vaccines as the boost. Subsequently, Pasteur Merieux Connaught and the AIDS Vaccine Evaluation Group altered their plans and requested us to provide our formulations of bivalent gp120 as a replacement for the Chiron product. From this request arose the letter of intent and a plan to co-develop a new vaccine regimen.

Currently, we and Pasteur Merieux Connaught are planning collaborative studies with our respective vaccines. During this time we are also negotiating a long-term co-development agreement with Pasteur Merieux Connaught. Should an agreement be reached on final terms, we will supply 100% of Pasteur Merieux Connaught's requirements for our bivalent gp120. Pasteur Merieux Connaught would pay our fully burdened costs plus 10% for all vaccines purchased from us. In addition, Pasteur Merieux Connaught would pay a royalty to us from Pasteur Merieux Connaught's sales of both vaccines in the regimen.

Genentech holds exclusive options for the manufacture and marketing of AIDSVAX. The non-binding letter of intent with Pasteur Merieux Connaught has certain conflicts with our license agreement with Genentech. This conflict will require resolution between us and Genentech. The issue is now under discussion, and we will resolve it prior to our entering a final business agreement with Pasteur Merieux Connaught. Upon resolution of the business issues with Genentech and the Pasteur Merieux Connaught agreement, Genentech will then join us in negotiations with Pasteur Merieux Connaught.

COMPETITION

We estimate that approximately 30 other companies have been engaged in research to produce an HIV vaccine. Only AIDSVAX and one other vaccine have progressed Phase II testing. AIDSVAX is the only HIV vaccine to commence Phase III clinical trials. Chiron Vaccines is currently developing a DNA-based HIV vaccine that incorporates gp120.

Two other notable efforts at producing HIV vaccines have failed. A collaboration between Merck & Co., Inc. and Repligen Corporation was terminated because their vaccine failed to elicit HIV-neutralizing antibodies. Similarly, MicroGeneSys, Inc. designed a vaccine that failed in early stage human testing. It appears that the principal differences between these vaccines and ours has been the choice of viral protein as antigen or the methods used for manufacturing.

We believe that we now lead all competitors worldwide in the development of an HIV preventive vaccine. Of the two HIV vaccines that have reached human clinical trials, we have full control of the leading product, AIDSVAX, and we plan to become a partner in the second with Pasteur Merieux Connaught.

GOVERNMENT REGULATION

AIDSVAX is subject to federal regulation, by the federal government, principally by the FDA under the Public Health Services Act, the Food, Drug and Cosmetic Act and other laws, and by state and local governments. Such regulations govern or influence, among other things, the testing, manufacture, safety

and efficacy requirements, labeling, storage, record keeping, licensing, advertising, promotion, distribution and export of such products.

AIDSVAX is classified by the FDA as a biological drug product. The steps ordinarily required before a biological drug product may be marketed in the United States include:

- preclinical laboratory and animal testing;
- the submission to the FDA of an Investigational New Drug Application, which must become effective before clinical trials may commence;
- adequate and well-controlled clinical trials to establish the safety, purity and potency of the biological drug product and to characterize how it behaves in the human body;
 - the submission to the FDA of a biologics license application;
 - FDA review of the biologics license application;
- satisfactory completion of an FDA preapproval inspection of the manufacturing facilities; and
- $\mbox{-}\mbox{FDA}$ approval of the license application, including approval of all product labeling.

In connection with obtaining approval to proceed with Phase III clinical trials and in determining the trial protocol, VaxGen has met with the FDA and its Vaccines and Related Biological Product Advisory Committee of the FDA. FDA's advisory committees are composed of outside experts who assist FDA in product reviews and provide advice on various issues. While the recommendations of these committees are not binding on the FDA, they are commonly followed. In connection with the Phase III clinical trials the FDA sought and received advice from the Vaccines and Related Biological Products Advisory Committee regarding the clinical development program and clinical study designs for AIDSVAX.

Preclinical testing includes laboratory evaluation of product chemistry, formulation and stability, as well as animal studies to assess the potential safety, purity and potency of each product. Preclinical safety tests must be conducted by laboratories that comply with FDA regulations regarding Good Laboratory Practices. The results of the preclinical tests together with manufacturing information and analytical data are submitted to the FDA as part of the Investigational New Drug Application and are reviewed by the FDA before the commencement of clinical trials. Unless the FDA objects to an Investigational New Drug Application by placing the study on clinical hold, the Investigational New Drug Application will become effective 30 days following its receipt by the FDA. The FDA may suspend clinical trials at any time on various grounds, including a finding that patients are being exposed to unacceptable health risks. If the FDA does place the study on clinical hold, the sponsor must usually resolve all of FDA's concerns before the study can proceed.

Clinical trials involve the administration of the investigational product to humans under the supervision of qualified principal investigators. Clinical trials are conducted in accordance with Good Clinical Practices under protocols submitted to the FDA as part of the Investigational New Drug Application. In addition, each clinical trial is approved and conducted under the auspices of an institutional review board and with the patients' informed consent. The institutional review board will consider, among other things, ethical factors, the safety of human subjects and possibility of liability of the institutions conducting the trial.

Clinical trials are conducted in three sequential phases; however, the phases may overlap. The goal of a Phase I clinical trial is to establish initial data about safety and tolerance of the biological agent in humans. In Phase II clinical trials, evidence is sought about the desired immune response of a biological agent in a limited number of patients. Additional safety data and dosing regimen information are also gathered from these studies. The Phase III clinical trial program consists of expanded, large-scale, multi-center studies of persons who are susceptible to the targeted disease. The goal of these studies is to obtain sufficient evidence of the safety, purity and potency of the proposed product. Our Phase III clinical trials of AIDSVAX are being conducted on persons at risk for HIV infection but who test HIV negative prior to

enrollment in the trial. The FDA also frequently requests that sponsors conduct Phase IV studies after licensing to gain additional information about the biological drug product in a wider population.

All data obtained from this comprehensive program, in addition to detailed information on the manufacture and composition of the product, are submitted in a biologics license application to the FDA for review and approval for the manufacture, marketing and commercial shipments of AIDSVAX. FDA approval of the biologics license application is required before marketing may begin in the United States. The FDA also may, at any time, require the submission of product samples and testing protocols for lot-by-lot confirmatory testing by the FDA prior to commercial distribution. This means a specific lot of vaccine cannot be released for commercial distribution until the FDA has authorized such release. Similar types of regulatory processes will be encountered as efforts are made to market the vaccine internationally. We will be required to assure product performance and manufacturing processes from one country to another.

For commercialization of AIDSVAX, the manufacturing processes described in our biologics license application must receive FDA approval and the manufacturing facility must successfully pass an inspection prior to approval of AIDSVAX for sale within the United States. The pre-approved inspection assesses whether, for example, the facility complies with the FDA's good manufacturing practices. These practices include elaborate testing, control, documentation, record keeping and other quality assurance procedures. If Genentech does not exercise its option to manufacture AIDSVAX, we must pursue third party manufacturing arrangements. For marketing outside the United States, we will be subject to the regulatory requirements of other countries, which vary from country to country, including marketing approval requirements. The regulatory approval process in other countries includes requirements which vary from country to country and the time needed to secure approval may be longer or shorter from that required for FDA approval.

EMPLOYEES

As of April 15, 1999, we had 52 employees: 24 are clinical staff, 12 are research and development staff and 16 are management/administration staff. None of our employees is subject to a collective bargaining agreement, and we believe that our relations with our employees are good.

FACILITIES

Our executive offices are located in Brisbane, California, in an office building in which we lease approximately 16,000 square feet. The lease agreement terminates in July 2005, and we have an option to renew for a successive five-year period. We also lease approximately 10,000 square feet of laboratory space in South San Francisco under a lease agreement that terminates in March 2006. We have an option to renew for a successive five-year period. We believe that our facilities are sufficient to support our operations for at least the next 24 months.

In Thailand, we lease office space at Mahidol University and at Taksin Hospital in Bangkok. We will lease this space through the duration of the Thai Phase III clinical trials.

LEGAL PROCEEDINGS

We are not currently subject to any material legal proceedings or claims.

MANAGEMENT

EXECUTIVE OFFICERS, DIRECTOR NOMINEES AND DIRECTORS

NAME	AGE	POSITION
Robert C. Nowinski(1)(4)	52	Chairman, Chief Executive Officer
Donald P. Francis(1)(4)	56	President, Director
Phillip W. Berman(4)	49	Senior Vice President, Research &
John G. Curd	53	Senior Vice President, Medical Affairs
Carter A. Lee	46	Senior Vice President, Finance &Administration
Stephen C. Francis(3)(4)	58	Director
Roberta R. Katz(5)	51	Director Nominee
Ruth B. Kunath(5)	47	Director Nominee
William D. Young(1)(2)(3)	54	Director

- (1) Member of the Executive Committee
- (2) Member of the Compensation Committee
- (3) Member of the Audit Committee
- (4) Member of the Genentech Contract Committee
- (5) The director nominees have agreed to join the board of directors shortly after consummation of the offering. We anticipate that each director nominee will become a member of the Compensation, Audit and Genentech Contract Committees.

ROBERT C. NOWINSKI, PH.D. Dr. Nowinski co-founded VaxGen in November 1995 and has served as a director and Chairman of the Board since inception and our Chief Executive Officer since April 1999. In 1991, Dr. Nowinski founded PathoGenesis, Corporation, a publicly-held biotechnology company and served as Chairman of the Board until 1995. In 1989, Dr. Nowinski founded ICOS Corporation, a publicly-held biotechnology company, where, from 1989 through 1991, Dr. Nowinski served as Chief Executive Officer and President. In 1981, Dr. Nowinski founded Genetic Systems Corporation, a publicly-held biotechnology company, where, from 1981 to 1985, Dr. Nowinski held various executive positions including Chairman of the Board, Chief Executive Officer, President and Scientific Director. Following the merger of Genetic Systems Corporation with Bristol-Myers Company, from 1988 to 1989, Dr. Nowinski served as Vice-President of New Technology for Bristol-Myers Company at its headquarters in New York. Prior to such time, Dr. Nowinski was a Professor of Microbiology and Immunology at the University of Washington and Head of the Virology Program at the Fred Hutchinson Cancer Research Center in Seattle, Washington. During his academic career, Dr. Nowinski authored over 100 scientific publications. Dr. Nowinski received a B.S. from Beloit College and a Ph.D. in immunology from Cornell University Sloan-Kettering Division.

