AVANT IMMUNOTHERAPEUTICS INC
Form S-3
October 09, 2003

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As filed with the Securities and Exchange Commission on October 9, 2003

Registration Statement No. 333-

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

AVANT IMMUNOTHERAPEUTICS, INC.

(Exact name of Registrant as Specified in Its Charter)

Delaware	**13-3191702**
(State of Incorporation)	(I.R.S. Employer Identification Number)

119 Fourth Avenue
Needham, Massachusetts 02494
(781) 433-0771
(Address, including zip code and telephone number, including area code, of Registrant's principal executive offices)

Una S. Ryan, Ph.D., President and Chief Executive Officer
AVANT IMMUNOTHERAPEUTICS, INC.
119 Fourth Avenue
Needham, Massachusetts 02494
(781) 433-0771
(Name, address, including zip code and telephone number, including area code, of agent for service)

Copies to:

Stuart M. Cable, P.C.
Ettore A. Santucci, P.C.
Goodwin Procter LLP
Exchange Place
Boston, Massachusetts 02109-2881
(617) 570-1000

Approximate Date of Commencement of Proposed Sale to the Public: From time to time after this Registration Statement becomes effective, as determined by the Registrant.

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

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

If this form is used to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act Registration Statement number of the earlier effective registration statement for the same offering. o

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

CALCULATION OF REGISTRATION FEE

Title of Securities Being Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Unit(2)	Proposed Maximum Aggregate Offering Price(2)	Amount of Registration Fee(3)
Common Stock, par value $0.001	17,250,000	$2.59	$44,677,500	$3,615
Warrants to Purchase Common Stock(4)	2,250,000	N/A	N/A	N/A
Preferred Stock Purchase Rights(5)	17,250,000	N/A	N/A	N/A

(1) The amount to be registered consists of 17,250,000 shares of common stock (including 2,250,000 shares of common stock issuable upon exercise of the warrants registered hereunder) and 2,250,000 warrants to purchase common stock. Pursuant to Rule 429 under the Securities Act of 1933, as amended, the 17,250,000 shares of common stock and 2,250,000 warrants includes the amount of 7,942,095 shares of common stock and 1,000,000 warrants to purchase common stock covered by the Registration Statement on Form S-3 (No. 333-64704), which have not been sold.

(2) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(c) based on the average of the high and low prices per share of the Registrant's common stock on the Nasdaq National Market on October 2, 2003.

(3) Pursuant to Rule 429 under the Securities Act of 1933, as amended, the prospectus included in this registration statement is a combined prospectus which relates to Registration Statement No. 333-64704, previously filed by the Registrant on Form S-3, under which the amount of 7,942,095 shares of common stock and 1,000,000 warrants to purchase common stock remains unissued and is being carried forward. Registration fees of $12,092 were previously paid with respect to the common stock and warrants being carried forward from Registration Statement No. 333-64704, calculated using the registration fees in effect in July 2001, and shall be applied to the fee payable in connection with this registration statement.

(4) Pursuant to Rule 457(g), because the shares of common stock issuable upon exercise of the warrants are also being registered in this registration statement, no additional registration fee is payable with respect to the warrants.

(5) This registration statement also relates to Preferred Stock Purchase Rights to purchase shares of Series C-1 Junior Participating Cumulative Preferred Stock of the Registrant, which are attached to all shares of common stock issued, pursuant to the terms of the Registrant's Shareholder Rights Agreement dated November 10, 1994, as amended. Until the occurrence of certain prescribed events, the rights are not exercisable, are evidenced by the certificates for the common stock and will be transferred with and only with such stock. Because no separate consideration is paid for the rights, the registration fee therefor is included in the fee for the common stock.

Pursuant to Rule 429 under the Securities Act of 1933, the prospectus included in this registration statement is a combined prospectus which also relates to Registration Statement No. 333-64704, previously filed by the Registrant on Form S-3, under which 7,942,095 shares of common stock and 1,000,000 warrants to purchase common stock remains unissued. This registration statement also constitutes a post-effective amendment to Registration Statement No. 333-64704.

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, dated , 2003

Prospectus

AVANT Immunotherapeutics, Inc.

15,000,000 Shares of Common Stock

Warrants to Purchase 2,250,000 Shares of Common Stock

This prospectus will allow us to issue, from time to time in one or more offerings,

up to 15,000,000 shares of our common stock,

warrants to purchase up to 2,250,000 shares of our common stock, and

the rights to acquire our series C-1 junior participating cumulative preferred stock that are attached to, and trade with, the common stock.

The common stock and warrants may be offered and sold separately or together in one or more series of issuances.

In this prospectus, we refer to the common stock and the warrants collectively as the "securities."

Each time we sell securities we will provide a prospectus supplement that will contain specific information about the terms of that sale and may add, update or change the information contained in this prospectus. You should read this prospectus and any prospectus supplement carefully before you invest in our securities.

Our common stock is listed on the Nasdaq National Market under the symbol "AVAN." On October 8, 2003, the last reported sale price of our common stock on the Nasdaq National Market was $2.90.

See "Risk Factors" beginning on page 3 for a discussion of material risks that you should consider before you invest in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2003

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PROSPECTUS SUMMARY

ABOUT AVANT

We are a biopharmaceutical company that uses novel applications of immunology to develop products for the prevention and treatment of diseases. We are developing a broad portfolio of vaccines addressing a wide range of applications including cardiovascular disease, bacterial and viral diseases, biodefense and food safety. These include single-dose, oral vaccines that protect against important disease-causing agents, a novel, proprietary vaccine candidate for cholesterol management and a complement inhibitor to improve patient outcomes following cardiac surgery. Our strategy is to demonstrate proof-of-concept for our product candidates before leveraging their value through partnerships or, in appropriate situations, continuing late stage development ourselves. Demonstrating proof-of-concept for a product candidate generally involves bringing it through Phase I clinical trials and one or more Phase II clinical trials so that we are able to demonstrate, based on human trials, good safety data for the product candidate and some data indicating its effectiveness. Our current collaborations encompass the development of an oral human rotavirus vaccine, vaccines to combat threats of biological warfare, and vaccines addressed to human food safety and animal health. Our product candidates address large market opportunities for which we believe current therapies are inadequate or non-existent.

Our focus is on using the power of the immune system to prevent and treat disease. We have assembled a broad portfolio of technologies and intellectual property that we believe will give us a strong competitive position in the vaccine arena. This portfolio includes:

- *Cholera*- and *Salmonella*-vectored vaccine delivery technologies;
- patent rights directed to a rotavirus strain;
- technology supporting our CETi-1 product candidate, which is aimed at increasing levels of HDL, or "good" cholesterol; and
- our Vitrilife® patented drying system for the preservation of proteins, cells, bacteria and viruses.

We currently have six programs in clinical development. Our goal is to become a leading developer of innovative vaccines and immunotherapeutics that address health care needs on a global basis.

Our success has depended and will continue to depend upon many factors, including our ability and that of our licensees and collaborators to successfully develop, obtain regulatory approval for and commercialize our product candidates. To date, we have had no commercial revenues from sales of our human therapeutic or vaccine products and a history of operating losses. It is possible that we may not be able to successfully develop, obtain regulatory approval for or commercialize our product candidates, and we are subject to a number of risks that you should be aware of before investing in our company. These risks are disclosed more fully in "Risk Factors."

Our common stock has been quoted on the Nasdaq National Market under the symbol "AVAN" since August 24, 1998. Prior to that time, our common stock traded on the Nasdaq National Market, beginning May 15, 1986, under the symbol "TCS."

Our executive offices are located at 119 Fourth Avenue, Needham, Massachusetts 02494-2725 and our telephone number is (781) 433-0771. Additional information regarding our company, including our audited financial statements and descriptions of our business, is contained in the documents incorporated by reference in this prospectus. See "Where You Can Find More Information" on page 31 and "Incorporation of Documents by Reference" on page 31.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a "shelf" registration process. Under this shelf registration process, we may offer from time to time up to 15,000,000 shares of our common stock and warrants to purchase up to 2,250,000 shares of our common stock, either separately or in units. This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with additional information described under the heading "Where You Can Find More Information."

We have not authorized any dealer, salesperson or other person to give any information or to make any representation other than those contained or incorporated by reference in this prospectus and any accompanying prospectus supplement. You must not rely upon any information or representation not contained or incorporated by reference in this prospectus or any accompanying prospectus supplement as if we had authorized it. This prospectus and any accompanying prospectus supplement do not constitute an offer to sell or the solicitation of an offer to buy any securities other than the registered securities to which they relate, nor does this prospectus and any accompanying prospectus supplement constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction. You should not assume that the information contained in this prospectus and any accompanying prospectus supplement is correct on any date after their respective dates, even though this prospectus or any prospectus supplement is delivered or securities are sold on a later date.

RISK FACTORS

You should consider carefully the risk factors described below with respect to any investment in our securities. This section includes some forward-looking statements.

Our history of losses and uncertainty of future profitability make our common stock a highly speculative investment.

We have had no commercial revenues to date from sales of our human therapeutic or vaccine products and cannot predict when we will. We have accumulated net operating losses since inception of approximately $198.4 million, as of June 30, 2003. We expect to spend substantial funds to continue research and product testing of the following products we have in the pre-clinical and clinical testing stages of development:

Product	Use	Stage
CholeraGarde vaccine	Cholera	Clinical phase IIb
Ty800 vaccine	Typhoid fever	Clinical phase I/II
ETEC vaccine	Enterotoxigenic E. coli infection	Pre-clinical
Shigella vaccine	Dysentery	Pre-clinical
Campylobacter vaccine	Campylobacter infection	Pre-clinical
Injectable Anthrax vaccine	Anthrax infection	Clinical phase I
Oral Anthrax & Plague vaccines	Anthrax & plague infection	Pre-clinical
Rotarix® vaccine	Rotavirus	Clinical phase III
CETi-1 vaccine	Cholesterol management	Clinical phase II
Therapore®	HIV	Pre-clinical
Therapore®	Hepatitis	Pre-clinical
TP10	Cardiac surgery	Clinical phase II

In anticipation of Food and Drug Administration approval of these products, we will need to make substantial investments to establish sales, marketing, quality control, and regulatory compliance capabilities. These investments will increase if and when any of these products receive FDA approval. We cannot predict how quickly our lead products will progress through the regulatory approval process. As a result, we may continue to lose money for several years.

If we cannot sell capital stock to raise necessary funds, it may force us to limit our research, development and testing programs.

We will need to raise more capital from investors to advance our lead products through the clinical testing and to fund our operations until we receive final FDA approval and our products begin to generate revenues for us. However, based on our history of losses, we may have

difficulty attracting sufficient investment interest. As of June 30, 2003, we had cash and cash equivalents of $17.0 million, which, at that time, we believed would support expected operations for approximately 15 months.

On July 1, 2003, we completed a private placement of our common stock with gross proceeds of approximately $10 million. We believe that our current cash balance of approximately $25 million will meet our expected cash requirements for over two years. We anticipate using cash in the range of $0.9 $1.2 million per month to support our expected operations.

We continue to seek partnerships with pharmaceutical and biotech companies and with other organizations to support the clinical development of our programs, in addition to funded research grants. This kind of funding is at the discretion of other organizations and companies which have limited funds and many companies compete with us for those funds. As a result, we may not receive

any research grants or funds from collaborators. If we are unable to raise necessary funds, we may have to delay or discontinue the clinical development of programs, license out programs earlier than expected, raise funds at significant discount or on other unfavorable terms or evaluate a sale of all or part of our business.

Our stock price has been and could remain volatile.

The market price of our common stock has historically experienced and may continue to experience significant volatility. From January 2001 through September 2003, the market price of our common stock has fluctuated from a high of $8.50 per share in the first quarter of 2001, to a low of $0.66 per share in the third quarter of 2002. Our progress in developing and commercializing our products, the impact of government regulations on our products and industry, the potential sale of a large volume of our common stock by selling stockholders, our quarterly operating results, changes in general conditions in the economy or the financial markets and other developments affecting us or our competitors could cause the market price of our common stock to fluctuate substantially. In addition, in recent years, the stock market has experienced significant price and volume fluctuations. This volatility has affected the market prices of securities issued by many companies for reasons unrelated to their operating performance and may adversely affect the price of our common stock. In addition, we could be subject to a securities class action litigation as a result of volatility in the price of our stock, which could result in substantial costs and diversion of management's attention and resources and could harm our stock price, business, prospects, results of operations and financial condition.