DONALD P. FRANCIS, M.D., D.SC. Dr. Francis co-founded VaxGen in November 1995 and has served as our President and as a director since inception. From 1993 to 1995, Dr. Francis directed HIV vaccine clinical research at Genentech. Prior to joining Genentech, Dr. Francis served from 1973 to 1993 in various positions at the Centers for Disease Control. During this period, Dr. Francis established and directed the HIV laboratory for the Centers for Disease Control and served as an Assistant Director, Viral Diseases Program. At that time, he was also a principal investigator in one of the two Phase III clinical trials that led to licensure of the hepatitis B vaccine in the United States. In 1976, Dr. Francis was the lead epidemiologist on the first clinical team to encounter and control Ebola virus. Prior to such time, Dr. Francis had a central role in the World Health Organization's smallpox eradication program, which eradicated smallpox from the world. Dr. Francis received an M.D. from Northwestern University and completed his training in pediatrics at Los Angeles County/USC Medical Center. Dr. Francis received a doctorate in virology from the Harvard School of Public Health. Dr. Francis is the brother of Stephen Francis.

PHILLIP W. BERMAN, PH.D. Dr. Berman has served as our Senior Vice President, Research & Development since April 1999. Dr. Berman served as our Vice President of Research & Development from

November 1997 to April 1999, and has served as a director since October 1997. From 1982 to 1997, Dr. Berman served in various capacities with Genentech, including Senior Scientist, Molecular Biology Department, and Staff Scientist, Department of Immunology and also Department of Process Sciences. Since 1984, Dr. Berman has had research responsibilities in Genentech's AIDS Vaccine Project and is an inventor of AIDSVAX. Dr. Berman received an A.B. in biology from the University of California, Berkeley, a Ph.D. in biochemistry from Dartmouth College and performed post doctoral research at the Neurobiology Laboratory of the Salk Institute and the Department of Biochemistry and Biophysics at the University of California, San Francisco.

JOHN G. CURD, M.D. Dr. Curd has served as our Senior Vice President, Medical Affairs, since April, 1999. From 1991 to April 1999, Dr. Curd held various positions at Genentech, including Director, Immunology/Oncology/Infectious Disease, Senior Director and Head of Clinical Science and Vice President of Clinical Development. From 1978 to 1991, Dr. Curd held several research and clinical positions at The Scripps Clinic, a world-renowned research foundation and medical clinic, including Head, Division of Rheumatology and Vice Chairman, Department of Medicine. He received a B.A. from Princeton University and an M.D. from Harvard Medical School.

CARTER A. LEE Mr. Lee has served as General Manager and Senior Vice President, Finance & Administration since September 1998. From 1991 to 1997, Mr. Lee served as Senior Vice President and Chief Financial Officer of Diefenbach Elkins International, Inc., a corporate branding consultancy. From 1990 to 1991, Mr. Lee served as Vice President, Finance & Administration of EDAW, Inc., a worldwide landscape architecture and planning firm for projects such as theme parks and destination resorts. From 1987 to 1990, Mr. Lee served as Vice President and Corporate Controller of Landor Associates, a strategic design consulting firm. Prior to such time, Mr. Lee served in various positions at Coopers & Lybrand, including Senior Accountant and Supervising Consultant. Mr. Lee received a B.A. from the University of California, Berkeley, and an M.B.A. from California State University, Hayward.

STEPHEN C. FRANCIS Mr. Francis has served as a director since October 1996. Mr. Francis has served as Vice-Chairman and Chief Risk Oversight Officer at Fischer, Francis, Trees & Watts, an investment management firm which he co-founded in 1972. Mr. Francis is a member and former chairman of the Treasury Borrowing Committee, which advises the United States Treasury, and is a member of the Stanford University Graduate School of Business Advisory Council. Mr. Francis received an A.B. from Dartmouth College and an M.B.A. from Stanford University. Mr. Francis is the brother of Donald Francis.

ROBERTA R. KATZ Ms. Katz is a director nominee who has agreed to join the board of directors shortly after consummation of the offering. Ms. Katz is the Chief Executive Officer of The Technology Network. Ms. Katz joined Netscape Communications Corporation in May 1995 as Vice President, General Counsel and Secretary. From January 1996 to April 1999, Ms. Katz served as Senior Vice President, General Counsel and Secretary of Netscape, where she was a member of the team that negotiated the Netscape/ America Online merger. From March 1993 until joining Netscape, Ms. Katz served as Senior Vice President and General Counsel of McCaw Cellular Communications, where she was a member of the team that negotiated the AT&T/McCaw merger. In addition, from March 1992 until joining Netscape, Ms. Katz served as Senior Vice President and General Counsel of LIN Broadcasting Company, a subsidiary of McCaw. In March 1998, Ms. Katz was named as one of the 50 Most Influential Women Attorneys in America by the National Law Journal. She is an author of Justice Matters: Rescuing the Legal System for the 21st Century. Ms. Katz received a B.A. from Stanford University, a Ph.D. in anthropology from Columbia University and a J.D. from the University of Washington School of Law.

RUTH B. KUNATH Ms. Kunath is a director nominee who has agreed to join the board of directors shortly after consummation of the offering. Ms. Kunath has managed the Vulcan Venture Biotechnology Portfolio, managing public and private biotech and emerging healthcare investments since 1992. Prior to her employment at Vulcan Ventures, Ms. Kunath managed Seattle Capital Management equity assets as Senior Portfolio Manager for the healthcare sector of Bank of America Capital Management. Ms. Kunath received a B.A. from DePaul University and is a Certified Financial Analyst.

WILLIAM D. YOUNG Mr. Young has served as a director since November 1995. Since 1997, Mr. Young has served as the Chief Operating Officer of Genentech, where he has been employed since 1980. Mr. Young serves on the board of directors of IDEC Pharmaceuticals and Energy Biosystems Corp. He received a B.S. in chemical engineering from Purdue University and an M.B.A. from Indiana University.

BOARD OF DIRECTORS AND OFFICERS

The size of the board of directors is currently set at seven members. Directors hold office until the next annual meeting at which time their terms expire and their successors are elected. Officers are appointed by the board of directors for one year terms.

AUDIT COMMITTEE

The audit committee makes recommendations to the board of directors about the selection of independent auditors, reviews the results and scope of the audit and other services provided by our independent auditors, and evaluates our internal controls. The audit committee consists of Mr. Stephen Francis and Mr. William Young. Upon joining the board of directors, Ms. Katz and Ms. Kunath will become members of this committee.

COMPENSATION COMMITTEE

The compensation committee reviews and approves the compensation and benefits for our executive officers, administers our stock option plans and makes recommendations to the board of directors about compensation matters. The compensation committee consists of Mr. William Young. Upon joining the board of directors, Ms. Katz and Ms. Kunath will become members of this committee.

EXECUTIVE COMMITTEE

The executive committee may act on behalf of the board of directors on all matters except those concerning filling vacancies on the board, executive compensation, audits or individual contracts or financial obligations exceeding \$3,000,000. The executive committee consists of Dr. Robert Nowinski, Dr. Donald Francis and Mr. William Young.

GENENTECH CONTRACT COMMITTEE

The Genentech contract committee considers matters relating to agreements with Genentech. The Genentech contract committee consists of Dr. Robert Nowinski, Dr. Donald Francis, Dr. Phillip Berman and Mr. Stephen Francis. Upon joining the board of directors, Ms. Katz and Ms. Kunath will become members of this committee.

COMPENSATION COMMITTEE INTERLOCKS AND INSIDER PARTICIPATION

Decisions about executive compensation are made by the compensation committee. No member of the compensation committee or executive officer of VaxGen has an interlocking relationship with executive officers or directors of another company.

EXECUTIVE COMPENSATION

The following table depicts amounts paid during the last fiscal year as compensation to our chief executive officer and our three most highly compensated executive officers, other than the chief executive officer, who were serving as executive officers at the end of fiscal 1998.

SUMMARY COMPENSATION TABLE

	ANNUAL COMPENSATION		LONG-TERM COMPENSATION	
NAME AND PRINCIPAL POSITION	SALARY(\$)	BONUS(\$)	SECURITIES UNDERLYING OPTIONS(#)	
Robert C. Nowinski, Chairman(1) Donald P. Francis, President		\$ 75,000	60,000 15,000	
Phillip W. Berman, Vice President, Research &Development(2)	175,000	35,000	15,000	
Finance(3)	150,730		200,000	

- (1) Dr. Nowinski was appointed Chief Executive Officer on April 22, 1999.
- (2) Dr. Berman was appointed Senior Vice President, Research & Development on April 22, 1999.
- (3) Mr. Pacquer resigned from VaxGen as of March 15, 1999.

The following table depicts stock option plan activity during the fiscal year ended December 31, 1998.

OPTION GRANTS IN LAST FISCAL YEAR

INDIVIDUAL GRANTS					POTENTIAL REALIZABLE VALUE AT ASSUMED ANNUAL	
		% OF TOTAL				ES OF
	NUMBER OF SECURITIES UNDERLYING	OPTIONS GRANTED TO EMPLOYEES	EXERCISE OR BASE		STOC APPRE	K PRICE CIATION TION TERM
	OPTIONS	IN	PRICE	EXPIRATION		
NAME	GRANTED(#)	1998	(\$/SH)	DATE	5%(\$)	10%(\$)
Robert C. Nowinski						
Phillip W. Berman						
Robert F. Pacquer(1)	200,000(2)	45.7	7.00	1/2/08	880,000	2,231,000

- (1) Mr. Pacquer resigned from VaxGen as of March 15, 1999.
- (2) Under the terms of Mr. Pacquer's employment agreement, he received an option to purchase 200,000 shares. Under the terms of Mr. Pacquer's resignation, this amount was reduced as follows: (a) as of March 15, 1999, 77,500 of Mr. Pacquer's options were exercisable until March 31, 2000; and (b) if we complete our initial public offering by September 1, 1999, an additional 10,000 shares will become exercisable until March 31, 2000. The balance of Mr. Pacquer's options have terminated.