If selling stockholders choose to sell shares in large volume, the trading price of our common stock could suffer.

In December 2000, we issued 1,841,236 shares of our common stock at $9.54 per share in connection with our acquisition of Megan Health Inc. and 285,877 shares of our common stock at $10.50 per share in a separate private placement with Pfizer Inc. In July 2003, we issued 4,444,444 shares of our common stock and warrants to purchase 444,444 shares of our common stock for an aggregate purchase price of $10 million in a private placement with The Riverview Group, LLC. Those shares plus, among others, 3,057,900 shares we sold in an October 2001 direct equity placement at $4.58 per share, 4,650,953 shares we sold in a July 2000 private placement at $7.85 per share, 5,459,375 shares we sold in a September 1999 private placement at $1.92 per share, and 3,084,910 shares that employees may purchase under stock options at prices ranging from $0.30 to $14.69 per share, can be resold in the public securities markets without restriction. These shares in total account for approximately 36.0% of our total common stock outstanding as of September 30, 2003. If large numbers of shares are sold over a short period of time, the price of our stock may decline rapidly or fluctuate widely.

If our products do not pass required tests for safety and effectiveness, we will not be able to derive commercial revenue from them.

For AVANT to succeed, we will need to derive commercial revenue from the products we have under development. The FDA has not approved any of our lead products for sale to date. Products in our vaccine programs are in various stages of pre-clinical and clinical testing. Pre-clinical tests are performed at an early stage of a product's development and provide information about a product's safety and effectiveness on laboratory animals. Pre-clinical tests can last years. If a product passes its pre-clinical tests satisfactorily, we file an investigational new drug application for the product with the FDA, and if the FDA gives its approval we begin phase I clinical tests. Phase I testing generally lasts between 6 and 24 months. If phase I test results are satisfactory and the FDA gives its approval, we can begin phase II clinical tests. Phase II testing generally lasts between 6 and 36 months. If phase II test results are satisfactory and the FDA gives its approval, we can begin phase III pivotal studies. Phase III

studies generally last between 12 and 48 months. Once clinical testing is completed and a new drug application is filed with the FDA, it may take more than a year to receive FDA approval.

In all cases we must show that a pharmaceutical product is both safe and effective before the FDA, or drug approval agencies of other countries where we intend to sell the product, will approve it for sale. Our research and testing programs must comply with drug approval requirements both in the United States and in other countries, since we are developing our lead products with companies, including Glaxo, Pfizer, and DynPort, which intend to commercialize them both in the U.S. and abroad. A product may fail for safety or effectiveness at any stage of the testing process. The key risk we face is the possibility that none of our products under development will come through the testing process to final approval for sale, with the result that we cannot derive any commercial revenue from them after investing significant amounts of capital in multiple stages of pre-clinical and clinical testing.

Product testing is critical to the success of our products but subject to delay or cancellation if we have difficulty enrolling patients.

As our portfolio of potential products moves from pre-clinical testing to clinical testing, and then through progressively larger and more complex clinical trials, we will need to enroll an increasing number of patients with the appropriate characteristics. At times we have experienced difficulty enrolling patients and we may experience more difficulty as the scale of our clinical testing program increases. The factors that affect our ability to enroll patients are largely uncontrollable and include principally the following:

the nature of the clinical test

the size of the patient population

the distance between patients and clinical test sites

the eligibility criteria for the trial

If we cannot enroll patients as needed, our costs may increase or it could force us to delay or terminate testing for a product.

We depend greatly on the intellectual capabilities and experience of our key executives and scientists and the loss of any of them could affect our ability to develop our products.

The loss of Dr. Una S. Ryan, our president and chief executive officer, or other key members of our staff, including Avery W. Catlin, our chief financial officer, Dr. Alistair W.E.Wheeler, our vice president of medical affairs, Dr. Henry C. Marsh, Jr., our vice president of research, Anthony Helstosky, our senior director of regulatory affairs, or Michael Furlong, our senior director of business development, could harm us. We have employment agreements with Dr. Ryan and Mr. Catlin. We do not have any key-person insurance coverage. We also depend on our scientific and clinical collaborators and advisors, all of whom have outside commitments that may limit their availability to us. In addition, we believe that our future success will depend in large part upon our ability to attract and retain highly skilled scientific, managerial and marketing personnel, particularly as we expand our activities in clinical trials, the regulatory approval process and sales and manufacturing. We routinely enter into consulting agreements with our scientific and clinical collaborators and advisors, opinion leaders and heads of academic departments in the ordinary course of our business. We also enter into contractual agreements with physicians and institutions who recruit patients into our clinical trials on our behalf in the ordinary course of our business. Notwithstanding these arrangements, we face significant competition for this type of personnel from other companies, research and academic institutions, government entities and other organizations. We cannot predict our success in hiring or retaining the personnel we require for continued growth.

We rely on our contract manufacturers. Should the cost, delivery and quality of clinical and commercial grade materials supplied by contract manufacturers vary to our disadvantage, our business operations could suffer significant harm.

We are dependent on sourcing from third-party manufacturers for suitable quantities of clinical and commercial grade materials essential to pre-clinical and clinical studies currently underway and to planned clinical trials in addition to those currently being conducted by third parties or us. The inability to have suitable quality and quantities of these essential materials produced in a timely manner would result in significant delays in the clinical development and commercialization of products, which could adversely affect our business, financial condition and results

of operations. We rely on collaborators and contract manufacturers to manufacture proposed products in both clinical and commercial quantities in the future. Our leading bacterial vaccine candidates use attenuated live bacteria as vectors and therefore require specialized manufacturing capabilities and processes. We have faced difficulties in securing commitments from U.S. contract manufacturers as U.S. manufacturers have at times been unwilling or unable to accommodate our needs. Relying on foreign manufacturers involves peculiar and increased risks, and in one occasion we had to terminate a contract with a foreign manufacturer and find a substitute source of material for planned clinical trials. These peculiar and increased risks include risks relating to the difficulties foreign manufacturers may face in complying with the FDA's Good Manufacturing Practices, or GMP, as a result of language barriers, lack of familiarity with GMP or the FDA regulatory process or other causes, economic or political instability in or affecting the home countries of our foreign manufacturers, shipping delays, potential changes in foreign regulatory laws governing the sales of our product supplies, fluctuations in foreign currency exchange rates and the imposition or application of trade restrictions.

There can be no assurances that we will be able to enter into long-term arrangements with such third party manufacturers on acceptable terms or at all. Further, contract manufacturers must also be able to meet our timetable and requirements, and must operate in compliance with GMP; failure to do so could result in, among other things, the disruption of product supplies. As noted above, non-U.S. contract manufacturers may face special challenges in complying with the FDA's GMP requirements, and although we are not currently dependent on non-U.S. collaborators or contract manufacturers, we may choose or be required to rely on non-U.S. sources in the future as we seek to develop stable supplies of increasing quantities of materials for ongoing clinical trials of larger scale. Our dependence upon third parties for the manufacture of our products may adversely affect our profit margins and our ability to develop and deliver products on a timely and competitive basis.

We depend on third party suppliers and manufacturers, including Walter Reed Army Institute of Research, Lonza Biologics plc, Bioconcept, Inc., Multiple Peptide Systems, and Maine Biological Laboratories, to provide us with suitable quantities of materials necessary for clinical tests. If these materials are not available in suitable quantities of appropriate quality, in a timely manner, and at a feasible cost, our clinical tests will face delays.

We rely on third parties to plan, conduct and monitor our clinical tests, and their failure to perform as required would interfere with our product development.

We rely on third parties, including, among others, the International Center for Diarrhoeal Disease Research, Bangladesh, the International Vaccines Institute, The Cleveland Clinic, The Chicago Center for Clinical Research, Pharmaceutical Research Associates, Inc., PPD Development, LLC, Protocare, Inc., the NIH and Glaxo to conduct the significant majority of our clinical research development activities. These activities can be characterized as clinical patient recruitment and observation, clinical trial monitoring, clinical data management and analysis, safety monitoring and project management. We conduct approximately 50% of our project management and 90% of our safety monitoring in-house and rely on third parties for the remainder of our clinical development

activities. If any of these third parties fails to perform as we expect or if their work fails to meet regulatory standards, our testing could be delayed, cancelled or rendered ineffective.

We depend greatly on third party collaborators to license, develop and commercialize some of our products, and they may not meet our expectations.

We have agreements with other companies, including Glaxo, Pfizer, DynPort, and Lohmann for the licensing, development and ultimate commercialization of some of our products. Some of those agreements give substantial responsibility over the products to the collaborator. Some collaborators may be unable or unwilling to devote sufficient resources to develop our products as their agreements require. They often face business risks similar to ours, and this could interfere with their efforts. Also, collaborators may choose to devote their resources to products that compete with ours. If a collaborator does not successfully develop any one of our products, we will need to find another collaborator to do so. The success of our search for a new collaborator will depend on our legal right to do so at the time and whether the product remains commercially viable.

The success of our vaccine candidates depends in great part upon our and our collaborators' success in promoting them as superior to other treatment alternatives. We believe that vaccines like those under development by AVANT can be proven to offer disease prevention and treatment with notable advantages over drugs in terms of patient compliance and cost and ease of distribution. However, there can be no assurance that we will be able to prove these advantages or that the advantages will be sufficient to support the successful commercialization of our vaccines.

We may face delays, difficulties or unanticipated costs in establishing sales, distribution and manufacturing capabilities for our commercially ready products.

We have chosen to retain, rather than license, all rights to some of our lead products, such as our portfolio of travelers' vaccines. If we proceed with this strategy, we will have full responsibility for commercialization of these products if and when they are approved for sale. We currently lack the marketing, sales and distribution capabilities that we will need to carry out this strategy. To market any of our products directly, we must develop a substantial marketing and sales force with technical expertise and a supporting distribution capability. We have little expertise in this area, and we may not succeed. We may find it necessary to enter into strategic partnerships on uncertain but potentially unfavorable terms to sell, market and distribute our products when they are approved for sale.

Some of our products are difficult to manufacture, especially in large quantities, and we have not yet developed commercial scale manufacturing processes for any of our products. We do not currently plan to develop internal manufacturing capabilities to produce any of our products if they are approved for sale. To the extent that we choose to market and distribute products ourselves, this strategy will make us dependent on other companies to produce our products in adequate quantities, in compliance with regulatory requirements, and at a competitive cost. We may not find third parties capable of meeting those manufacturing needs.

A decrease in demand for Megan® Vac 1 and other future products could adversely affect our revenues.

From the date of our acquisition of Megan Health Inc. in December 2000 through June 30, 2003, AVANT generated approximately $672,000 in revenue from its sales of Megan® Vac 1, including approximately $292,000 in revenue during 2002. Because AVANT's focus is on human health care, as of September 1, 2002 we appointed Lohmann Animal Health International (LAHI) as the exclusive distributor of our Megan Health poultry vaccines in North America. LAHI, an established animal health company, is taking over marketing and distribution of Megan's currently marketed poultry products and assuming control of the late-stage food safety and animal health vaccines under

development for the commercial poultry market. Under the distribution agreement, AVANT receives a percentage of Megan® Vac 1 product sales in the form of royalty payments.

Both demand and ultimately the profitability of Megan® Vac 1, currently our only product available for commercial sales, and future products, are components to our success. The following are potential factors that may negatively affect the demand for Megan® Vac 1:

- Our competitors may develop, manufacture and market products that are more effective or less expensive than ours;
- Megan® Vac 1 could be replaced by a novel product and may become obsolete;
- Users may not accept such a recently approved product without years of proven history;
- Our competitors in the food safety market have greater financial and management resources than we do, and significantly more experience in bringing products to market; and
- We have no manufacturing or distribution facilities for Megan® Vac 1. Instead, we contract with Maine Biological Laboratories, a subsidiary of LAHI, to manufacture Megan® Vac 1 for us.