FISCAL YEAR-END OPTION VALUES

NAME 	NUMBER OF SECURITIES UNDERLYING UNEXERCISED OPTIONS AT FISCAL YEAR-END (#) EXERCISABLE/UNEXERCISABLE	VALUE OF UNEXERCISED IN-THE-MONEY OPTIONS AT FISCAL YEAR-END (\$) EXERCISABLE/UNEXERCISABLE
Robert C. Nowinski Donald P. Francis Phillip W. Berman Robert F. Pacquer(1)	/ / 50,000/150,000 50,000/150,000	/ / 125,000/375,000 125,000/375,000

(1) Mr. Pacquer resigned from VaxGen as of March 15, 1999.

EMPLOYMENT AGREEMENTS

Dr. Nowinski's employment agreement provides for a base annual salary of \$250,000 through 2002. On April 22, 1999, our board of directors approved an increase in Dr. Nowinski's annual salary to \$300,000. Dr. Nowinski will receive a performance bonus of 125,000 shares of common stock if either the market value of our common stock reaches an average of \$28.00 per share over a 30-day period or we are acquired in an acquisition that results in a purchase price of at least \$28.00 per share. In the event of a change of control or termination prior to the end of the term of his employment agreement, we may be required to pay all salary due to Dr. Nowinski. Upon termination of employment, Dr. Nowinski has agreed not to compete with us for one year.

Dr. Francis' employment agreement provides for a base salary of \$250,000 through 2002. On April 22, 1999, our board of directors approved an increase in Dr. Francis' annual salary to \$275,000. Dr. Francis may receive an annual bonus of up to 30% of his base salary as determined in the discretion of the board of directors. Dr. Francis will also receive a performance bonus of 125,000 shares of common stock if either the market value of our common stock reaches an average of \$28.00 per share over a 30-day period or we are acquired in an acquisition that results in a purchase price of at least \$28.00 per share. In the event of a change of control or termination of employment prior to the end of the five-year term, we may be required to pay all salary due to Dr. Francis. Upon termination of employment, Dr. Francis has agreed not to compete with us for one year.

Dr. Berman's employment agreement provides for a base salary of \$175,000 through November 2000. On April 22, 1999, our board of directors approved an increase in Dr. Berman's annual salary to \$200,000. Dr. Berman may receive an annual bonus of up to 20% of his base salary as determined in the discretion of the board of directors. Dr. Berman will also receive a performance bonus of 75,757 shares of common stock if either the market value of our common stock reaches an average of \$28.00 per share over a 30-day period or we are acquired in an acquisition that results in a purchase price of at lease \$28.00 per share. In the event of a change of control or termination of employment prior to the expiration of the three-year term, we may be required to pay Dr. Berman's base salary for twelve months following his termination. Upon termination of employment, Dr. Berman has agreed not to compete with us for one year.

Dr. Curd's employment agreement provides for an annual base salary of \$225,000 through May 2003. Dr. Curd may also receive an annual bonus of up to 30% of his base salary and up to 10,000 shares of stock options with an exercise price equal to fair market value, as determined in the discretion of the board of directors. We have agreed to pay Dr. Curd a bonus of up to \$50,000, to be paid over the period of his four-year contract. We have also agreed to assume Dr. Curd's loan for \$96,822 outstanding with Genentech and accept an interest-free promissory note from Dr. Curd. Dr. Curd agrees to retire the outstanding loan by the termination of this agreement. Dr. Curd has received an option to purchase up to 125,000 shares of common stock that vests over a four-year period. In the event of a change of control, Dr. Curd may receive a one-time bonus of 37,500 shares of common stock. In the event of termination prior to the expiration of the four-year term, we may be required to pay Dr. Curd's base salary for twelve months following his termination. Upon termination of employment, Dr. Curd has agreed not to compete with us for one year.

Mr. Lee's employment agreement provides for a base salary of \$185,000 through March 2003. Mr. Lee may also receive an annual bonus of up to 20% of his base salary, and 10,000 shares of stock options with an exercise price equal to fair market value, as determined in the discretion of the board of directors. Mr. Lee has received an option to purchase up to 125,000 shares of common stock that vests over a four-year period. In the event of a change of control, Mr. Lee may receive a one-time bonus of 37,500 shares of common stock. In the event of termination prior to the expiration of the four-year term, we may be required to pay Mr. Lee's base salary for twelve months following his termination. Upon termination of employment, Mr. Lee has agreed not to compete with us for one year.

DIRECTOR COMPENSATION

We reimburse directors for out-of-pocket and travel expenses incurred while attending board of director and committee meetings. Directors are also paid \$1,000 per meeting attended in person and \$500 for participation by conference call. Directors who are not also employees receive an annual option to purchase up to the lesser of: (1) \$20,000 worth of common stock at an exercise price equal to the fair market value of the stock on the date of grant; and (2) 2,857 shares of common stock. Employee directors are also eligible to receive option grants.

1996 STOCK OPTION PLAN

We adopted a 1996 stock option plan for our officers, directors, key employees and consultants. Options to purchase shares of common stock are authorized to be issued to participants through either incentive stock options or nonqualified stock options. On April 1, 1999, our shareholders approved an increase of 1,250,000 in the number of shares reserved for issuance under the 1996 plan, to a total of 1,750,000 shares of common stock reserved for issuance; options are subject to adjustment. The 1996 plan is administered by our board of directors but may also be administered by a committee appointed by our board of directors. The exercise price of options is not less than the fair market value of the common stock on the date of grant, except that the exercise price of nonqualified stock options shall not be less than 85% of the fair market value at the date of the grant. Options granted under the 1996 plan have a maximum term of ten years. Options vest at a rate of 25% per year over a four-year period unless otherwise provided by the board of directors. In no event may the board of directors specify a vesting schedule that permits an option to vest at a rate less than 20% per year, however. Nonqualified stock options granted to non-employee directors will vest at the rate of 40% on the date of grant and 60% on the first anniversary of the date of grant. The 1996 plan expires ten years from the date of adoption, unless sooner terminated by the board of directors. As of May 31, 1999, there were a total of 1,150,600 options outstanding under the 1996 plan.

1998 DIRECTORS STOCK OPTION PLAN

We adopted a 1998 director stock option plan for our non-employee directors. The plan provides for the issuance of 37,500 shares of common stock to non-employee directors through annual options. Options are subject to adjustment. The plan provides for grant of initial options to non-employee directors on May 6, 1998. Annual option grants will automatically be made to non-employee directors on the annual meeting date in each subsequent year. The exercise price of the initial options is \$7.00 per share. The exercise price of the each annual option is the fair market value of our common stock on the annual grant date. Each initial option is fully vested upon grant. Each annual option fully vests on the first anniversary of its grant date, subject to certain meeting attendance requirements. The board of directors may terminate the 1998 director plan at any time. As of May 31, 1999, there were a total of 8,571 options outstanding under the 1998 director plan.

401(k) PLAN

We maintain a 401(k) profit sharing benefit plan intended to qualify under Section 401 of the Internal Revenue Code of 1986, as amended. The plan covers all employees who satisfy certain minimum age eligibility requirements. Under the profit sharing portion of the plan, we may make an annual contributions for the benefit of eligible employees in an amount determined by us. Under the 401(k) portion of the plan, eligible employees may make pretax elective contributions of their compensation, subject to maximum limits on contributions prescribed by law.

CERTAIN TRANSACTIONS

The following is a summary of certain related party transactions since January 1996 to which we were or are a party or in which certain of our executive officers, directors or greater than 10% stockholders had or have a direct or indirect material interest. We believe that each of these agreements was made on terms at least as fair to us as could have been obtained from unaffiliated third parties.

We entered into a credit agreement dated December 19, 1995 with Genentech under which Genentech financed our formation by means of a \$1,000,000 line of credit. We borrowed \$780,000 under the credit agreement in 1996 and \$205,000 in 1997. Our obligations under the credit agreement were converted into 142,857 shares of common stock in March 1997 at a price of \$7.00 per share.

We issued 1,150,000 shares of common stock to Genentech, 500,000 shares of common stock to Dr. Donald P. Francis, and 250,000 shares of common stock to Dr. Robert C. Nowinski on April 10, 1996 for a purchase price of \$0.02 per share. We also issued 133,333 shares of common stock to Dr. Francis, 66,666 shares of common stock to Dr. Nowinski, and 20,000 shares of common stock to Stephen C. Francis on October 29, 1996 for a purchase price of \$0.02 per share.

We entered into a services agreement dated January 1, 1996 with Genentech under which Genentech agreed to provide us with administrative and other services. Under the services agreement Genentech has provided us with expertise in process sciences, regulatory affairs, virology and the manufacturing of clinical supplies of AIDSVAX. We paid Genentech \$1,442,000, \$2,352,000 and \$690,000 in years 1996-1998. The initial services agreement expired December 31, 1998 but was renewed through December 31, 2000.

We entered into a license agreement dated May 1, 1996 with Genentech under which Genentech granted us an exclusive license to specified patents and proprietary know-how relating to the development of a vaccine to prevent HIV infection and/or AIDS. The Genentech license agreement is described in further detail in "Business -- License and Services Agreement with Genentech."

We entered into a warrant agreement with Genentech on March 15, 1996 under which Genentech could purchase that number of shares of our common stock necessary to maintain Genentech's 25% ownership on a fully-diluted basis. The purchase price for any shares purchased under this agreement would be market price. The warrant expired January 11, 1999, at the completion of our 1998 private placement. We have granted Genentech registration rights with respect to all of its securities. They do not hold any further rights to acquire our common stock.

We issued 142,857 shares of common stock to Genentech in March 1997 in connection with our 1997 private placement for a purchase price of \$7.00 per share.

We entered into a sublease agreement dated September 3, 1997 with Genentech covering office space located on the premises leased by Genentech in South San Francisco. We are no longer occupying this space. Under the sublease we paid Genentech a monthly rental of \$5,985 through September 1998.