Any one of these factors could reduce demand for Megan® Vac 1 to a level which may lead to LAHI's and/or our discontinuation of the product. Should LAHI or AVANT be unable to realize acceptable profits from sales of Megan® Vac 1, LAHI or AVANT may choose to scale back our commercialization efforts. In addition, if our partner, LAHI, is unable to continue to distribute Megan® Vac 1 in an effective manner, or is unable to maintain sufficient personnel with the appropriate levels of experience to manage this function, LAHI may be unable to meet the demand for our products and we may lose potential revenues and royalties.

We may be unable to manage multiple late stage clinical trials for a variety of product candidates simultaneously.

During 2003, we expect to have two Phase I clinical trials, three Phase II clinical trials and one Phase III clinical trial in progress. As our current clinical trials progress, we may need to manage multiple late stage clinical trials simultaneously in order to continue developing all of our current products. The management of late stage clinical trials is more complex and time consuming than early stage trials. Typically early stage trials involve several hundred patients in no more than 10-20 clinical sites. Late stage (Phase III) trials involve up to several thousand patients in up to several hundred clinical sites and may require facilities in several countries. Therefore the project management required to supervise and control such an extensive program is substantially larger than early stage programs. As the need for these resources is not known until some months before the trials begin it is necessary to recruit large numbers of experienced and talented individuals very quickly. If the labor market does not allow this team to be recruited quickly the sponsor is faced with a decision to delay the program or to initiate it with inadequate management resources. This may result in recruitment of inappropriate patients, inadequate monitoring of clinical investigators and inappropriate handling of data or data analysis. Consequently it is possible that conclusions of efficacy or safety may not be acceptable to permit filing of a Biologics License Application or New Drug Application for any one of the above reasons or a combination of several.

Our reliance on third parties requires us to share our trade secrets, which increases the possibility that a competitor will discover them.

Because we rely on third parties to develop our products, we must share trade secrets with them. We seek to protect our proprietary technology in part by entering into confidentiality agreements and, if applicable, material transfer agreements, collaborative research agreements, consulting agreements or other similar agreements with our collaborators, advisors, employees and consultants prior to beginning

research or disclosing proprietary information. These agreements will typically restrict the ability of our collaborators, advisors, employees and consultants to publish data potentially relating to our trade secrets. Our academic collaborators typically have rights to publish data, provided that we are notified in advance and may delay publication for a specified time in order to secure our intellectual property rights arising from the collaboration. In other cases, publication rights are typically controlled exclusively by us, although in some cases we may share these rights with other parties. Nevertheless, our competitors may discover our trade secrets, either through breach of these agreements, independent development or publication of information including our trade secrets in cases where we do not have proprietary or otherwise protected rights at the time of publication. A competitor's discovery of our trade secrets would impair our competitive position.

We may not be able to successfully integrate newly acquired technology with our existing technology or to modify our technologies to create new vaccines.

As part of our acquisition of the assets of UPT in January 2003, we acquired VitriLife®, a patented drying process for the industrial-scale preservation of proteins, cells, bacteria and viruses. VitriLife® may improve product stability at room temperature or higher, thereby eliminating the need for costly cold-chain distribution storage of vaccines and rendering vaccines more affordable. If we are able to integrate VitriLife® with our vaccine technology, we believe that the room temperature stability afforded by VitriLife® will give AVANT's vaccines a competitive advantage for a wide range of uses in food safety, animal health and biodefense applications. However, if we are unable to successfully integrate VitriLife®, or other technologies which we have acquired or may acquire in the future, with our existing technology and potential products currently under development, we may be unable to realize any benefit from our acquisition of VitriLife®, or other technology which we have acquired or may acquire in the future and may face the loss of our investment of financial resources and time in the integration process.

We believe that AVANT's vaccine technology portfolio may offer opportunities to develop vaccines that treat a variety of bacterial and viral infections by stimulating a patient's immune system against those disease organisms. However, some applications of our vaccine technology will require that we adapt AVANT's vectoring systems to develop new, safe and effective oral vaccines against anthrax, plague, and other bacterial and viral health threats. It is possible that the attenuated live bacteria we use in our bacterial vaccine candidates can not serve as vectors for the development of further bacterial or viral vaccines. If our vaccine technology portfolio cannot be used to create vaccines against a variety of disease organisms, we may lose all or portions of our investment in development efforts for new bacterial or viral vaccine candidates.

We license technology from other companies to develop our products, and those companies could restrict our use of it.

Companies that license to us technologies we use in our research and development programs may require us to achieve milestones or devote minimum amounts of resources to develop products using those technologies. They may also require us to make significant royalty and milestone payments, including a percentage of any sublicensing income, as well as payments to reimburse them for patent costs. The number and variety of our research and development programs require us to establish priorities and to allocate available resources among competing programs. From time to time we may choose to slow down or cease our efforts on particular products. If in doing so we fail to perform our obligations under a license fully, the licensor can terminate the licenses or permit our competitors to use the technology. Moreover, we may lose our right to market and sell any products based on the licensed technology.

We have many competitors in our field and they may develop technologies that make ours obsolete.

Biotechnology, pharmaceuticals and therapeutics are rapidly evolving fields in which scientific and technological developments are expected to continue at a rapid pace. We have many competitors in the U.S. and abroad, including Merck, Pfizer, Japan Tobacco, Esperion, Acambis, Powderject, ID Biomedical, Iomai, Microscience and Berna Biotech. Our success depends upon our ability to develop and maintain a competitive position in the product categories and technologies on which we focus. Many of our competitors have greater capabilities, experience and financial resources than we do. Competition is intense and is expected to increase as new products enter the market and new technologies become available. Our competitors may:

develop technologies and products that are more effective than ours, making ours obsolete or otherwise noncompetitive;

obtain regulatory approval for products more rapidly or effectively than us; and

obtain patent protection or other intellectual property rights that would block our ability to develop competitive products.

We rely on patents, patent applications and other intellectual property protections to protect our technology and trade secrets; they are expensive and may not provide sufficient protection.

Our success depends in part on our ability to obtain and maintain patent protection for technologies that we use. Biotechnology patents involve complex legal, scientific and factual questions and are highly uncertain. To date, there is no consistent policy regarding the breadth of claims allowed in biotechnology patents, particularly in regard to patents for technologies for human uses like those we use in our business. We cannot predict whether the patents we seek will issue. If they do issue, a competitor may challenge them and limit their scope. Moreover, our patents may not afford effective protection against competitors with similar technology. A successful challenge to any one of our patents could result in a third party's ability to use the technology covered by the patent. We also face the risk that others will infringe, avoid or circumvent our patents. Technology that we license from others is subject to similar risks and this could harm our ability to use that technology. If we, or a company that licenses technology to us, were not the first creator of an invention that we use, our use of the underlying product or technology will face restrictions, including elimination.

If we must defend against suits brought against us or prosecute suits against others involving intellectual property rights, we will incur substantial costs. In addition to any potential liability for significant monetary damages, a decision against us may require us to obtain licenses to patents or other intellectual property rights of others on potentially unfavorable terms. If those licenses from third parties are necessary but we cannot acquire them, we would attempt to design around the relevant technology, which would cause higher development costs and delays, and may ultimately prove impracticable.

Our business requires us to use hazardous materials, which increases our exposure to dangerous and costly accidents.

Our research and development activities involve the use of hazardous chemicals, biological materials and radioactive compounds. Although we believe that our safety procedures for handling and disposing of hazardous materials comply with the standards prescribed by applicable laws and regulations, we cannot completely eliminate the risk of accidental contamination or injury from these materials. Our property insurance covers claims of up to $25,000 arising from physical loss or damage to property caused by bio-contamination. While we believe that we are adequately covered for these risks through either commercial insurance coverage or through self-insurance, there can be no assurance that in the event of an accident, an injured party will not sue us for any resulting damages

with potentially significant liability. The ongoing cost of complying with environmental laws and regulations is significant and may increase in the future. In addition, in connection with our merger with Virus Research Institute, Inc. in 1998, we assumed the real property lease at Virus Research Institute, Inc.'s former site. We understand that this property has a low level of oil-based and other hazardous material contamination. We believe that the risks posed by this contamination are low, but we cannot predict whether additional hazardous contamination exists at this site, or that changes in applicable law will not require us to clean up the current contamination of the property.

Health care reform and restrictions on reimbursement may limit our returns on potential products.

Because AVANT's strategy ultimately depends on the commercial success of our products, we assume, among other things, that end users of our products will be able to pay for them. In the United States and other countries, in most cases, the volume of sales of products like those we are developing depends on the availability of reimbursement from third-party payors, including national health care agencies, private health insurance plans and health maintenance organizations. Third-party payors increasingly challenge the prices charged for medical products and services. Accordingly, if we succeed in bringing products to market, and reimbursement is not available or is insufficient, we could be prevented from successfully commercializing our potential products.

The health care industry in the United States and in Europe is undergoing fundamental changes as a result of political, economic and regulatory influences. Reforms proposed from time to time include mandated basic health care benefits, controls on health care spending, creation of large medical services and products purchasing groups and fundamental changes to the health care delivery system. We anticipate ongoing review and assessment of health care delivery systems and methods of payment in the United States and other countries. We cannot predict whether any particular reform initiatives will result or, if adopted, their impact on us. However, we expect that adoption of any reform proposed will impair our ability to market products at acceptable prices.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of the federal securities laws. You can identify forward-looking statements by the use of the words "believe," "expect," "anticipate," "intend," "estimate," "project," "will," "should," and other expressions which predict or indicate future events and trends to and which do not relate to historical matters. You should not rely on forward-looking statements, because they involve known and unknown risks, uncertainties and other factors, some of which are beyond the our control. These risks, uncertainties and other factors may cause our actual results, performance or achievements to be materially different from the anticipated future results, performance or achievements expressed or implied by the forward-looking statements.

Some of the factors that might cause these differences include the following:

- the integration of the recently acquired UPT technology and programs with our already existing technology and programs;
- the ability to adapt AVANT's vectoring systems to develop new, safe and effective orally administered vaccines against anthrax and plague or any other microbes used as bioweapons;
- the ability to successfully complete development and commercialization of CholeraGarde (Peru-15), Ty800, CETi-1 and of other products;
- the cost, timing, scope and results of ongoing safety and efficacy trials of CholeraGarde (Peru-15), Ty800, CETi-1 and other preclinical and clinical testing;
- the ability to successfully complete product research and further development, including animal, pre-clinical and clinical studies of CholeraGarde (Peru-15), Ty800, CETi-1 and other products;
- the ability to manage multiple late stage clinical trials for a variety of product candidates;
- the volume and profitability of product sales of Megan® Vac 1 and other future products;
- changes in existing and potential relationships with corporate collaborators;

the cost, delivery and quality of clinical and commercial grade materials supplied by contract manufacturers;

the timing, cost and uncertainty of obtaining regulatory approvals to use CholeraGarde (Peru-15) and Ty800, among other purposes, to protect travelers and people in endemic regions from diarrhea causing diseases, to use CETi-1, among other purposes, to raise serum HDL cholesterol levels and for other products;

the ability to obtain substantial additional funding;

the ability to develop and commercialize products before competitors;

the integration of Megan Health's business and programs;

the ability to retain certain members of management; and

other factors detailed from time to time in filings with the Securities and Exchange Commission.

In addition, the factors described under "Risk Factors" in this prospectus, as may be updated from time to time by our future filings under the Securities Exchange Act, and elsewhere in the documents incorporated by reference in this prospectus, may result in these differences. You should carefully review all of these factors. These forward-looking statements were based on information, plans and estimates at the date of this prospectus, and we do not promise to update any forward-looking statements to reflect changes in underlying assumptions or factors, new information, future events or other changes.

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

AVANT's principle activity since our inception has been research and product development conducted on our own behalf, as well as through joint development programs with several pharmaceutical companies and other collaborators. We were incorporated in the State of Delaware in December 1983.

Critical Accounting Policies

Our critical accounting policies are set forth under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Item 7 to our Form 10-K for the year ended December 31, 2002, which is incorporated by reference into this prospectus. There have been no changes to these policies since December 31, 2002. Readers are encouraged to review these critical accounting policies in conjunction with the review of this prospectus.

Overview

AVANT's focus is using the power of the immune system to prevent and treat disease. We have assembled a broad portfolio of technologies and intellectual property that give us a strong competitive position in the vaccines arena and five of our vaccines are in clinical development. The development of immunotherapeutic vaccines like CETi-1 and the marriage of innovative vector delivery technologies with the unique VitriLife® manufacturing process represent the potential for a new generation of vaccines. Our goal is to become a leading developer of such innovative vaccines that address health care needs on a global basis.