PRINCIPAL STOCKHOLDERS

The following table sets forth information about the beneficial ownership of common stock of:

- each director, director nominee, our chief executive officer and our three most highly compensated executive officers;
- directors and executive officers as a group; and
- 5% beneficial owners.

The information in this table is as of May 31, 1999 and as adjusted to reflect the sale of common stock in the offering.

	BENEFICIALLY OWNED SHARES(1)			
	PRIOR TO O	FFERING	AFTER OFFERING	
NAME AND ADDRESS OF BENEFICIAL OWNER	NUMBER	PERCENT	PERCENT	
Genentech, Inc	1,522,354	19.8%	14.1%	
South San Francisco, California 94080 Donald P. Francis	633,333	8.2	5.9	
1000 Marina Boulevard, Suite 200 Brisbane, California 94005				
Robert C. Nowinski	309,166	4.0	2.9	
Phillip W. Berman(2)	50,000	*	*	
Stephen C. Francis(3)	42,857	*	*	
Roberta R. Katz(4)	,			
Ruth B. Kunath(5)	263,158	3.4	2.4	
William D. Young(6)	•	19.8	14.1	
persons)(7)	2,820,868	36.5	26.0	

- * Less than 1%.
- (1) Includes shares underlying options or warrants exercisable within 60 days of May 31, 1999. Except as indicated, persons named in the table have sole voting and investment power with respect to all shares of common stock owned by them.
- (2) Includes 50,000 shares issuable on exercise of outstanding options exercisable within 60 days of May 31, 1999.
- (3) Includes 2,857 shares issuable upon exercise of outstanding options exercisable within 60 days of May 31, 1999.
- (4) Ms. Katz is a director nominee who has agreed to join the board of directors shortly after consummation of the offering. Ms. Katz will be granted an option to purchase up to 20,000 shares of common stock upon commencement of service on the board of directors. The stock option vests over four years.
- (5) Ms. Kunath is a director nominee who has agreed to join the board of directors shortly after consummation of the offering. Ms. Kunath manages the Vulcan Venture Biotechnology Portfolio as an employee of Vulcan Ventures, Inc. Vulcan Ventures Inc. owns 263,158 shares of common stock. Ms. Kunath disclaims any beneficial ownership of Vulcan Ventures shares except to the extent of any pecuniary interest therein. Ms. Kunath will be granted an option to purchase up to 20,000 shares of common stock upon commencement of service on the board of directors. The stock option vests over four years.
- (6) Mr. Young is Chief Operating Officer of Genentech. Mr. Young disclaims any beneficial ownership of Genentech shares except to the extent of any pecuniary interest therein.
- (7) Includes an aggregate of 52,857 shares of common stock issuable on exercise of outstanding options exercisable within 60 days of May 31, 1999.

DESCRIPTION OF CAPITAL STOCK

The following is a description of the material terms of our capital stock and charter documents. While complete in material respects, this description is nonetheless a summary and is qualified in each instance by reference to the full text of these documents.

Our certificate of incorporation authorizes 40,000,000 shares of capital stock, consisting of 20,000,000 shares of common stock, \$0.01 par value, and 20,000,000 shares of preferred stock, \$0.01 par value.

COMMON STOCK

We have 20,000,000 shares of common stock authorized, of which 7,685,161 shares are outstanding as of May 31, 1999. There are approximately 768 stockholders of record. Holders of common stock are entitled to one vote per share. There are no cumulative voting or preemptive rights. Holders of common stock are entitled to receive their share of any dividends declared by the board of directors. In the event of liquidation, dissolution or winding up, holders of common stock are entitled to their share of remaining assets following payment to creditors. All the outstanding shares of common stock are fully paid, validly issued and non-assessable. As of May 31, 1999, we had outstanding options to purchase 1,159,171 shares of common stock.

PREFERRED STOCK

The board of directors is authorized to issue 20,000,000 shares of preferred stock in one or more series and to fix the rights, preferences and privileges of those shares without further action by stockholders. Any shares of preferred stock so issued may have priority over the common stock with respect to dividend, liquidation and other rights. No preferred stock has been issued.

WARRANTS

As of May 31, 1999, there are outstanding warrants to purchase 459,825 shares of common stock. All of these warrants are currently exercisable.

In connection with our 1997 financing we granted a contractual right to one private unaffiliated investor to maintain his proportionate stock ownership position. This right will expire March 31, 2002.

ANTI-TAKEOVER PROVISIONS IN CHARTER DOCUMENTS

Our certificate of incorporation does not provide for cumulative voting in connection with the election of directors. Genentech is currently our largest single stockholder, owning approximately 20% of our common stock. Our officers and directors as a group own approximately 37% of our common stock. While these percentages will decrease after this offering, Genentech and our officers and directors acting together could influence the direction and control of our business.

Our bylaws provide that special meetings of stockholders may be called only by the board of directors, the Chairman of the Board, the President, or any holder or holders of at least 10% of our voting stock. The bylaws also provide that stockholders seeking to bring business before an annual or special meeting must provide timely notice in writing. To be timely, a stockholder's notice must be transmitted:

- (1) not less than 20 days nor more than 60 days before a meeting to act on a plan of merger or consolidation or a proposed sale, lease, exchange or other disposition of our assets; or
- (2) not less than 10 days nor more than 60 days before any other meeting.

The bylaws also contain specific requirements for the form of a stockholder's notice. These provisions have anti-takeover effects that may deter a change in control of us.

REGISTRATION RIGHTS

In connection with our prior private financings, we granted registration rights with respect to:

- (1) 3,607,047 shares of common stock sold in the 1997 private placement;
- (2) 1,570,010 shares of common stock sold in the 1998 private placement; and
 - (3) 372,354 shares of common stock sold to Genentech.

These registration rights generally grant to the holders up to three "piggyback" registrations and two "demand" registrations, subject to customary cutback provisions.

DELAWARE LAW

VaxGen is subject to Section 203 of the Delaware General Corporation Law, which prevents an "interested stockholder," defined as a person who owns or within three years did own 15% or more of a corporation's outstanding voting stock, from engaging in a business combination with a publicly-held Delaware corporation for three years following the date that person became an interested stockholder. An exception is made where the business combination is approved in a prescribed manner. A corporation may at its option exclude itself from the coverage of Section 203 by amending its certificate of incorporation or bylaws by action or its stockholders. We did not elect to exclude ourselves.

DIRECTORS' AND OFFICERS' LIABILITY AND INDEMNIFICATION

Our certificate of incorporation eliminates the personal liability of directors to us or our stockholders for money damages resulting from breaches of their fiduciary duty to the fullest extent permitted by Delaware General Corporation Law. This provision does not eliminate the liability of directors for:

- (1) acts or omissions not in good faith that involve intentional misconduct or a knowing violation of law;
 - (2) improper declarations of dividends;
- (3) transactions from which a director derived an improper personal benefit; or
 - (4) breaches of directors' duty of loyalty to us or our stockholders.

Our bylaws contain provisions requiring the indemnification of our directors to the fullest extent permitted by applicable law. We also have the ability to indemnify officers, employees and agents to the same extent as directors. Our bylaws also permit us to secure insurance on behalf of any director, officer, employee or other agent for any liability arising out of his or her actions in such capacity, regardless of whether the bylaws permit such indemnification. The employment agreements of Drs. Nowinski and Francis contain indemnification provisions. We have entered into an indemnification agreement with Ms. Katz and Ms. Kunath both director nominees, under which we have agreed to indemnify them with respect to any liability in connection with this offering to the fullest extent permitted by law.

TRANSFER AGENT

The transfer agent for the common stock is ChaseMellon Shareholder Services, Seattle, Washington.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our common stock. The market price of our common stock could drop due to sales of a large number of shares of our common stock or the perception that such sales could occur. These factors could also make it more difficult to raise funds through future offerings of common stock.

After this offering, 10,785,161 shares of common stock will be outstanding. A total of 11,250,161 shares will be outstanding if the underwriters exercise their over-allotment option in full. Of these shares, all of the shares sold in this offering, including shares, if any, issued on exercise of the underwriter's over-allotment option, will be freely tradable without restriction under the Securities Act except for any shares purchased by "affiliates" of VaxGen as defined in Rule 144 under the Securities Act. The remaining shares are "restricted securities" within the meaning of Rule 144 under the Securities Act. The restricted securities generally may not be sold unless they are registered under the Securities Act or sold pursuant to an exemption from registration, such as the exemption provided by Rule 144 under the Securities Act.

Our officers and directors and a majority of shareholders have entered into lock-up agreements pursuant to which they have agreed not to offer or sell any shares of common stock they currently own, for a period of 180 days after the date of this prospectus without the prior written consent of Prudential Securities, on behalf of the underwriters. In addition to the shares subject to lock-up agreements, 1,319,497 shares of common stock may not be sold in reliance on Rule 144 before December 1999. Prudential Securities may, at any time and without notice, waive any of the terms of these lock-up agreements specified in the underwriting agreement. Following the lock-up period, these shares will not be eligible for sale in the public market without registration under the Securities Act unless such sales meet the conditions and restrictions of Rule 144 as described below.

In general, under Rule 144 as currently in effect, any person, or persons whose shares are aggregated, including an affiliate, who has beneficially owned shares for a period of at least one year is entitled to sell, within any three-month period, a number of shares that does not exceed the greater of: (1) 1% of the then-outstanding shares of common stock; and (2) the average weekly trading volume in the common stock during the four calendar weeks immediately preceding the date on which the notice of such sale on Form 144 is filed with the SEC. Sales under Rule 144 are also subject to certain provisions relating to notice and manner of sale and the availability of current public information about VaxGen. In addition, a person, or persons whose shares are aggregated, who has not been an affiliate of VaxGen at any time during the 90 days immediately preceding a sale, and who has beneficially owned the shares for at least two years, would be entitled to sell such shares under Rule 144(k) without regard to the volume limitation and other conditions described above. The foregoing summary of Rule 144 is not intended to be a complete description.

As soon as practicable following the consummation of this offering, VaxGen intends to file a registration statement under the Securities Act to register the shares of common stock available for issuance pursuant to its stock option plans after the effective date of such registration statement will be available for sale in the open market subject to the lock-up period and, for affiliates of VaxGen, subject to certain conditions and restrictions of Rule 144.

UNDERWRITING

We have entered into an underwriting agreement with the underwriters named below, for whom Prudential Securities Incorporated and Punk, Ziegel & Company L.P. are acting as representatives. We are obligated to sell, and the underwriters are obligated to purchase, all of the shares offered on the cover page of this prospectus, if any are purchased. Subject to conditions specified in the underwriting agreement, each underwriter has severally agreed to purchase the shares indicated opposite its name:

UNDERWRITERS	NUMBER OF SHARES
Prudential Securities Incorporated. Punk, Ziegel &Company L.P. BancBoston Robertson Stephens Inc. CIBC World Markets Corp. Hambrecht &Quist LLC. Lehman Brothers Inc. E*OFFERING Corp. First Security Van Kasper. KSH Investment Group, Inc. Ragen MacKenzie Incorporated. Vector Securities International, Inc.	1,592,500 857,500 100,000 100,000 100,000 50,000 50,000 50,000 50,000 50,000
Total	3,100,000

The underwriters may sell more than the total number of shares offered on the cover page of this prospectus and they have, for a period of 30 days from the date of this prospectus, an over-allotment option to purchase up to 465,000 additional shares from us. If any additional shares are purchased, the underwriters will severally purchase the shares in the same proportion as per the table above.

The representatives of the underwriters have advised us that the shares will be offered to the public at the offering price indicated on the cover page of this prospectus. The underwriters may allow to selected dealers a concession not in excess of \$0.53 per share and these dealers may reallow a concession not in excess of \$0.10 per share to certain other dealers. After the shares are released for sale to the public, the representatives may change the offering price and the concessions. The representatives have informed us that the underwriters do not intend to sell shares to any investor who has granted them discretionary authority.

We have agreed to pay the underwriters the following fees, assuming both no exercise and full exercise of the underwriters' over-allotment option to purchase additional shares:

		TOTAL FEES		
	FEE PER SHARE	WITHOUT EXERCISE OF OVER-ALLOTMENT OPTION	FULL EXERCISE OF OVER-ALLOTMENT OPTION	
Fees paid by us	\$0.91	\$2,821,000	\$3,244,150	

In addition, we estimate that we will spend approximately \$1,000,000 in expenses for this offering. We have agreed to indemnify the underwriters against liabilities, including liabilities under the Securities Act or contribute to payments that the underwriters may be required to make in respect of these liabilities.

We, our officers and directors, and a majority of shareholders of VaxGen have entered into lock-up agreements, under which we and they agreed not to offer or sell any shares of common stock or securities convertible into or exchangeable or exercisable for shares of common stock for a period of 180 days from the date of this prospectus without the prior written consent of Prudential Securities on behalf of the

 $underwriters.\ Prudential\ Securities\ may,\ at\ any\ time\ and\ without\ notice,\ waive\ the\ terms\ of\ these\ lock-up\ agreements\ specified\ in\ the\ underwriting\ agreement.$

Prior to this offering, there has been no public market for the common stock of VaxGen. The public offering price was negotiated between VaxGen and the representatives and is based upon various factors such as our financial and operating history and condition, its prospects, the prospects for the industry we are in and prevailing market conditions.

Prudential Securities, on behalf of the underwriters, may engage in the following activities in accordance with applicable securities rules:

- Over-allotments involving sales in excess of the offering size, creating a short position. Prudential Securities may elect to reduce this short position by exercising some or all of the over-allotment option.
- Stabilizing and short covering: stabilizing bids to purchase the shares are permitted if they do not exceed a specified maximum price. After the distribution of shares has been completed, short covering purchases in the open market may also reduce the short position. These activities may cause the price of the shares to be higher than would otherwise exist in the open market.
- Penalty bids permitting the representatives to reclaim commissions from a syndicate member for the shares purchased in the stabilizing or short covering transactions.

Such activities, which may be commenced and discontinued at any time, may be effected on the Nasdaq National Market, NYSE in the over-the-counter market or otherwise.

Each underwriter has represented that it has complied and will comply with all applicable laws and regulations in connection with the offer, sale or delivery of the shares and related offering materials in the United Kingdom, including:

- the Public Offers of Securities Regulations 1995;
- the Financial Services Act 1986; and
- the Financial Services Act 1986 (Investment Advertisements) (Exemptions),
 Order 1996 (as amended).

We have asked the underwriters to reserve shares for sale at the same offering price directly to our employees and other business affiliates or related third parties. The number of shares available for sale to the general public in the offering will be reduced to the extent such persons purchase the reserved shares.

The Roman Arch Fund L.P. and The Roman Arch Fund II L.P., an internal employee private equity fund of Prudential Securities Incorporated, own an aggregate of 16,000 shares.

Employees of Prudential Securities Incorporated and affiliates of KSH Investment Group, Inc. own an aggregate of 86,490 shares. These shares will be deemed to be compensation to the underwriters for the purpose of this offering. These shares are subject to restrictions on resale for a period of one year from the date of purchase. The holders of these shares have also entered into lock-up agreements pursuant to which the shares cannot be offered or sold for a period of 180 days from the date of this prospectus.

Consultants who provided us with services in connection with a private placement of our common stock that occurred in 1998 and 1999 received common stock warrants to purchase an aggregate of 90,878 shares. These warrants will be deemed to be compensation to the underwriters for the purpose of this offering. Shares purchased pursuant to these warrants are subject to restrictions pursuant to which they cannot be offered or sold for a period of 180 days from the date of this prospectus.

LEGAL MATTERS

Graham & James LLP/Riddell Williams P.S., Seattle, Washington, passed on the validity of the shares. Principals of Graham & James LLP/Riddell Williams P.S. beneficially own 22,000 shares. Cooley Godward LLP,

 ${\tt Kirkland}\,,\,\,{\tt Washington}\,,\,\,{\tt passed}$ on legal matters for the underwriters.

EXPERTS

The financial statements of VaxGen as of December 31, 1997 and 1998, and for each of the years in the three-year period ended December 31, 1998 and for the period from November 27, 1995 (inception) through December 31, 1998, have been included herein and in the registration statement in reliance upon the report of KPMG LLP, independent certified public accountants, appearing elsewhere herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We filed a registration statement on Form S-1 with the SEC covering sale of the common stock, of which this prospectus is a part. This prospectus does not contain all of the information in the registration statement, portions of which are omitted as permitted by SEC rules. Statements in this prospectus about documents filed as exhibits, while complete in material respects, are nonetheless summaries. Reference is made to each exhibit for a full description. In each case, summary descriptions are qualified by reference to complete exhibits. You may read or copy any document filed by us at the SEC's Public Reference Room located at 450 5th Street, NW, Washington, D.C. 20549. You may obtain information about the Public Reference Room by calling the SEC for further information at 1-800-SEC-0330. Our filings are also available at the SEC's web site at www.sec.gov.

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INDEPENDENT AUDITORS' REPORT

The Board of Directors VaxGen. Inc.:

We have audited the accompanying balance sheets of VaxGen, Inc. (a development stage enterprise) as of December 31, 1997 and 1998, and the related statements of operations, stockholders' equity (deficit) and comprehensive loss, and cash flows for each of the years in the three-year period ended December 31, 1998 and the period from November 27, 1995 (inception) through 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 audits 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 VaxGen, Inc. (a development stage enterprise) as of December 31, 1997 and 1998, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 1998 and the period from November 27, 1995 (inception) through December 31, 1998, in conformity with generally accepted accounting principles.

KPMG LLP

Seattle, Washington February 5, 1999, except as to note 9(b), which is as of April 1, 1999

BALANCE SHEETS

ASSETS

		ER 31,	21
	1997		MARCH 31, 1999
			(UNAUDITED)
Current assets:			
Cash and cash equivalents		\$ 6,818,000	\$ 7,931,000
Investment securities	23,239,000	12,650,000	12,676,000
Interest receivable	152,000	112,000	148,000
Prepaid expenses and other current assets	230,000	360,000	294,000
Total current assets	24,262,000	19,940,000	21,049,000
Property and equipment, net	33,000	1,258,000	1,423,000
Other assets	6,000	274,000	221,000
Total assets		\$ 21,472,000	\$ 22,693,000
	=======	========	========
LIABILITIES AND STOCKH	OLDERS' EQUITY		
Current liabilities:			
Payable to Genentech		\$ 260,000	\$ 500,000
Accounts payable	237,000	1,483,000	248,000
Accrued liabilities	390,000	331,000	963,000
Current portion of long-term obligations			20,000
Total current liabilities	4,419,000	2,074,000	1,731,000
Long-term obligations			66,000
Stockholders' equity:			
Preferred stock, \$0.01 par value. Authorized			
20,000,000 shares; none issued or			
outstanding			
7,685,161 shares at March 31, 1999	61,000	71,000	77,000
Additional paid-in capital	24,985,000	33,619,000	38,886,000
Accumulated other comprehensive income unrealized gain on investment securities Deficit accumulated during the development	8,000	43,000	28,000
stage	(5,172,000)	(14,335,000)	(18,095,000)
Total stockholders' equity	19 882 000	19,398,000	20,896,000
Commitments and contingencies	19,002,000	19,390,000	20,890,000
Total liabilities and stockholders'			
equity	\$24,301,000 ======	\$ 21,472,000 ======	\$ 22,693,000 ======

See accompanying notes to financial statements.