We have actively developed and acquired innovative technologies especially novel approaches to vaccine creation. Today our broad intellectual property position allows us to respond quickly and leverage our expertise into many different areas as opportunities and needs arise. For example, our vaccine technology for providing rapid protection against bacterial illnesses may prove useful for improving and expanding America's vaccine arsenal against microbial agents used in war or terrorist attacks.

AVANT is targeting its efforts where it can add the greatest value to the development of its products and technologies. Our goal is to demonstrate clinical proof-of-concept for each product, and then seek excellent partners to help see those products through to commercialization. This approach allows us to maximize the overall value of our technology and product portfolios while best ensuring the expeditious development of each individual product.

Acquisitions

Universal Preservation Technologies, Inc.: In January 2003, AVANT completed the acquisition of certain technology and intellectual property of Universal Preservation Technologies, Inc. (UPT), a privately held company based in San Diego, California, and the licensure of certain patent rights from Elan Drug Delivery Limited (a subsidiary of Elan Corporation plc). As part of the acquisition, Elan Drug Delivery Limited (EDD) settled a patent interference with UPT. Under the settlement agreement UPT assigned certain patent rights to EDD, and EDD licensed UPT's and other related patents to AVANT. EDD's license to AVANT gives AVANT exclusive rights in connection with those patents relating to orally administered vaccines, and non-exclusive rights in certain other fields.

Through this transaction, AVANT has gained exclusive rights to UPT's VitriLife® process for use in AVANT's oral vaccines and certain other non-injectable applications. VitriLife® is a patented drying method for the industrial-scale preservation of biological solutions and suspensions, such as proteins, enzymes, viruses, bacteria and other cells, which has the potential to cut production costs and improve

product stability at room temperature or higher, thus eliminating the need for costly cold-chain distribution and storage of vaccines the major challenge to vaccine affordability in many areas of the world facing endemic disease. The acquisition of UPT's assets includes only technology and patents; AVANT did not acquire UPT's San Diego facility or employees in this transaction. We have determined that this technology has alternative future uses and will be incorporated into a number of AVANT's bacterial vaccine programs. AVANT paid an aggregate of $2,000,000 in consideration in the transaction, recorded this value to acquired intangible assets, and is amortizing these assets over their estimated lives of ten years.

Megan Health, Inc.: On December 1, 2000, AVANT acquired all of the outstanding capital stock of Megan Health, Inc. ("Megan"), a company engaged in the discovery and development of human and animal vaccines using patented gene modification technologies. In connection with the acquisition, we recorded a charge of $9,012,300 for acquired in-process research and development ("IPR&D"), which represented purchased in-process technology which had not yet reached technological feasibility and had no alternative future use. The value of IPR&D was determined by estimating the costs to develop the purchased in-process technology into commercially viable products, estimating the net cash flows from such projects and discounting the net cash flows back to their present values. The probability of success and discount rates in each project take into account the uncertainty surrounding the successful development and commercialization of the purchased in-process technology. The resulting net cash flows for these projects were based on our best estimates of revenue, cost of sales, research and development costs, selling, general and administrative costs, and income taxes for each project, and the net cash flows reflect assumptions that would be used by market participants.

Virus Research Institute, Inc.: On August 21, 1998, AVANT acquired Virus Research Institute, Inc. ("VRI"), a company engaged in the discovery and development of systems for the delivery of vaccines and immunotherapeutics, and novel vaccines for adults and children. In connection with the acquisition, we recorded a charge of $44,630,000 for acquired IPR&D, which represented purchased in-process technology which had not yet reached technological feasibility and had no alternative future use. As of June 30, 2003, none of the acquired research and development projects had reached technical feasibility.

Research and Development Activities

AVANT is currently focused on the development of a number of vaccine product candidates which are in various stages of clinical trials. We expect that a large percentage of our research and development expenses will be incurred in support of our current and future clinical trial programs.

The expenditures that will be necessary to execute AVANT's business plan are subject to numerous uncertainties. Completion of clinical trials may take several years or more, but the length of time generally varies substantially according to the type, complexity, novelty and intended use of a product candidate. It is not unusual for the clinical development of these types of product candidates to each take five years or more, and for total development costs to exceed $100 million for each product candidate.

AVANT estimates that clinical trials of the type AVANT generally conducts are typically completed over the following timelines:

Clinical Phase	Estimated Completion Period
Phase I	1-2 Years
Phase II	1-5 Years
Phase III	1-5 Years

The duration and the cost of clinical trials may vary significantly over the life of a project as a result of differences arising during the clinical trial protocol, including, among others, the following:

- the number of patients that ultimately participate in the trial;
- the duration of patient follow-up that seems appropriate in view of results;
- the number of clinical sites included in the trials;
- the length of time required to enroll suitable patient subjects; and
- the efficacy and safety profile of the product candidate.

AVANT tests potential product candidates in numerous preclinical studies for safety, toxicology and immunogenicity. AVANT then may conduct multiple clinical trials for each product candidate. As we obtain results from trials, we may elect to discontinue or delay clinical trials for certain product candidates in order to focus our resources on more promising product candidates.

An element of AVANT's business strategy is to pursue the research and development of a broad portfolio of product candidates. This is intended to allow AVANT to diversify the risks associated with its research and development expenditures. As a result, AVANT believes its future capital requirements and its future financial success are not substantially dependent on any one product candidate. To the extent AVANT is unable to maintain a broad range of product candidates, AVANT's dependence on the success of one or a few product candidates increases.

AVANT's product candidates also have not yet received FDA regulatory approval, which is required before AVANT can market them as therapeutic or vaccine products. In order to proceed to subsequent clinical trial stages and to ultimately achieve regulatory approval, the FDA must conclude that AVANT's clinical data establish safety and efficacy. Historically, the results from preclinical testing and early clinical trials (through Phase II) have often not been predictive of results obtained in later clinical trials. A number of new drugs, biologics and vaccines have shown promising results in early clinical trials, but subsequently failed to establish sufficient safety and efficacy data to obtain necessary regulatory approvals.

Furthermore, AVANT's business strategy includes the option of entering into collaborative arrangements with third parties to complete the development and commercialization of AVANT's product candidates. In the event that third parties take over the clinical trial process for one of AVANT's product candidates, the estimated completion date would largely be under control of that third party rather than AVANT. AVANT cannot forecast with any degree of certainty which proprietary products, if any, will be subject to future collaborative arrangements, in whole or in part, and how such arrangements would affect AVANT's development plan or capital requirements. AVANT's programs may also benefit from subsidies, grants, contracts or government or agency-sponsored studies that could reduce AVANT's development costs.

As a result of the uncertainties discussed above, among others, AVANT is unable to estimate the duration and completion costs of its research and development projects or when, if ever, and to what extent it will receive cash inflows from the commercialization and sale of a product. AVANT's inability to complete its research and development projects in a timely manner or its failure to enter into collaborative agreements, when appropriate, could significantly increase its capital requirements and could adversely impact its liquidity. These uncertainties could force AVANT to seek additional, external sources of financing from time to time in order to continue with its business strategy. AVANT's inability to raise additional capital, or to do so on terms reasonably acceptable to it, would jeopardize the future success of its business. The amount incurred for each material research program since the beginning of 2000, is set forth below under "Program Developments." During the past five years through the end of 2002, AVANT incurred an aggregate of $60.6 million in research and development costs. During the six months ended June 30, 2003, AVANT incurred an aggregate of $5.4 million in

research and development costs. The following table indicates the amount incurred for each of AVANT's material research programs and for other identified research and development activities during the years ended December 31, 2002, 2001 and 2000 and the six months ended June 30, 2003 and 2002. The amounts disclosed in the following table and in "Program Developments" below reflect direct research and development costs, license fees associated with the underlying technology and an allocation of indirect research and development costs to each program. Prior to January 1, 2000, AVANT did not track research and development costs by program and, therefore we are unable to disclose spending by program prior to that date.

	Six Months Ended June 30,		Year Ended December 31,		
	2003	2002	2002	2001	2000
Cholesterol Management Vaccine:					
CETi-1	$ 2,002,100	$ 1,548,000	$ 3,176,800	$ 2,387,700	$ 1,900,100
Bacterial Vaccines:					
CholeraGarde	656,900	3,457,700	5,959,100	2,369,200	134,200
Ty800	202,800	1,333,200	2,203,600	1,863,500	66,100
Other	542,000		204,400		
BioDefense Vaccines:	1,178,300		239,900		
Food Safety & Animal Health Vaccines:	36,500	286,400	450,600	984,900	64,800
Viral Vaccines:					
Rotavirus vaccine	250,000	200,000	400,000	334,100	244,900
Other	41,700	147,900	346,800	264,600	1,366,500
Complement Inhibitors:					
TP10/TP20	455,600	1,493,100	1,714,800	12,930,500	6,514,600
Discontinued Programs:		9,700	12,500	446,000	483,000
Total R&D Expense	$ 5,365,900	$ 8,476,000	$ 14,708,500	$ 21,580,500	$ 10,774,200

Program Developments

Cholesterol Management Vaccine: We are developing an immunotherapeutic vaccine against endogenous cholesteryl ester transfer protein ("CETP"), which may be useful in reducing risks associated with atherosclerosis. CETP is a key intermediary in the balance of HDL (high-density lipoprotein) and LDL (low-density lipoprotein). We are developing this vaccine, CETi-1, to stimulate an immune response against CETP, which we believe may improve the ratio of HDL to LDL cholesterol and reduce the progression of atherosclerosis. We have conducted preliminary studies of rabbits, which have demonstrated the ability of CETi-1 vaccine to elevate HDL and reduce the development of blood vessel lesions.

CETi-1 is being developed for the management of patients with low levels of HDL cholesterol. In September 1999, we initiated a double-blind placebo controlled, Phase I clinical trial of our CETi-1 vaccine in adult volunteers. The object of the study was to demonstrate the safety of single administrations of the vaccine at four different dosage strengths and results were announced in January 2001. The vaccine was very well tolerated in the 48 adult volunteers who participated in the study. The only serious adverse reaction reported during the study (allergic reaction to shower gel) was not related to study medication. There were no differences in the safety profiles of placebo groups and active vaccine groups. In addition, there was limited evidence of an immune response in one subject treated with the highest dose. Subsequently, AVANT announced results from a double-blinded placebo controlled extension of the earlier completed CETi-1 Phase I trial in the same healthy adult volunteers receiving a second dose of the vaccine. Results from the extension study showed measurable antibody titers in all dose groups treated with study medication, suggesting a dose-response relationship.

These data were extremely helpful in moving the program forward to a placebo controlled Phase II study, which was initiated in August 2001, in approximately 200 patients with low levels of HDL cholesterol. The objectives of the study are to evaluate the safety,

immunogenicity and dose-response relationship of the CETi-1 product in patients who receive an initial immunization followed by boosters. The primary endpoint is the change in HDL cholesterol measured after the six-month booster. Results are expected from the trial during the fourth quarter of 2003. During the period January 1, 2000 through December 31, 2002, AVANT incurred approximately $7.5 million in research, development and clinical costs. During the six months ended June 30, 2003, AVANT incurred approximately $2.0 million in research, development and clinical costs associated with the CETi-1 program. As clinical data become available, we plan to seek a corporate partner to complete development and to commercialize the CETi-1 vaccine.

Bacterial Vaccines: Development of a safe, effective cholera vaccine is the first step in establishing AVANT's single-dose, oral bacterial vaccine franchise. During 2002, AVANT completed a Phase II dose-ranging study with CholeraGarde which confirmed the safety and activity of this vaccine and supported the start of Phase II trials in December 2002 with the International Vaccine Institute (IVI) in Bangladesh where cholera is endemic. IVI is assessing the safety and immunogenicity of the vaccine in adults before moving into progressively younger pediatric populations, eventually studying the vaccine in infants as young as nine months. To date, IVI has completed testing in adults and is now vaccinating toddlers, ages 2 to 5 years. AVANT expects IVI to provide data from the adult and toddler portions of this study during the second half of 2003.

During the second quarter of 2003, AVANT terminated its manufacturing contract with Bio Sidus, S.A., of Buenos Aires, Argentina, for the manufacture of its CholeraGarde vaccine. Simultaneously, AVANT has commenced arbitration proceedings in the State of New York to reconcile contractual issues between the two companies. AVANT believes it has fully accrued for any potential costs. Clinical material for the IVI trials in Bangladesh previously has been manufactured by the Walter Reed Army Institute of Research (WRAIR), and AVANT and WRAIR have entered into a manufacturing agreement to supply CholeraGarde .

During the period January 1, 2000 through December 31, 2002, AVANT incurred approximately $8.5 million in research, development and clinical costs on its CholeraGarde program. During the six months ended June 30, 2003, AVANT incurred approximately $0.7 million in research, development and clinical costs on its CholeraGarde program.

In addition, the National Institute of Allergy and Infectious Disease (NIAID) of the National Institutes of Health (NIH) and AVANT have agreed for the NIAID to conduct a Phase I in-patient dose-ranging clinical trial aimed at demonstrating the safety and immunogenicity of the Ty800 typhoid fever vaccine. The trial is planned for a NIAID-funded clinical site using NIAID-funded clinical material. The NIAID trial seeks to confirm the safety and immunogenicity of the Ty800 oral vaccine observed in an earlier physician-sponsored Ty800 vaccine study. During the period January 1, 2000 through December 31, 2002, AVANT incurred approximately $4.1 million in research, development and clinical costs on its Ty800 program. During the six months ended June 30, 2003, AVANT incurred approximately $0.2 million in research, development and clinical costs on its Ty800 program.

Finally, we are developing three additional bacterial vaccines against enterotoxigenic *E. coli*, *Shigella* and *Campylobacter* all important causes of serious diarrheal diseases worldwide. These three programs are in pre-clinical development.

BioDefense Vaccines: The attenuated live bacteria used to create AVANT's single-dose oral vaccines can also serve as vectors for the development of vaccines against other bacterial and viral diseases. By engineering key disease antigens into the DNA of the vector organisms, AVANT expects to be able to extend the protective ability of its single-dose oral vaccines to a wide variety of illnesses. We

believe our vector technologies may prove useful for improving and expanding America's vaccine arsenal against microbial agents used in war or terrorist attacks.

In October 2001, AVANT granted DynPort Vaccine Company LLC (DynPort) a license for exclusive rights to use certain components of AVANT's anthrax vaccine technology. In October 2002, DynPort announced the initiation of a Phase I clinical trial of a new injectable recombinant anthrax vaccine in approximately 70 volunteers. The vaccine candidate consists of a highly purified protein Protective Antigen derived from the anthrax bacterium using recombinant technology and advance production processes licensed from AVANT. DynPort hopes this vaccine will offer a safe, effective product to support the country's need for a new-generation anthrax vaccine. The Phase I trial is being conducted at WRAIR in conjunction with the Henry M. Jackson Foundation. The study will evaluate tolerability, safety and immunogenicity of DynPort's new vaccine being developed for the U.S. Department of Defense (DoD) through the Joint Vaccine Acquisition Program (JVAP). In June 2003, AVANT was awarded a subcontract by DynPort, in the amount of $344,000, which covers stability testing of DynPort "s injectable anthrax vaccine. Payments under the subcontract agreement are made on a time and materials basis and receipt of the full amount is conditioned upon the project being fully funded through completion and AVANT performing and continuing to demonstrate that it has the capability to perform the funded work.

In July 2002, AVANT was awarded a Phase I Small Business Innovation Research (SBIR) grant to support the development of the Company's oral, single-dose bacterial vectors to immunize people against anthrax. Vaccine delivery using live, attenuated bacteria is particularly well suited for situations where ease of administration and rapid onset of immunity are required, such as for protection against biological warfare agents. The NIAID of the NIH awarded this Live Attenuated Vaccines Against Anthrax grant, which provides approximately $125,000 in funding to AVANT.

Further, in January 2003, AVANT was awarded a subcontract to develop for the U.S. Department of Defense an oral combination vaccine against anthrax and plague using AVANT's proprietary vaccine technologies. AVANT executed this initial subcontract with DynPort and will be reimbursed on a time and materials basis for vaccine development research work performed by AVANT in the amount of $2.5 million. In June 2003, AVANT was awarded a second subcontract for approximately $1.3 million to support preclinical animal testing of vaccine constructs being developed by AVANT for the oral combination vaccine against anthrax and plague. AVANT expects to execute additional subcontracts with DynPort. Under the subcontract agreement, AVANT may receive in excess of $8 million over a two-year period, covering vaccine development through preclinical testing. The Defense Appriations Bill for Fiscal Year 2004 passed by Congress in September 2003 commits $3.0 million for the continued development of this combination vaccine. Payments under the subcontract agreement are made on a time and materials basis and receipt of the full amount is conditioned upon the project being fully funded through completion and AVANT performing and continuing to demonstrate that it has the capability to perform the funded work.

In August 2003, the Company announced that it had reached agreement with MassDevelopment, the economic development entity for the Commonwealth of Massachusetts, for AVANT to occupy and buildout a process development and pilot-manufacturing facility in Fall River, Massachusetts. It is expected that MassDevelopment will provide financing for AVANT to establish this 11,000 square foot facility, which will support the clinical development of its portfolio of bacterial vaccines, including vaccines for biodefense, as well as the continued development and product application of VitriLife.

During the period January 1, 2000 through December 31, 2002, AVANT incurred approximately $0.2 million in research and development costs on its biodefense vaccine program. During the six months ended June 30, 2003, AVANT incurred approximately $1.2 million in research and development costs on its biodefense vaccine program.

Food Safety and Animal Health Vaccines: AVANT has also partnered with Pfizer, who will apply AVANT's vaccine technologies to animal health and human food safety markets. The Pfizer research programs are making significant progress and in late 2002 we achieved an important milestone, which resulted in a modest payment to AVANT. During the period January 1, 2000 through December 31, 2002, AVANT incurred approximately $1.5 million in research and development costs on its food safety and animal health vaccines program. During the six months ended June 30, 2003, AVANT incurred approximately $36,500 in research and development costs on its food safety and animal health vaccines program.

Modern biotechnology offers great potential for bettering health conditions worldwide. New vaccine technologies, in particular, can provide avenues to disease prevention and treatment with notable advantages over drugs in terms of patient compliance and cost. They also offer strategies to solve global health problems, to protect both civilians and military from biowarfare threats, and to increase the safety of our food supply. Our goal is to become a leading developer of innovative vaccines that address health care needs on a global basis. In this regard, we have recently completed the acquisition of VitriLife®, a new technology with the potential to reduce manufacturing costs and improve product stability, eliminating the need for vaccine refrigeration. With this technology and our *Cholera*- and *Salmonella*-vectored delivery technologies, named VibrioVec and SalmoVec , we can now develop a new generation of vaccines that have an ideal product profile: safe, effective, oral, single-dose, rapidly protective and requiring no refrigeration.

Rotavirus Vaccine: Rotavirus is a major cause of diarrhea and vomiting in infants and children. No vaccine against rotavirus is currently on the market. In 1997, we licensed our oral rotavirus vaccine to Glaxo. In 1999, after our Phase II study demonstrated 89% protection in a study involving 215 infants, Glaxo paid us an additional license fee and assumed full responsibility for funding and performing all remaining clinical development. Substantially all of the ongoing development is being conducted and funded by Glaxo. During the period January 1, 2000 through December 31, 2002, AVANT incurred approximately $900,000 in licensing fees and $79,000 in research and development costs. During the six months ended June 30, 2003, AVANT incurred approximately $250,000 in licensing fees associated with the rotavirus program. Prior to January 1, 2000, AVANT did not track research and development costs by program and, therefore, we are unable to disclose spending by program prior to that date. Glaxo has completed Phase I/II bridging studies in over 6,000 infants in Europe, Latin America and Asia using its two-dose oral rotavirus vaccine, called Rotarix®. Glaxo initiated global Phase III clinical trials of Rotarix® in the third quarter of 2003, and AVANT recognized a $1.0 million milestone. Assuming product development and commercialization continues satisfactorily, we may receive additional milestone payments totaling $7.5 million upon the achievement of specified milestones. In addition, we will be entitled to royalties based on net sales of Rotarix®.

Complement Inhibitors: In 1997, we entered into an agreement with Novartis relating to the development of our complement inhibitor, TP10, for use in xenotransplantation (animal organs into humans) and allotransplantation (human organs into humans). The decision to license TP10 resulted in a $6 million equity investment and license payment by Novartis which was received by AVANT in January 2000. As of September 6, 2002, Novartis and AVANT agreed to terminate the TP10 agreement pursuant to which Novartis paid a net termination fee of $1.9 million and returned to AVANT all pre-clinical and clinical TP10 material.

In February 2002, AVANT announced that TP10 had not achieved a significant reduction in the primary endpoint of death, myocardial infarction, prolonged intubation or prolonged intra-aortic balloon pumping following preliminary analysis of a Phase II adult cardiac surgery trial conducted in 564 patients. However, further analysis of the study data demonstrated an important treatment benefit to male patients participating in the trial, with no significant treatment benefit to female patients. Adverse events reported following treatment with TP10 were generally similar to those seen in placebo treated patients and were said by investigators to be routinely observed following cardiopulmonary bypass.

The important treatment benefits seen in the male population were directly related to mortality and the benefit seen was impressive. This further analysis of the study data showed continued promise for this molecule and AVANT has announced its renewed commitment to its development. AVANT plans to conduct a Phase II double-blind, placebo-controlled trial of TP10 in approximately 200 women undergoing cardiopulmonary by-pass surgery. The trial will examine the effect of TP10 versus placebo, is planned to begin around year-end 2003 and conclude around year-end 2004, and will be conducted at approximately 10 sites throughout the United States. The goals of the trial are to clarify the effect that TP10 has for women undergoing cardiac surgery, as well as augment the safety data for that patient population to allow for the design of a subsequent registration-directed trial.

During the period January 1, 2000 through December 31, 2002, AVANT incurred approximately $21.2 million in research, development and clinical costs. During the six months ended June 30, 2003, AVANT incurred approximately $0.5 million in research, development and clinical costs associated with its complement programs. With the termination of the Novartis agreement, AVANT can now offer a worldwide license for all fields, and may seek partnering arrangements to capture the value inherent in this program and its strong intellectual property portfolio.

Technology Licensing

AVANT has adopted a business strategy of out-licensing technology that does not match its development focus or where it lacks sufficient resources for the technology's efficient development. For example, when AVANT acquired Megan it also signed an agreement with Pfizer Inc. to leverage the value of Megan's oral vaccine technology in a significant market opportunity (animal health and human food safety) outside of AVANT's own focus on human health care.

DynPort License: In October 2001, AVANT granted a license to DynPort Vaccine Company LLC (DynPort) for exclusive rights to use certain components of AVANT's anthrax vaccine technology. In October 2001, in connection with the execution of the agreement, AVANT received a $200,000 materials transfer fee. Under the agreement, AVANT is also entitled to annual $50,000 license maintenance payments, with respect to which AVANT has received $100,000, and milestone payments of up to $700,000 in the aggregate, $100,000 of which AVANT has already received. AVANT is also entitled to specified royalties on eventual product sales. The term of this agreement is through the expiration of the last of the patents covered by the agreement, although DynPort may terminate the agreement upon 90 days prior written notice. DynPort, a private company, is chartered with providing an integrated approach for the advanced development of specific vaccines and other products to protect against the threat of biological warfare agents. DynPort has a 10-year contract with the U.S. Department of Defense for the development of vaccines against certain acute infectious diseases and contagious diseases, initiated under the 1997 Joint Vaccine Acquisition Program. We see this licensing opportunity as an excellent way to further leverage our vaccine technology.

Results of Operations

Six-Month Period Ended June 30, 2003 compared with Six-Month Period Ended June 30, 2002

AVANT reported consolidated net loss of $6,545,500, or $.11 per share, for the six months ended June 30, 2003, compared with a net loss of $10,077,900, or $.17 per share, for the six months ended June 30, 2002. The weighted average common shares outstanding used to calculate net loss per common share was 60,468,700 in 2003 and 60,457,900 in 2002.