STATEMENTS OF OPERATIONS

		ENDED DECEMBER	- ,	PERIOD FROM NOVEMBER 27, 1995 (INCEPTION) THROUGH	THREE N	ARCH 31,	PERIOD FROM NOVEMBER 27, 1995 (INCEPTION) THROUGH	
	1996	1997	1998	1998	1998	1999	MARCH 31, 1999	
					(UNAUDITED)	(UNAUDITED)	(UNAUDITED)	
Operating expenses: Research and development: Genentech charges		\$ 2,348,000 798,000		\$ 4,467,000 7,196,000	\$ 190,000 526,000	\$ 240,000 2,798,000	\$ 4,707,000 9,994,000	
Other	248,000	798,000				2,798,000		
General and administrative:	(1,683,000)	(3,146,000)	(6,831,000)	(11,663,000)	(716,000)	(3,038,000)	(14,701,000)	
Genentech charges	7,000 364,000	4,000 796,000	9,000 3,336,000	20,000 4,523,000	447,000	1,006,000	20,000 5,529,000	
	(371,000)	(800,000)	(3,345,000)	(4,543,000)	(447,000)	(1,006,000)	(5,549,000)	
Loss from operations Other income (expense), net:		(3,946,000)	(10,176,000)	(16,206,000)	(1,163,000)	(4,044,000)	(20,250,000)	
Investment income, net Interest		905,000	1,013,000	1,918,000	306,000	285,000	2,203,000	
expense Genentech		(19,000)		(/ /			(47,000)	
Interest expense other						(1,000)	(1,000)	
Total other income (expense), net Net loss	\$(2,082,000)			1,871,000 \$(14,335,000)	306,000 \$ (857,000)		2,155,000 \$(18,095,000)	
Basic and diluted loss per	========	========	========	========	========	=======	========	
share	\$ (1.90)	\$ (0.60)	\$ (1.48)		\$ (0.14)			
Weighted average shares used in computing basic and								
diluted loss per share	1,093,000	5,096,000	6,185,000		6,066,000	7,619,000 =====		

See accompanying notes to financial statements.

STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT) AND COMPREHENSIVE LOSS

	COMMON STOCK		DEFICIT		ACCUMULATED OTHER COMPREHENSIVE	TOTAL STOCKHOLDERS'	
	SHARES	AMOUNT	CAPITAL	STAGE	INCOME	EQUITY (DEFICIT)	
Balance at inception (November 27, 1995)		\$	\$	\$	\$	\$	
Net and total comprehensive loss for the period from inception to December 31, 1995				(30,000)		(30,000)	
Balance at December 31, 1995 Shares issued at \$0.02 per share from April through October 1996:				(30,000)		(30,000)	
Genentech for technology Other founders for cash Net and total comprehensive		11,000 10,000	12,000 10,000			23,000 20,000	
loss				(2,082,000)		(2,082,000)	
Balance at December 31, 1996 Sale of shares in private placement at \$7.00 per share from March through June 1997 for cash, net of issue costs	2,130,000	21,000	22,000	(2,112,000)		(2,069,000)	
of \$2,248,000	3,607,047	36,000	22,965,000			23,001,000	
\$7.00 per share for cash Genentech exercise of warrants at \$0.02 per share in October	285,714	3,000	1,997,000			2,000,000	
1997 for cash	86,640	1,000	1,000			2,000	
Comprehensive loss: Net loss Unrealized gain on investment				(3,060,000)		(3,060,000)	
securities					8,000	8,000	
Total comprehensive loss						(3,052,000)	
Balance at December 31, 1997 Exercise of employee stock options at \$7.00 per share in		61,000	24,985,000	(5,172,000)	8,000	19,882,000	
June and July 1998 for cash Sale of shares in private placement in December 1998 at \$9.50 per share for cash, net	5,750		40,000			40,000	
of issue costs of \$764,000 Comprehensive loss:	986,097	10,000	8,594,000			8,604,000	
Net loss Unrealized gain on investment				(9,163,000)		(9,163,000)	
securities					35,000	35,000	
Total comprehensive loss						(9,128,000)	
Balance at December 31, 1998 Sale of shares in private placement in January 1999 at \$9.50 per share for cash, net	7,101,248	71,000	33,619,000	(14,335,000)	43,000	19,398,000	
of issue costs of \$264,000 (unaudited)	583,913	6,000	5,267,000			5,273,000	
Net loss				(3,760,000)		(3,760,000)	
Net unrealized loss on investment securities					(15,000)	(15,000)	
Total comprehensive							
loss						(3,775,000)	
Balance at March 31, 1999 (unaudited)	7,685,161	\$77,000 =====	\$38,886,000	\$(18,095,000) =======	\$ 28,000 ======	\$20,896,000 ======	

See accompanying notes to financial statements.

STATEMENTS OF CASH FLOWS

		. ENDED DECEMBER		PERIOD FROM NOVEMBER 27, 1995 (INCEPTION) THROUGH	THREE M	RCH 31,	PERIOD FROM NOVEMBER 27, 1995 (INCEPTION) THROUGH
	1996	1997	1998	DECEMBER 31, 1998	1998	1999	MARCH 31, 1999
					(UNAUDITED)	(UNAUDITED)	(UNAUDITED)
Cash flows from operating activities: Net loss	\$(2,082,000)	\$ (3,060,000)	\$ (9,163,000)	\$(14,335,000)	\$ (857,000)	\$(3,760,000)	\$(18,095,000)
Depreciation and amortization Amortization of discounts on	3,000	4,000	92,000	99,000	4,000	80,000	179,000
investment securities Changes in assets and liabilities:		(229,000)	(154,000)	(383,000)	(75,000)	(39,000)	(422,000)
Interest receivable Prepaid expenses and other current		(152,000)	40,000	(112,000)	(5,000)	(36,000)	(148,000)
assets Other assets Payable to	(2,000)	(228,000) (1,000)	(130,000) (150,000)	(360,000) (162,000)	35,000	66,000 53,000	(294,000) (109,000)
Genentech Accounts payable and accrued	1,442,000	2,350,000	(3,532,000)	260,000	(3,608,000)	240,000	500,000
liabilities	35,000	566,000	1,187,000	1,814,000	1,644,000	(603,000)	1,211,000
Net cash used in operating activities	(604,000)	(750,000)	(11,810,000)	(13,179,000)	(2,862,000)	(3,999,000)	(17,178,000)
Cash flows from investing							
activities: Purchases of investment securities		(28,957,000)	(25,600,000)	(54,557,000)	(4,996,000)	(3,097,000)	(57,654,000)
Sales of investment securities		5,955,000	36,378,000	42,333,000	7,883,000	3,095,000	45,428,000
Purchases of property and equipment		(34,000)	(1,315,000)	(1,349,000)	(44,000)	(159,000)	(1,508,000)
Long-term lease deposits			(120,000)	(120,000)			(120,000)
Net cash provided by (used in) investing							
activities		(23,036,000)	9,343,000	(13,693,000)	2,843,000	(161,000)	(13,854,000)
Cash flows from financing activities:							
Stock issuances: Issued to Genentech Issued to other	23,000	1,002,000		1,025,000			1,025,000
founders Private placements	15,000	5,000 25,249,000	9,368,000	20,000 34,617,000		5,537,000	20,000 40,154,000
Issuance costs of private placements Exercise of employee	(176,000)	(2,072,000)	(764,000)	(3,012,000)		(264,000)	(3,276,000)
stock options Loans from Genentech	780,000	205,000	40,000	40,000 1,000,000			40,000 1,000,000
Net cash provided by financing activities	642,000	24,389,000	8,644,000	33,690,000		5,273,000	38,963,000
Increase in cash and cash							
equivalents Cash and cash equivalents at		603,000	6,177,000	6,818,000	(19,000)		7,931,000
beginning of period		38,000	641,000		641,000	6,818,000	
Cash and cash equivalents at end of period		\$ 641,000 ======	\$ 6,818,000 ======	\$ 6,818,000 ======		\$ 7,931,000	\$ 7,931,000 ======
Supplemental schedule of noncash financing activities: Issuance of stock through conversion of Genentech note payable	\$		\$	\$ 1,000,000 ======			\$ 1,000,000 ======
Equipment acquired through capital leases (unaudited)	\$	\$	\$	\$			\$ 86,000

NOTES TO FINANCIAL STATEMENTS

(1) ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) NATURE OF DEVELOPMENT STAGE ACTIVITIES

VaxGen, Inc. ("Company") is a development stage biotechnology company formed to develop a vaccine (AIDSVAX) intended to eradicate HIV. The Company was incorporated on November 27, 1995 and since that date its principal activities have included defining and conducting research programs, conducting animal and human clinical trials, raising capital and recruiting scientific and management personnel.

The Company's development activities involve inherent risks. These risks include, among others, dependence on key personnel and determination of patentability of the Company's products and processes. The Company is dependent on Genentech to provide certain research and development support and vaccine production (note 4). In addition, the Company has only one product candidate which has not yet obtained Food and Drug Administration approval. Successful future operations depend upon the Company's ability to obtain approval for and commercialize AIDSVAX.

(b) INTERIM FINANCIAL STATEMENTS

The financial information as of March 31, 1999 and for the three months ended March 31, 1998 and 1999 is unaudited. These interim financial statements have been prepared on substantially the same basis as the audited financial statements and in the opinion of management, contain all adjustments, consisting only of normal recurring adjustments, necessary for the fair presentation of the financial information set forth therein.

(c) CASH EQUIVALENTS

All short-term investments with an original maturity at date of purchase of three months or less are considered to be cash equivalents. Cash equivalents consisting of commercial paper amounted to \$572,000 and \$6,490,000 at December 31, 1997 and 1998, respectively.

(d) INVESTMENT SECURITIES

Investment securities are classified as available-for-sale and carried at market value with unrealized gains and losses excluded from the statement of operations and reported as other comprehensive income. Realized gains and losses on sales of investment securities are determined on the specific identification method and are included in investment income, net.

(e) PROPERTY AND EQUIPMENT

Equipment, consisting of computers and other office equipment, is depreciated using the straight-line method over the assets' estimated useful lives of three to ten years. Leasehold improvements are amortized using the straight-line method over the shorter of the assets' estimated useful lives or the remaining term of the lease.

(f) RESEARCH AND DEVELOPMENT COSTS

Research and development costs are charged to expense as incurred.

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

(g) INCOME TAXES

Deferred income taxes are provided based on the estimated future tax effects of temporary differences between financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates that are expected to apply to taxable income in the years in which those temporary differences are expected to be recovered. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is established to reduce deferred tax assets to the amount expected to be realized.