Revenue

Total revenue increased $426,800, or 32.0%, to $1,760,100 for the first six months of 2003 compared to $1,333,600 for the first six months of 2002.

Product development and licensing revenue decreased $720,600, or 65.1%, to $387,100 for the first six months of 2003 from $1,107,700 for the first six months of 2002. In 2003, the decrease in product development and licensing revenue consisted primarily of a decrease of $307,800 for the amortization of a nonrefundable license fee from Novartis due to the termination of the TP10 agreement with Novartis in 2002, a decrease of $213,000 for the amortization of nonrefundable license fees from Pfizer due to an extension of the amortization period, a decrease of $240,000 in funded research from Pfizer, a decrease of $25,000 in milestone payments from DynPort received in 2002, offset partly by a one-time $50,000 distribution fee from LAHI, and $15,300 received in connection with government SBIR grants.

During the first six months of 2003, AVANT received three subcontracts from its partner, DynPort, to develop anthrax and plague vaccines for the U.S. Department of Defense. AVANT will be reimbursed by DynPort on a time and materials basis for vaccine development research work performed by AVANT in the aggregate amount of $4.1 million. Under these agreements, AVANT recognized $1,295,600 in government contract revenue during the first six months of 2003.

As of September 1, 2002, we transferred the marketing and distribution of the Megan poultry product line to our partner, LAHI, and for the first six months of 2003 AVANT received a percentage of all Megan®Vac 1 product sales as product royalty payments totaling $77,400. Product sales for the first six months of 2002 totaled $225,900 and were derived from direct sales by AVANT of the Megan®Vac 1 salmonella vaccine product.

Operating Expense

Total operating expense decreased $3,337,800, or 28.3%, to $8,439,900 for the first six months of 2003 compared to $11,777,700 for the first six months of 2002. The decrease in total operating expense for the first six months of 2003 compared to the first six months of 2002 is primarily due to a reduction in costs associated with conducting sponsored research and clinical trials, and a decrease in contract manufacturing activities and consulting costs associated with the bacterial vaccines programs.

Research and development expense decreased $3,110,100, or 36.7%, to $5,365,900 for the first six months of 2003 compared to $8,476,000 for the first six months of 2002. The decrease in 2003 compared to 2002 is primarily due to reductions in contract manufacturing costs of $2,055,800, sponsored research costs of $84,000 and clinical trial costs of $921,500 associated with the company's bacterial vaccine programs. It also reflects declines in personnel and related expenses of $251,700, and manufacturing consultancy costs of $219,700, offset partly by increases in license fees of $260,400, and facility related expenses of $297,900.

Selling, general and administrative expense decreased $297,000, or 10.3%, to $2,576,400 for the first six months of 2003 compared to $2,873,400 for the first six months of 2002. The decrease in 2003 is primarily attributed to a decrease in selling and marketing expense and in personnel and related expenses of $88,100, offset partly by legal expenses of $269,700, consulting costs of $494,200 and insurance expenses of $87,400.

Amortization expense of acquired intangible assets was $497,600 in the first six months of 2003 compared to $397,600 in 2002.

Investment Income, Net

Net investment income decreased $231,900, or 63.3%, to $134,300 for the first six months of 2003 compared to $366,200 for the first six months of 2002. The decrease is primarily due to lower average cash balances and significantly lower interest rates during the first six months of 2003 compared to the first six months of 2002. During the first six months of 2003 and 2002, the average month-end cash balances were $19,352,600 and $36,171,600, respectively. The effective interest rates during the first six months of 2003 and 2002 were 1.24% and 1.91%, respectively.

Fiscal Year Ended December 31, 2002 compared with Fiscal Year Ended December 31, 2001

AVANT reported a net loss of $13,829,200, or $0.23 per share, for the year ended December 31, 2002, a decrease of $8,923,800, or 39%, compared to a net loss of $22,753,000, or $0.39 per share, for the year ended December 31, 2001. The weighted average common shares outstanding used to calculate the net loss per common share was 60,461,400 in 2002 and 57,981,800 in 2001.

Revenue

Total revenue increased $3,358,900, or 100%, to $6,704,800 in 2002 from $3,345,900 in 2001.

Product development and licensing revenue increased $3,412,600, or 114%, to $6,412,400 in 2002 from $2,999,800 in 2001. The increase in 2002 in product development and licensing revenue consisted primarily of a $1,900,000 net fee paid by Novartis for the termination of its agreement on TP10 in transplantation, the recognition of $1,846,100 in previously deferred revenue related to the Novartis agreement as a result of its termination, a $500,000 milestone payment from Pfizer as a result of the submission of an application with the USDA for licensure of a food safety vaccine, a reduction of $225,900 in one-time revenue recognized in 2001 from Innogenetics and Parallel Solutions and a decrease of $342,400 in funding received in connection with our SBIR and STTR grants. The Novartis-related revenue in 2002 is non-recurring in nature and the deferred revenue portion represents non-cash revenue. The decrease in SBIR and STTR grant funding primarily reflects the completion of certain grants by the company in 2002 and a reduction in activity on other grants.

Product sales decreased $53,700, or 16%, to $292,400 in 2002 from $346,100 in 2001 and were derived from sales of our Megan®Vac 1 product, a vaccine for use in chickens for protection against multiple strains of Salmonella bacteria. As of September 1, 2002, we transferred the marketing and distribution of this product line to our partner, Lohmann Animal Health International (LAHI), and in the future AVANT will receive a percentage of all Megan®Vac 1 product sales in the form of royalty payments. As a result of the distribution agreement with LAHI, AVANT expects to see a decline in revenue received by AVANT from Megan®Vac 1 product sales in future years but believes that this decrease will be offset by the elimination of sales, marketing and administrative expense at Megan.

Operating Expense

Total operating expense decreased $6,770,600, or 24%, to $21,136,700 for 2002 compared to $27,907,300 for 2001. The decrease in total operating expense for 2002 compared to 2001 is primarily due to decreased clinical trials costs of approximately $6,240,700 and decreased clinical materials costs of approximately $1,155,800 incurred in connection with the Company's clinical programs. Also contributing to this decrease was the elimination of goodwill amortization of $580,800, offset in part by an increase in consultancy, legal, insurance and facility-related expenses.

Research and development expense decreased $6,872,000, or 32%, to $14,708,500 in 2002 from $21,580,500 in 2001. The decrease in 2002 compared to 2001 is primarily due to (1) the Company's terminated TP10 programs which resulted in a decline in clinical trials costs of $7,301,700, offset partly by an increase in clinical trials costs for our CETi-1 and bacterial vaccines programs of $1,061,000 during 2002; and (2) a decrease in clinical materials costs of $908,500 as a result of the terminated TP-10 programs and $282,600 as a result of the decision not to continue with the current supplier for further production runs for the bacterial vaccines programs, offset in part by an increase of $35,300 in clinical materials costs associated with the CETi-1 program. This decrease in expense was further offset in part by increases in manufacturing consultancy expenses of $494,600 and facility-related expenses of $508,000 as a result of efforts to resolve delays in production runs and increases in rent and utility costs, respectively.

Selling, general and administrative expense increased $678,000, or 14%, to $5,592,100 in 2002 compared to $4,914,100 in 2001. The increase in expense in 2002 compared to 2001 is primarily attributed to increased consultancy expense of $357,100, legal expense of $159,700, insurance costs of $112,900 and corporate communications costs of $101,100 offset in part by a decrease in selling and marketing expenses of $136,100.

Investment Income, Net

Interest income decreased $1,205,600, or 67%, to $602,700 for 2002 compared to $1,808,300 for 2001. The decrease in interest income is primarily due to significantly lower interest rates and lower average cash balances in 2002. During 2002 and 2001, the average month-end cash balances were $31,479,000 and $42,466,300, respectively. The effective interest rates in 2002 and 2001 were 1.84% and 4.14%, respectively.

Fiscal Year Ended December 31, 2001 compared with Fiscal Year Ended December 31, 2000

AVANT reported a net loss of $22,753,000, or $0.39 per share, for the year ended December 31, 2001, compared to a net loss of $21,975,000, or $0.42 per share, for the year ended December 31, 2000. The net loss for the year ended December 31, 2000 includes a charge of $9,012,300 for purchased in-process research and development related to the acquisition of Megan in December 2000. Excluding the charge for purchased in-process research and development in 2000, the net loss for 2001 increased $9,790,300, or 75.5%, to $22,753,000, or $0.39 per share, compared to a net loss of $12,962,700, or $0.25 per share, for 2000. The weighted average common shares outstanding used to calculate

the net loss per common share was 57,981,800 in 2001 and 52,438,100 in 2000.

Revenue

Total revenue increased $2,582,700, or 338%, to $3,345,900 in 2001 from $763,200 in 2000.

Product development and licensing revenue increased $2,270,000, or 311%, to $2,999,800 in 2001 from $729,800 in 2000. In 2001, the increase in product development and licensing revenue consisted primarily of an increase of $847,200 in the amortization of a nonrefundable license fee from Pfizer, $542,000 from Pfizer for funding of research and development at Megan, annual license and milestone payments of $212,500 from DynPort, $225,700 in one-time revenue recognized in 2001 from Innogenetics and Parallel Solutions and an increase of $442,600 received in connection with our SBIR and STTR grants. The increase in amortization of a nonrefundable license fee from Pfizer reflects a full year of amortization in 2001. The increase in Pfizer's funding of research and development reflects a full year of such activity in 2001.

Product sales increased $312,700 to $346,100 in 2001 from $33,400 in 2000 and were derived from sales of our Megan®Vac 1 product, a vaccine for use in chickens for protection against multiple strains of Salmonella bacteria, which we acquired in connection with our acquisition of Megan on December 1, 2000. The increase in product sales is due to the fact that in 2000 only one month of Megan®Vac 1 product sales were recorded.

Operating Expense

Total operating expense for 2001 was $27,907,300 compared to $24,716,300 for 2000. Operating expense for 2000 included a charge of $9,012,300 for purchased in-process research and development in connection with the acquisition of Megan in December 2000. Excluding the purchased in-process research and development charge in 2000, operating expense increased $12,203,300, or 77.7%, to $27,907,300 for 2001 compared to $15,704,000 for 2000. The increase in total operating expense for 2001 compared to 2000 is primarily due to increased clinical trials costs incurred in connection with AVANT's TP10 and CETi-1 clinical programs and clinical materials costs incurred in connection with

the bacterial vaccines programs. Also contributing to this increase was the addition of the operating costs of Megan in the twelve-month period in 2001 and an increase in the charges for amortization of acquired intangible assets related to the Megan Health acquisition in late 2000. Also, expenses in 2000 were offset in part by the receipt of legal settlement payments totaling $500,000.

Research and development expense increased $10,806,300, or 100.3%, to $21,580,500 in 2001 from $10,774,200 in 2000. The increase in 2001 compared to 2000 is primarily due to (1) significant increased costs associated with conducting clinical trials of TP10 ($5,540,000) and CETi-1 ($397,800) in 2001, (2) an increase in expense of $2,414,000 associated with the manufacture of clinical materials for Peru-15 and Ty800, offset in part by reduced expenses of $383,500 associated with the manufacture of clinical materials for TP10 and CETi-1, and (3) twelve months of Megan research and development expense incurred in 2001.

Selling, general and administrative expense increased $105,800, or 2.2%, to $4,914,100 in 2001 compared to $4,808,300 in 2000. Included in selling, general and administrative expense in 2001 and 2000 are charges of $22,400 and $69,600 for the write-off of certain capitalized patent costs associated with our complement and SMIR programs, respectively. Excluding the writeoff of patent costs in 2001 and 2000, selling, general and administrative expense increased $153,000, or 3.2%, to $4,891,700 for 2001 compared to $4,738,700 for 2000. The increase in expense in 2001 compared to 2000 is primarily attributed to the addition of twelve months of Megan selling, general and administrative expense.

Investment Income, Net

Interest income decreased $169,700, or 8.6%, to $1,808,300 for 2001 compared to $1,978,100 for 2000. The decrease in interest income is primarily due to significantly lower interest rates, offset partly by higher average cash balances in 2001. During 2001 and 2000, the average month-end cash balances were $42,466,300 and $33,297,300, respectively.

Liquidity and Capital Resources

AVANT's cash, cash equivalents and marketable securities at December 31, 2002 was $25,070,700 compared to $42,665,900 at December 31, 2001.

Net cash used in operating activities decreased to $16,659,400 in 2002 compared $20,825,400 in 2001. The decrease is attributed to a decrease in net loss incurred in 2002 compared to 2001 and decreases in accounts receivable and inventories, offset by an increase in prepaid expenses and decreases in accounts payable, accrued expenses and deferred revenue.

Net cash used in investing activities increased to $840,600 in 2002 compared to $775,400 in 2001. The increase is primarily due to the increased investment in patents and licenses, offset in part by decreased investment in property and equipment in 2002 compared to 2001.

Net cash used in financing activities was $95,200 in 2002 compared to net cash provided by financing activities of $14,089,800 in 2001. The decrease is due to a decrease in proceeds from the issuance of stock and from the exercise of stock options and warrants, coupled with the purchases of treasury stock under a share repurchase plan.

In connection with our acquisition of the technology and intellectual property portfolio of UPT and the licensure of certain patents from Elan, AVANT paid an aggregate of $2,000,000 in consideration in the transaction. The transaction was recorded in the first quarter of 2003. In connection with our acquisition of Megan, we entered into a licensing agreement with Pfizer whereby Pfizer made an initial license payment of $2.5 million together with a $3 million equity investment in AVANT. In July 1999, Novartis exercised its option to license TP10 for use in the field of transplantation. The decision to license TP10 resulted in a $6 million payment by Novartis which was received by AVANT in January 2000. As of September 6, 2002, Novartis and AVANT agreed to

terminate the TP10 agreement pursuant to which Novartis paid a net termination fee of $1.9 million and returned to AVANT all pre-clinical and clinical TP10 material.

In August 2002, our Board of Directors approved a stock repurchase plan, which authorized the buyback of up to two million shares of our common stock in the open market or through privately negotiated transactions through August 31, 2003. Under the plan, we acquired 220,300 shares at an aggregate cost of approximately $227,700 and an average price of $1.03 per share.

In October 2001, we completed a direct equity placement of approximately 3,057,900 shares of common stock to institutional investors at an average price of $4.58 per share which generated net proceeds totaling approximately $13,575,200. In July 2000, we completed a private placement of 4,650,900 newly issued shares of common stock at $7.85 per share which generated net proceeds totaling approximately $34,481,000 after deducting all associated expenses.

AVANT ended the second quarter of 2003 with cash and cash equivalents of $16,984,100 compared to cash and cash equivalents of $25,070,700 at December 31, 2002.

Net cash used in operating activities decreased to $5,735,000 for the first six months of 2003 compared to $10,571,800 for the first six months of 2002. The decrease is primarily attributed to the decrease in net loss incurred in 2003 compared to 2002 and an increase in deferred revenue.

Net cash used in investing activities increased to $2,263,700 for the first six months of 2003 compared to $461,200 for the first six months of 2002. The increase is primarily due to $2 million of cash paid for certain assets of Universal Preservation Technologies, Inc.

Net cash used in financing activities was $87,900 for the first six months of 2003 compared to net cash provided by financing activities of $35,100 for the first six months of 2002. The decrease is due to a decrease in proceeds from the exercise of stock options and warrants, coupled with purchases of treasury stock under a share repurchase plan.

As of June 30, 2003, AVANT had future payments required under contractual obligations and other commitments approximately as follows:

	Total	Less than One Year	1-3 Years	4-5 Years
Operating lease obligations	$ 8,371,900	$ 1,162,600	$ 6,499,600	$ 709,700
Licensing obligations	763,000	298,000	275,000	190,000
Total future obligations	$ 9,134,900	$ 1,460,600	$ 6,774,600	$ 899,700

In July 2003, AVANT completed a private placement of approximately 4,444,444 shares and warrants to purchase 444,444 shares of common stock at $3.00 per share to an institutional investor. Gross proceeds from the offering totaled $10 million. Expenses associated with the transaction are expected to total approximately $700,000.

AVANT believes that cash inflows from existing collaborations, interest income on invested funds and our current cash and cash equivalents will be sufficient to meet estimated working capital requirements and fund operations beyond September 30, 2004. The working capital requirements of AVANT are dependent on several factors including, but not limited to, the costs associated with research and development programs, preclinical and clinical studies and the scope of collaborative arrangements. AVANT does not expect that its historical pattern of incurring net losses will change materially over the next 18-24 months. During 2003, we expect to take steps to raise additional capital including, but not limited to, the licensing of technology programs with existing or new collaborative partners, possible business combinations, or the issuance of common stock via private placement and public offering. There can be no assurance that such efforts will be successful.

Recent Accounting Pronouncements

In July 2002, the FASB issued SFAS 146, *Accounting for Costs Associated with Exit or Disposal Activities*. SFAS 146 requires that a liability for a cost associated with an exit or disposal activity be recognized at its fair market value when the liability is incurred, rather than at the date of an entity's commitment to an exit plan. The provisions of SFAS 146 are effective for exit or disposal activities that are initiated after December 31, 2002. The adoption of SFAS 146 has not had a material effect on the Company's financial statements.

In December 2002, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 148, "Accounting for Stock-Based Compensation Transition and Disclosure" ("SFAS 148"). SFAS 148 provides alternative methods of transition for a voluntary change to the fair value method of accounting for stock-based employee compensation as originally provided by SFAS No. 123 "Accounting for Stock-Based Compensation". Additionally, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosure in both the annual and interim financial statements about the method of accounting for stock-based compensation and the effect of the method used on reported results. The transitional requirements of SFAS 148 will be effective for all financial statements for fiscal years ending after December 15, 2002. The disclosure requirements shall be effective for financial reports containing condensed financial statements for interim periods beginning after December 15, 2002. We expect to adopt the disclosure portion of this statement for the quarter ending March 31, 2003. The application of this standard will have no impact on our consolidated financial position or results of operations.

In November 2002, the FASB issued FASB Interpretation No. 45, Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others, an interpretation of FASB Statements No. 5, 57, and 107 and rescission of FASB Interpretation No. 34 ("FIN 45") requires that a guarantor recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken by issuing the guarantee. The Interpretation also requires additional disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees it has issued. The accounting requirements for the initial recognition of guarantees are applicable on a prospective basis for guarantees issued or modified after December 31, 2002. The disclosure requirements are effective for all guarantees outstanding, regardless of when they were issued or modified, during the first quarter of fiscal 2003. The adoption of FIN No. 45 did not have a material effect on our consolidated financial statements.

In January 2003, the FASB issued FASB Interpretation No. 46, *Consolidation of Variable Interest Entities, an Interpretation of ARB No. 51*(FIN 46). The primary objective of the Interpretation is to provide guidance on the identification of, and financial reporting for, entities over which control is achieved through means other than voting rights; such entities are known as variable-interest entities (VIEs). Although the FASB's initial focus was on special-purpose entities (SPEs), the final guidance applies to a wide range of entities. FIN 46 applies to new entities that are created after the effective date, as well as applies to existing entities. The FIN is effective to preexisting entities as of the beginning of the first interim period beginning after June 15, 2003, and to any new entities beginning February 1, 2003. Once it goes into effect, FIN 46 will be the guidance that determines (1) whether consolidation is required under the "controlling financial interest" model of Accounting Research Bulletin No. 51 (ARB 51), Consolidated Financial Statements, or (b) other existing authoritative guidance, or, alternatively, (2) whether the variable-interest model under FIN 46 should be used to account for existing and new entities. The Company is evaluating the impact of FIN 46 on its financial statements.

USE OF PROCEEDS

Unless we provide otherwise in a supplement to this prospectus, we intend to use the net proceeds from the sale of our common stock for one or more of the following:

- research and clinical development activities;
- working capital;
- potential future acquisitions of companies and/or technologies in our industry;
- capital expenditures; and
- other general corporate purposes.

Our management will have broad discretion in the allocation of the net proceeds of any offering. Pending such uses, we intend to invest the net proceeds in short-term, investment grade, interest-bearing securities.

DESCRIPTION OF COMMON STOCK

As of the date of the prospectus, we are authorized to issue up to 100,000,000 shares of common stock, $.001 par value per share. As of October 1, 2003, 64,706,069 shares of common stock were outstanding.

Dividends

The Board of Directors may, out of funds legally available, at any regular or special meeting, declare dividends to the holders of shares of our common stock as and when they deem expedient, subject to the rights of holders of the preferred stock, if any.

Voting

Each share of common stock entitles the holders to one vote per share on all matters requiring a vote of the stockholders, including the election of directors. No holders of shares of common stock shall have the right to vote such shares cumulatively in any election for the Board of Directors.

Rights Upon Liquidation

In the event of our voluntary or involuntary liquidation, dissolution, or winding up, the holders of our common stock will be entitled to share equally in our assets available for distribution after payment in full of all debts and after the holders of preferred stock, if any, have received their liquidation preferences in full.

Miscellaneous

No holders of shares of our common stock shall have any preemptive rights to subscribe for, purchase or receive any shares of any class, whether now or hereafter authorized, or any options or warrants to purchase any such shares, or any securities convertible into or exchanged for any such shares, which may at any time be issued, sold or offered for sale by us.

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of our common stock. Warrants may be issued independently or together with our common stock and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be

entered into between us and a bank or trust company, as warrant agent. The warrant agent will act solely as our agent in connection with the warrants and will not have any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This summary of some provisions of the warrants is not complete. You should refer to the warrant agreement, including the forms of warrant certificate representing the warrants, relating to the specific warrants being offered for the complete terms of the warrant agreement and the warrants. Such warrant agreement, together with the terms of warrant certificate and warrants, will be filed with the SEC in connection with the offering of the specific warrants.

The prospectus supplement relating to a particular issue of warrants to issue common stock will describe the terms of the warrants, including the following:

- the title of the warrants;
- the offering price for the warrants, if any;
- the aggregate number of the warrants;
- the designation and terms of the common stock that may be purchased upon exercise of the warrants;
- if applicable, the designation and terms of the securities that the warrants are issued with and the number of warrants issued with each security;
- if applicable, the date from and after which the warrants and any securities issued with the warrants will be separately transferable;
- the number of shares of common stock that may be purchased upon exercise of a warrant and the price at which the shares may be purchased upon exercise;
- the dates on which the right to exercise the warrants commence and expire;
- if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;
- the currency or currency units in which the offering price, if any, and the exercise price are payable;
- if applicable, a discussion of material U. S. federal income tax considerations;
- anti-dilution provisions of the warrants, if any;
- redemption or call provisions, if any, applicable to the warrants;
- any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants; and
- any other information we think is important about the warrants.

Each warrant will entitle the holder of the warrant to purchase the number of shares of common stock at the exercise price as shall in each case be set forth in, or be determinable as set forth in, the prospectus supplement relating to the warrants offered. Warrants may be exercised at

any time up to the close of business on the expiration date set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void. Prior to the exercise of any warrants to purchase common stock, holders of the warrants will not have any of the rights of

holders of common stock purchasable upon exercise of the warrants, including the right to vote on the common stock.

PLAN OF DISTRIBUTION

We may sell our common stock from time to time in any manner permitted by the Securities Act, including any one or more of the following ways:

directly to investors;

to investors through agents;

to dealers; and

through one or more underwriters.

Any underwritten offering may be on a best efforts or a firm commitment basis. We may also make direct sales through subscription rights distributed to our stockholders on a pro rata basis, which may or may not be transferable. In any distribution of subscription rights to stockholders, if all of the underlying securities are not subscribed for, we may then sell the unsubscribed securities directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties. Under agreements into which we may enter, underwriters, dealers and agents who participate in the distribution of the securities may be entitled to indemnification by us against some liabilities, including liabilities under the Securities Act, or contribution from us to payments which the underwriters, dealers or agents may be required to make. Underwriters, dealers and agents may engage in transactions with us or perform services for us from time to time in the ordinary course of business.

The distribution of the securities may be effected from time to time in one or more transactions:

at a fixed price or prices, which may be changed;

at market prices prevailing at the time of sale;

at prices related to such prevailing market prices; or

at negotiated prices.

Any of the prices may represent a discount from prevailing market prices.