(h) FAIR VALUE OF FINANCIAL INSTRUMENTS

The Company has financial instruments other than cash and investment securities, consisting of interest receivable, accounts payable, and a payable to Genentech. The fair value of these financial instruments approximates their carrying amount due to their short-term nature.

(i) STOCK-BASED COMPENSATION

The Company accounts for its stock option plans for employees and non-employee members of the Board of Directors in accordance with the provisions of Accounting Principles Board (APB) Opinion No. 25, Accounting for Stock Issued to Employees, and related interpretations. Accordingly, compensation expense related to employee stock options is recorded if, on the date of grant, the fair value of the underlying stock exceeds the exercise price. It is expected that an interpretation of APB 25 will be issued which will require that non-employee director stock option grants be accounted for using a fair-value based method of accounting similar to Statement of Financial Accounting Standards (SFAS) No. 123, Accounting for Stock-Based Compensation, with a resulting charge to compensation expense. It is expected that such interpretation will impact options granted to non-employee directors after December 15, 1998. No options were granted to non-employee directors from December 16, 1998 to March 31, 1999. The Company applies the disclosure only requirements of SFAS No. 123, which allows entities to continue to apply the provisions of APB 25 for transactions with employees, and to provide pro forma results of operations disclosures for employee stock option grants as if the fair-value-based method of accounting in SFAS 123 had been applied to these transactions.

(i) COMPREHENSIVE LOSS

As of January 1, 1998, the Company adopted Statement of Financial Accounting Standards No. 130, Reporting Comprehensive Income (Statement 130), which establishes new rules for the reporting and display of comprehensive income and its components. Statement 130 requires companies to report, in addition to net income or loss, other components of comprehensive income or loss. Unrealized gain on securities included in comprehensive loss for 1998 is net of the reclassification adjustment for realized losses included in net loss of \$6,000. Adoption of Statement 130 had no effect on the Company's results of operations or financial position as reported in the financial statements.

(k) LOSS PER SHARE

Basic loss per share is computed on the basis of the weighted average number of shares outstanding for the reporting period. Diluted loss per share is computed on the basis of the weighted average number of common shares plus dilutive potential common shares outstanding using the treasury stock method. Potential dilutive common shares consist of shares issuable to holders of unexercised employee stock options and warrants outstanding. Options and warrants to purchase, in the aggregate, approximately

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

419,000, 751,000, 419,000 and 751,000 shares of common stock outstanding at December 31, 1997 and 1998 and March 31, 1998 and 1999 (unaudited), respectively, were not included in the calculation of diluted loss per share because the representative share increments would be antidilutive. No options or warrants were outstanding at December 31, 1996.

(1) 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 dates of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

(m) IMPAIRMENT OF LONG-LIVED ASSETS

The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets held and used is measured by a comparison of the carrying amount of an asset to future net cash flows expected to be generated by the asset. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the assets exceeds the discounted future cash flows expected to be generated by such assets. Assets to be disposed of are reported at the lower of their carrying amount or fair market value less costs to sell.

(n) RECLASSIFICATIONS

Certain prior year amounts have been reclassified to conform with the 1998 presentation.

(o) BUSINESS SEGMENTS

In 1998, the Company adopted Statement of Financial Accounting Standards No. 131 (SFAS 131), Disclosures about Segments of an Enterprise and Related Information. SFAS 131 requires an enterprise to report segment information based on how management internally evaluates the operating performance of its business units (segments). The Company's operations are confined to one business segment, the discovery and development of vaccines that immunize against certain infectious diseases.

(2) INVESTMENT SECURITIES

The following summarizes the Company's investment securities at December 31:

		GROSS	GROSS	
	AMORTIZED	UNREALIZED	UNREALIZED	MARKET
	COST	GAINS	LOSSES	VALUE
1997:				
Commercial paper	\$17,733,000	\$ 4,000	\$	\$17,737,000
Government obligations	5,498,000	4,000		5,502,000
	\$23,231,000	\$ 8,000	\$	\$23,239,000
	========	======	===	========
1998:				
Commercial paper	\$ 3,962,000	\$ 4,000	\$	\$ 3,966,000
Government obligations	8,645,000	39,000		8,684,000
	410 605 000			410 650 000
	\$12,607,000	\$43,000	\$	\$12,650,000
	========	======	===	========

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

Amortized cost and market value of investment securities at December 31, 1998 by contractual maturity are shown below. Actual maturities may differ from contractual maturities because borrowers may have the right to call or prepare obligations with or without call or prepayment penalties.

MATURITIES	AMORTIZED COST	MARKET VALUE
Due in 1 year or less Due between 1 year to 5 years	\$10,613,000 1,994,000	\$10,637,000 2,013,000
	\$12,607,000 =======	\$12,650,000 =======

Investment income, net, includes interest of \$0, \$905,000 and \$1,005,000 earned on investments and gains of \$0, \$0 and \$8,000 realized upon the sale of investments for 1996, 1997 and 1998, respectively.

(3) PROPERTY AND EQUIPMENT

Property and equipment consist of the following at December 31:

	1997	1998
Furniture and equipment	\$34,000	\$1,057,000
Leasehold improvements		292,000
	34,000	1,349,000
Less accumulated depreciation and amortization	1,000	91,000
	\$33,000	\$1,258,000
	======	========

(4) RELATIONSHIP WITH GENENTECH

The Company was founded in 1995 to develop and commercialize an HIV vaccine in partnership with Genentech. In 1996, in return for an equity interest (1,150,000 shares or 54% of the then outstanding and subscribed shares) in the Company, rights to maintain 25% ownership of the Company's common stock (through common stock warrants), a seat on the Board of Directors and certain manufacturing and marketing rights to the vaccine, Genentech granted the Company an exclusive license to certain technology.

Genentech financed the formation of the Company by means of a \$1,000,000 line of credit. Additionally, Genentech and the Company entered into an agreement whereby Genentech could convert the line of credit plus additional capital totaling \$2,000,000 into shares of the Company's common stock concurrent with an initial private placement in March 1997. The conversion resulted in the issuance of 285,714 shares of common stock. Upon the final closing of the private placement, Genentech exercised its option to retain a 25% common stock ownership interest and thereby acquired an additional 86,640 shares of common stock for cash. At December 31, 1998, Genentech retained warrants for the exercise of additional common stock in the event of a second private placement in excess of \$10 million or an Initial Public Offering (IPO). Such warrants were exercisable at the issue price per share of the additional capital raised and would allow Genentech to maintain its 25% ownership interest. The warrants expired unexercised at the completion of the Company's 1998 private placement in January 1999. Genentech has no rights beyond the second financing (whether by private placement or IPO) to maintain its 25% ownership position.

The license agreement between the Company and Genentech, in part, defines the working relationship between the companies. Genentech has granted the Company an exclusive license to all patents and proprietary

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

vaccine to prevent HIV infection. Certain of the licensed technology is sublicensed or assigned to the Company under licenses from third parties to Genentech. The Company, as the exclusive licensee of Genentech, has assumed all of Genentech's obligations under these third-party license agreements. Such obligations consist primarily of royalties on product sales. However, the vaccine in its current form does not incorporate any technology sublicensed or assigned to the Company for which there is an obligation under licenses from third parties. The initial term of the license agreement is 15 years from the commercial introduction date of a licensed product and will be determined on a country-by-country, product-by-product basis. In addition, upon entering the agreement, Genentech transferred to the Company 300,000 doses of the vaccine. Under the license agreement, the Company is required to use due diligence in developing, seeking regulatory approval for, and marketing and commercializing the vaccine. Due diligence is defined in the agreement as meaning that the development and commercialization of the vaccine will be the Company's sole business goal, with an expenditure of time, effort and funding that is commensurate with such goal.

In connection with reaching this goal, the Company is required to achieve the filing of the first market approval for a product with the FDA not later than the fifth anniversary of the closing of the 1997 private placement, which occurred in 1997. The Company and Genentech can agree to extend this requirement, subject to a two-year limit. If the Company fails to exercise due diligence, Genentech has the right to convert the exclusive license to a non-exclusive license, and may be entitled to terminate the license. Genentech may terminate the license agreement if the Company fails to: (1) maintain a tangible net worth of at least \$1,000,000; or (2) meet certain due diligence milestones within two years of the date originally set for such milestones.

As part of the license agreement, Genentech has an option to manufacture the vaccine and a one-time option to be responsible for marketing the vaccine worldwide. Should Genentech exercise its marketing option, Genentech will pay a license fee to the Company equal to 33% of the Company's developmental costs of the initial AIDSVAX product (including the Phase III clinical trials and regulatory submissions), as well as a percentage of ongoing profits on the sales of the vaccine. If Genentech does not elect its marketing option, it will receive a royalty on product sales; the royalty rate depends on whether Genentech elects to manufacture the vaccine being sold commercially.

The Company has a service contract with Genentech originally expiring December 31, 1998, whereby Genentech supplies research, vaccine production, and administrative and regulatory support to the Company. Expenses incurred by VaxGen for 1996, 1997 and 1998 were \$1,442,000, \$2,352,000 and \$690,000, respectively, under the contract. In excess of 95% of costs represent research and development expenses in each period and the remainder are general and administrative expenses. The contract has been extended under similar terms through December 31, 2000.

Prior to September 1998, the Company leased office space from Genentech. Rent expense under this lease was \$0, \$18,000, and \$80,000 in 1996, 1997, and 1998, respectively.

Management believes that the terms of the agreement provide Genentech full reimbursement for specifically identified actual direct costs as well as indirect and overhead costs incurred related to the Company. Charges for indirect and overhead costs are based upon a percentage of direct costs. Management believes this method results in a reasonable allocation of costs to the Company.

(5) PRIVATE PLACEMENT STOCK OFFERINGS

In 1997, the Company completed a private placement sale of 3,607,047 shares of its common stock at a price of \$7.00 per share resulting in proceeds of \$23,001,000, net of issuance costs of \$2,248,000. A total of 149,270 shares in this private placement were sold to related parties. In conjunction with the 1997

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

private placement and under agreements with the Company, Genentech converted a \$1,000,000 line of credit with the Company and invested an additional \$1,000,000 in the Company in return for 285,714 shares of the Company's common stock. Additionally, in October 1997, Genentech exercised its option to maintain a 25% ownership interest in the Company (note 4) which resulted in the issuance of 86,640 shares of the Company's common stock in October 1997.