Shares of common stock sold pursuant to the registration statement of which this prospectus is a part will be authorized for quotation and trading on the Nasdaq National Market. In the sale of the securities, underwriters or agents may receive compensation from us or from purchasers of the securities, for whom they may act as agents, in the form of discounts, concessions or commissions. Underwriters may sell the securities to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agents. Underwriters, dealers and agents that participate in the distribution of the securities may be deemed to be underwriters under the Securities Act of 1933, and any discounts or commissions they receive

from us and any profit on the resale of securities they realize may be deemed to be underwriting discounts and commissions under the Securities Act.

Each time we sell securities, we will describe the method of distribution of the securities in the prospectus supplement relating to such transaction. The applicable prospectus supplement will, where applicable:

identify any such underwriter or agent;

describe any compensation in the form of discounts, concessions, commissions or otherwise received from us by each such underwriter or agent and in the aggregate to all underwriters and agents;

identify the amounts underwritten; and

identify the nature of the underwriter's obligation to take the securities.

If underwriters are utilized in the sale of the securities, the securities may be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at fixed public offering prices or at varying prices determined by the underwriters at the time of the sale. We may offer the securities to the public either through underwriting syndicates represented by managing underwriters or directly by the managing underwriters. If any underwriters are utilized in the sale of the securities, unless otherwise stated in the applicable prospectus supplement, the underwriting agreement will provide that the obligations of the underwriters are subject to specified conditions precedent and that the underwriters with respect to a sale of the securities will be obligated to purchase all of the securities offered if any are purchased.

Until the distribution of the securities is completed, rules of the Securities and Exchange Commission may limit the ability of any underwriters and selling group members to bid for and purchase the securities. As an exception to these rules, underwriters are permitted to engage in some transactions that stabilize the price of the securities, such as over allotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934. Over allotment involves sales in excess of the offering size which create a short position. Stabilizing transactions consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the securities. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. The underwriters may also impose a penalty bid, under which selling concessions allowed to syndicate members or other broker-dealers for securities sold in the offering for their account may be reclaimed by the syndicate if the securities are repurchased by the syndicate in stabilizing or covering transactions. In general, purchases of a security for the purpose of stabilization or to reduce a short position could cause the price of the security to be higher than it might be in the absence of such purchases. The imposition of a penalty bid might also have an effect on the price of a security to the extent that it were to discourage resales of the security before the distribution is completed.

We do not make any representation or prediction as to the direction or magnitude of any effect that the transactions described above might have on the price of the securities. In addition, we do not make any representation that underwriters will engage in such transactions or that such transactions, once commenced, will not be discontinued without notice.

Underwriters, dealers and agents may engage in transactions with us or perform services for us in the ordinary course of business.

If indicated in the applicable prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by particular institutions to purchase securities from us at the public offering price set forth in such prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in such prospectus supplement. Each delayed delivery contract will be for an amount no less than, and the aggregate principal amounts of securities sold under delayed delivery contracts shall be not less nor more than, the respective amounts stated in the applicable prospectus supplement. Institutions with which such contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and others, but will in all cases be subject to our approval. The obligations of any purchaser under any such contract will be subject to the conditions that (a) the purchase of the securities shall not at the time of delivery be prohibited under the laws of

any jurisdiction in the United States to which the purchaser is subject, and (b) if the securities are being sold to underwriters, we shall have sold to the underwriters the total principal amount of the securities less the principal amount thereof covered by the contracts. The underwriters and such other agents will not have any responsibility in respect of the validity or performance of such contracts.

To comply with applicable state securities laws, the securities offered by this prospectus will be sold, if necessary, in such jurisdictions only through registered or licensed brokers or dealers. In addition, securities may not be sold in some states unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

EXPERTS

The consolidated financial statements incorporated in this prospectus by reference to our Annual Report on Form 10-K for the year ended December 31, 2002 have been so incorporated in reliance upon the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

LEGAL MATTERS

Certain legal matters with respect to the securities offered pursuant to this registration statement will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. Certain legal matters may be passed upon for any agents or underwriters by counsel for such agents or underwriters identified in the applicable prospectus supplement.

WHERE YOU CAN FIND MORE INFORMATION

We must comply with the informational requirements of the Securities Exchange Act of 1934, as amended, and we are required to file reports and proxy statements and other information with the Securities and Exchange Commission. You may read and copy these reports, proxy statements and other information at the public reference facilities maintained by the Securities and Exchange Commission at 450 Fifth Street, N.W., Washington, D.C. 20549. You may also obtain copies at the prescribed rates from the Public Reference Section of the Securities and Exchange Commission at its principal office in Washington, D.C. You may call the Securities and Exchange Commission at 1-800-SEC-0330 for further information about the public reference rooms. The Securities and Exchange Commission also maintains a web site that contains reports, proxy and information statements and other information regarding issuers like us that file electronically with the Securities and Exchange Commission. You may access the Securities and Exchange Commission's web site at http://www.sec.gov.

Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete, and in each instance we refer you to the copy of the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

INCORPORATION OF DOCUMENTS BY REFERENCE

The Securities and Exchange Commission allows us to incorporate by reference in this prospectus the information that we file with them. Incorporation by reference means that we can disclose important information to you by referring you to other documents that are legally considered to be part of this prospectus, and later information that we file with the Securities and Exchange Commission will automatically update and supersede the information in this prospectus, any supplement and the documents listed below. Our SEC file number is 0-15006. We incorporate by reference the specific documents listed below and any future filings made with the Securities and Exchange Commission

under Section 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended, until all of the shares of common stock and warrant shares covered by this prospectus are sold:

our Annual Report on Form 10-K for the fiscal year ended December 31, 2002, as amended, including information specifically incorporated by reference into our Form 10-K from our definitive proxy statement for our 2003 Annual Meeting of Stockholders;

our Quarterly Reports on Forms 10-Q filed with the Securities and Exchange Commission on May 13, 2003 and August 1, 2003;

the definitive Proxy Statement for our annual meeting of stockholders filed on April 2, 2003;

our Current Report on Form 8-K filed with the Securities and Exchange Commission on March 13, 2003;

our Current Report on Form 8-K filed with the Securities and Exchange Commission on July 2, 2003;

the description of the rights to purchase shares of our Series C-1 Junior Participating Cumulative Preferred Stock contained in our Registration Statement on Form 8-A, filed on November 14, 1994, including all amendments and reports updating that description; and

the description of our common stock contained in our Registration Statement on Form 8-A, filed on September 22, 1986, including all amendments and reports updating that description.

We will furnish without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any documents incorporated by reference other than exhibits to those documents. Requests should be addressed to: 119 Fourth Avenue, Needham, Massachusetts 02494, Attention: Corporate Secretary (telephone number (781) 433-0771).

You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone to provide you with different information. You should not assume that the information in this prospectus or the documents incorporated by reference is accurate as of any date other than the date on the front of this prospectus or those documents.

AVANT IMMUNOTHERAPEUTICS, INC.

PROSPECTUS

, 2003

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution(1).

The following are the estimated expenses of the distribution of the shares registered hereunder on Form S-3:

Registration Fee Securities and Exchange Commission	$ 3,615
Accountants Fees and Expenses	$ 10,000

Legal Fees and Expenses	$	50,000
Printing Expenses	$	3,500
Miscellaneous	$	1,500
Total	$	68,615

(1) The amounts set forth above, except for the SEC Registration Fee, are estimated.

Item 15. Indemnification of Directors and Officers.

AVANT is a Delaware corporation. In accordance with the Delaware General Corporation Law (the "DGCL"), Article Six of the Registrant's Third Restated Certificate of Incorporation, as amended, provides that no director of the Registrant shall be personally liable to the Registrant or its stockholders for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to AVANT or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit.

The DGCL permits, but does not require, a corporation to indemnify its directors, officers, employees or agents and expressly provides that the indemnification provided for under the DGCL shall not be deemed exclusive of any indemnification right under any bylaw, agreement, vote of stockholders or disinterested directors, or otherwise. The DGCL permits indemnification against expenses and certain other liabilities arising out of legal actions brought or threatened against such persons for their conduct on behalf of the corporation, provided that each such person acted in good faith and in a manner that he or she reasonably believed was in or not opposed to the corporation's best interests and in the case of a criminal proceeding, had no reasonable cause to believe his or her conduct was unlawful. The DGCL does not allow indemnification of directors in the case of an action by or in the right of the corporation (including stockholder derivative suits) unless the directors successfully defend the action or indemnification is ordered by the court. The Amended and Restated Bylaws of AVANT (the "Bylaws") provide for indemnification to the directors, officers, employees and agents of AVANT consistent with that authorized by the DGCL. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to directors and officers of AVANT pursuant to the foregoing provision or otherwise, AVANT has been advised that, in the opinion of the Securities and Exchange Commission, such indemnification is against public policy as expressed in the Securities Exchange Act of 1934, as amended, and is therefore, unenforceable.

AVANT currently carries a directors' and officers' liability insurance policy which provides for payment of expenses of AVANT's directors and officers in connection with threatened, pending or completed actions, suits or proceedings against them in their capacities as directors and officers, in accordance with the Bylaws and the DGCL.

Item 16. Exhibits.

Exhibit No.	Description
1.1*	Form of Underwriting Agreement
3.1	Third Restated Certificate of Incorporation of the Company (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.2	Certificate of Amendment of Third Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.3	Certificate of Designation for series C-1 Junior Participating Cumulative Preferred Stock (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.4	Second Certificate of Amendment of Third Restated Certificate of Incorporation of the Company

Exhibit No.	Description
	(incorporated herein by reference to Exhibit 3.2 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.5	Amended and Restated By-Laws of the Company as of November 10, 1994 (incorporated herein by reference to Exhibit 3.3 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.6	Third Certificate of Amendment of Third Restated Certificate of Incorporation of the Company (incorporated herein by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q, filed May 10, 2002).
4.1*	Form of Warrant.
4.2*	Form of Warrant Agreement.
4.3	Shareholder Rights Agreement dated November 10, 1994 between the Company and State Street Bank and Trust Company as Rights Agent (incorporated herein by reference to Exhibit 4.1 of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1999).
4.4	Amendment to Shareholder Rights Agreement between State Street Bank and Trust Company and the Companay dated as of December 17, 2001 (incorporated herein by reference to Exhibit 4.2 of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2001).
5.1**	Opinion of Goodwin Procter LLP.
23.1**	Consent of PricewaterhouseCoopers LLP.
23.2**	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
23.3**	Consent of L.E.K. Consulting LLC.
24.1**	Powers of Attorney (included on the signature page hereto).

* To be filed by amendment or as an exhibit to a Current Report on Form 8-K.

** Filed herewith.

Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental

change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3, Form S-8, or Form F-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the undersigned registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in the registration statement;

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

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Needham, Commonwealth of Massachusetts, on October 9, 2003.

AVANT IMMUNOTHERAPEUTICS, INC.

By: /s/ UNA S. RYAN, PH.D.

Una S. Ryan, Ph.D.
President and Chief Executive Officer

POWER OF ATTORNEY

Pursuant to the requirements of the Securities Act, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated, each of whom also constitutes and appoints Una S. Ryan and Avery W. Catlin, and each of them singly, his true and lawful attorney-in-fact and agent, for him, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to this Registration Statement, and to file the same and all exhibits thereto and any other documents in connection therewith with the Securities and Exchange Commission, granting unto each attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that each attorney-in-fact and agent or his substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Signature	Title	Date
/s/ UNA S. RYAN, PH.D. Una S. Ryan, Ph.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	October 9, 2003
/s/ J. BARRIE WARD, PH.D. J. Barrie Ward, Ph.D.	Chairman	October 9, 2003
/s/ AVERY W. CATLIN Avery W. Catlin	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer and Principal Accounting Officer)	October 9, 2003
/s/ FREDERICK W. KYLE Frederick W. Kyle	Director	October 9, 2003
/s/ THOMAS R. OSTERMUELLER Thomas R. Ostermueller	Director	October 9, 2003
Harry H. Penner, Jr.	Director	October 9, 2003
/s/ PETER A. SEARS, ESQ. Peter A. Sears, Esq.	Director	October 9, 2003
/s/ KAREN S. LIPTON Karen S. Lipton	Director	October 9, 2003
/s/ LARRY ELLBERGER Larry Ellberger	Director	October 9, 2003

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