In 1998, the Company initiated a second private placement sale of its common stock at a price of \$9.50 per share. The first closing and issuance of common shares in the private placement was completed in December 1998 and resulted in the sale of 986,097 shares of the Company's common stock and proceeds of \$8,604,000, net of issuance costs of \$764,000. A total of 33,629 shares in the first closing were sold to related parties. The second closing and issuance of common shares in the private placement was completed in January 1999 (note 9).

(6) STOCK OPTIONS AND WARRANTS

(a) STOCK OPTION PLANS

1996 Stock Option Plan

The Company's 1996 Stock Option Plan (the Plan) has 500,000 shares of common stock reserved for grant. Options granted under the Plan may be designated as qualified or nonqualified at the discretion of the compensation committee of the Board of Directors. At December 31, 1998, 61,750 shares were available for grant under the Plan.

Generally, options granted under the Plan vest and may be exercised over a four-year period in increments of 25% each year beginning one year from the date of grant; however, options can vest upon grant. All options expire no later than ten years from the date of grant. Qualified stock options are exercisable at not less than the fair market value of the stock at the date of grant and nonqualified stock options are exercisable at prices determined at the discretion of the Board of Directors, but not less that 85% of the fair market value of the stock at the date of grant. All Board approved options have been granted at an exercise price of \$7.00 per share.

1998 Director Stock Option Plan

In 1998, the Board of Directors approved the 1998 Director Stock Option Plan (the Director Plan) for nonemployee directors. Under the Director Plan, 37,500 shares of common stock are reserved for grant. On May 6, 1998, nonemployee directors were granted options to purchase 8,571 shares of the Company's common stock at an exercise price of \$7.00 per share. Such options vested immediately. Under the Director Plan, options will automatically be granted to nonemployee directors on the date of the annual shareholders' meeting. The exercise price of each annual option grant is to be the fair market value of the Company's common stock on the grant date. Each annual option grant fully vests on the first anniversary of its grant date, subject to certain meeting attendance requirements. At December 31, 1998, 28,929 shares were available for grant under the Director Plan.

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

A summary of stock option plans follows:

	STO	CK OPTIONS
	SHARES	WEIGHTED AVERAGE EXERCISE PRICE PER SHARE
Outstanding at		
December 31, 1996		\$
Granted	,	7.00
Exercised		
cancereu		
Outstanding at		
December 31, 1997	200,000	7.00
Granted	271,071	7.00
Exercised	(5,750)	7.00
Canceled	(24,250)	7.00
Outstanding at	441 001	AT. 00
December 31, 1998	441,071	\$7.00
	======	====

At December 31, 1998, options to purchase 116,696 shares were vested and exercisable under stock option plans. The weighted average remaining contractual life of stock options outstanding at December 31, 1998 is 9.0 years.

Had compensation cost pursuant to the plans been determined consistent with SFAS 123, the Company's net loss and loss per share would have been adjusted to the pro forma amounts indicated below:

	YEARS ENDED	DECEMBER 31
	1997 	1998
Net loss as reported	\$(3,005,000) \$(0.60)	\$(9,333,000) \$(1.48)

The fair value of each option grant is estimated on the date of grant using the minimum value method with the following assumptions used for grants in 1997 and 1998: expected dividend yield of 0%; expected volatility of 0%; risk-free interest rate of 6.0%; and expected lives of four years. Using these assumptions, the fair value of options granted in 1997 and 1998 was estimated as \$0.74 per share.

During 1998, the Board of Directors approved for grant options to purchase 174,925 shares of the Company's common stock at an exercise price of \$7.00 per share and 302,900 shares at an exercise price of \$9.50 per share. However, since the grant of such options would cause the number of shares outstanding to exceed the number of shares reserved for grant under the Plan, the Company's shareholders must approve an increase in the number of shares reserved for grant under the Plan. Because the shareholders must first approve an increase in the number of shares reserved for grant, the financial effect of the grants, if any, has not been reported in these financial statements (note 9b).

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

(b) COMMON STOCK WARRANTS

In connection with the Company's 1997 private placement, certain consultants were issued warrants to purchase approximately 219,000 shares of the Company's common stock exercisable at \$7.00 per share through June 2007. No warrants have been exercised to date.

The Company similarly agreed to issue warrants to purchase approximately 91,000 shares of the Company's common stock exercisable at \$9.50 per share to certain consultants in connection with the Company's 1998 private placement. Such warrants were earned in December 1998 and January 1999. The warrants are to be exercisable through 2009. No warrants have been exercised to date.

Additionally, in connection with the 1997 private placement, the Company granted an unrelated party a first option to maintain its approximately 4.8% interest in the Company. Such right allows the party the option to acquire a proportionate number of shares at an equivalent price to maintain its ownership percentage through March 31, 2002. The party exercised its option in connection with the 1998 private placement.

(7) INCOME TAXES

The Company has reported no income tax benefits due to limitations on the recognition of deferred tax assets for financial reporting purposes.

The tax effects of temporary differences and carryforwards that give rise to deferred tax assets are as follows:

	DECEMBER 31		
	1997 	1998	
Deferred tax assets: Research and experimentation credit carryforwards Net operating loss carryforwards Other		\$ 440,000 4,758,000 50,000	
Total gross deferred tax assets	1,949,000 1,949,000	5,248,000 5,248,000	
Net deferred tax assets	\$ =======	\$ ========	

Based on the weight of available evidence, including cumulative losses since inception and expected future losses, the Company has determined that it is more likely than not the entire deferred tax asset amount will not be realized and, therefore, a valuation allowance has been provided on all gross deferred tax assets.

The increases in the valuation allowance for deferred tax assets of \$1,203,000 in 1997 and \$3,299,000 in 1998 are primarily attributable to increases in net operating loss and tax credit carryforwards.

At December 31, 1998 the Company had net operating loss carryforwards of approximately \$13,995,000 and research and experimentation credit carryforwards of approximately \$440,000 which are available to offset future Federal taxable income and income taxes, respectively, if any, and expire beginning in 2010.

(8) COMMITMENTS

(a) LEASES

The Company leases office facilities under cancelable operating leases, which expire from 1999 to 2005. Until September 1998, the Company also leased office space from Genentech.

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

In August 1998, the Company commenced a lease for office space at Mahidol University in Bangkok, Thailand, ending at the conclusion of Phase III clinical trials in Thailand. The lease requires monthly payments of \$2,000. Additionally, the Company began renovation of project office space at Taksin Hospital, also in Bangkok. The Company is required to pay up to \$100,000 for renovations, for which the Company will receive use of the facility for a five-year term at no additional cost.

The Company entered into a 62-month laboratory lease commencing January 1, 1999 which requires the Company to expend a minimum of \$500,000 in leasehold improvements, in addition to its scheduled lease payments.

Minimum annual payments, excluding required leasehold improvements and renovations, under the foregoing leases, are as follows:

1999	\$571,000
2000	625,000
2001	650,000
2002	652,000
2003	677,000
Thereafter	877,000

Rent expense for 1996, 1997 and 1998 was \$12,000, \$66,000 and \$353,000, respectively.

(b) EMPLOYMENT AGREEMENTS

The Company has employment contracts with certain members of management ending from 2000 to 2003. Such agreements provide for discretionary bonuses and annual increases in compensation as determined by the Board of Directors. Minimum compensation under these contracts aggregates \$1,085,000 annually. The employment contracts with three members of management also provide for the issuance of an aggregate of 325,757 shares of the Company's common stock to these individuals if the Company is acquired in an acquisition that results in a purchase price of at least \$28.00 per share or once the per share value of the Company's common stock has attained an average price of \$28.00 over a 30 day period. This represents four times the per share value of the Company's common stock based on the 1997 private placement. If the shares are issued as a result of the common stock reaching an average value of \$28.00 per share, the Company will record an immediate non-cash charge to expense equal to the per share value of the common stock to be issued. For example, if the per share value of the stock upon issuance is \$28.00, the charge to expense will be \$9,100,000.

(c) CLINICAL TRIALS

In connection with Phase III clinical trials, the Company has contracted with or will contract for the services of 50 to 60 medical clinics. The clinics will provide the location, clinicians, oversight, and volunteers for the three year testing of the Company's vaccine. Payment will be made over the period based on the number of volunteers vaccinated, the number of return visits and the subsequent testing and follow-up of these volunteers. Total commitments are estimated to aggregate approximately \$25,000,000, of which the Company had paid approximately \$2,400,000 as of December 31, 1998. Estimated future payments are as follows:

1999	\$7,900,000
2000	5,450,000
2001	5,350,000
2002	3,900,000

NOTES TO FINANCIAL STATEMENTS (CONTINUED)

(9) SUBSEQUENT EVENTS

- (a) In connection with the Company's 1998 private placement, the final closing and issuance of 583,913 shares of common stock for proceeds of \$5,273,000, net of issue costs of \$264,000, occurred on January 11, 1999. A total of 2,000 shares were sold to related parties in the final closing.
- (b) On April 1, 1999, the shareholders concurrently approved a one-for-two reverse split of the number of shares of issued and outstanding common stock of the Company effective April 9, 1999 and a reduction in the number of common shares authorized from 30,000,000 to 20,000,000. These financial statements and the notes thereto reflect these changes for all periods presented.

Additionally, on April 1, 1999, the shareholders of the Company approved an increase in the number of shares reserved for grant under the 1996 stock option plan to 1,750,000 shares. This represents the measurement date for previously granted but unapproved options (note 6a). As a result, the Company recorded deferred compensation in the amount of \$2,587,000 representing the excess of the fair market value of the common shares on April 1, 1999 (\$14.00 per share) over the exercise price of the options. Additionally, the Company recorded an immediate charge to expense of \$456,000 for the portion of the vesting period elapsed at April 1. The deferred compensation will be amortized to expense over the remaining vesting period.

Until July 26, 1999, all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the obligation of dealers to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

[VAXGEN LOGO]

PRUDENTIAL SECURITIES PUNK, ZIEGEL & COMPANY

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