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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-K**

(Mark one)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE  
SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended **December 31, 2006**

or

**TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF  
THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number **0-15006**

**AVANT IMMUNOTHERAPEUTICS, INC.**

(Exact name of registrant as specified in its charter)

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**13-3191702**  
(I.R.S. Employer  
Identification No.)

**119 Fourth Avenue, Needham, Massachusetts 02494**  
(Address of principal executive offices)(Zip Code)

Registrant's telephone number, including area code: **(781) 433-0771**

Securities registered pursuant to Section 12(b) of the Act: **Common Stock, par value \$0.01**

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

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

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

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

The aggregate market value of common stock held by non-affiliates as of June 30, 2006 was \$117,266,432 (excludes shares held by directors and executive officers). Exclusion of shares held by any person should not be construed to indicate that such person possesses the power, direct or indirect, to direct or cause the actions of the management or policies of the registrant, or that such person is controlled by or under common control with the registrant. The number of shares of common stock outstanding at March 1, 2007 was: 74,184,048 shares.

Certain information contained in the registrant's proxy statement relating to its annual meeting of stockholders to be held on May 17, 2007 is incorporated by reference in Part III, Items 10, 11, 12, 13 and 14.

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ANNUAL REPORT ON FORM 10-K  
YEAR ENDED DECEMBER 31, 2006  
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**Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995:** This report on Form 10-K 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,” “may,” “plan,” “intend,” “assume” 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 control of AVANT. These risks, uncertainties and other factors may cause the actual results, performance or achievements of AVANT 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: (1) the integration of multiple technologies and programs; (2) the ability to adapt AVANT's vectoring systems to develop new, safe and effective orally administered vaccines against anthrax and plague or other bioterrorism threats or emerging health care threats; (3) the ability to successfully complete development and commercialization of TP10, CETP vaccines, CholeraGarde® (Peru-15), Ty800, ETEC E. coli, VLPs and other products and AVANT's expectations regarding market growth; (4) the cost, timing, scope and results of ongoing safety and efficacy trials of TP10, CETP vaccines, CholeraGarde® (Peru-15), Ty800, ETEC E. coli and other preclinical and clinical testing; (5) the ability to successfully complete product research and further development, including animal, pre-clinical and clinical studies of TP10, CETP vaccines, CholeraGarde® (Peru-15), Ty800, ETEC E. coli and other products; (6) the ability of AVANT to manage multiple late stage clinical trials for a variety of product candidates; (7) the volume and profitability of product sales of Megan®Vac 1, Megan®Egg and other future products; (8) the process of obtaining regulatory approval for the sale of Rotarix® in major commercial markets, as well as the timing and success of worldwide commercialization of Rotarix® by our partner, GlaxoSmithKline; (9) GlaxoSmithKline's strategy and business plans to launch and supply Rotarix® worldwide, including in the U.S. and other major markets and its payment of royalties to AVANT; (10) changes in existing and potential relationships with corporate collaborators and partners; (11) the availability, cost, delivery and quality of clinical and commercial grade materials supplied by contract manufacturers; (12) the timing, cost and uncertainty of obtaining regulatory approvals to use TP10, CETP vaccines, CholeraGarde® (Peru-15), Ty800 and ETEC E. coli, among other purposes, for adults undergoing cardiac surgery, to raise serum HDL cholesterol levels and to protect travelers and people in endemic regions from diarrhea causing diseases, respectively; (13) the ability to obtain substantial additional funding; (14) the ability to develop and commercialize products before competitors that are superior to the alternatives developed by competitors; (15) the ability to retain certain members of management; (16) AVANT's expectations regarding research and development expenses and general and administrative expenses; (17) DVC's ability to complete clinical trials and perform under its agreement; (18) AVANT's expectations regarding CETP vaccines' ability to improve cholesterol levels and AVANT's ability to develop and commercialize CETP vaccines; (19) AVANT's expectations regarding cash balances, capital requirements, anticipated royalty payments (including those from Glaxo), revenue and expenses, including infrastructure expenses; (20) our belief regarding the validity of our patents and potential litigation; and (21) other factors detailed from time to time in filings with the Securities and Exchange Commission. In addition, the factors described under “Item 1A. Risk Factors” in this report 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 report, 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.

## PART I

### Item 1. BUSINESS

#### A. General

As used herein, the terms “we,” “us,” “our,” or “AVANT” refer to AVANT Immunotherapeutics, Inc., a Delaware corporation organized in 1983. 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 and immunotherapeutics addressing a wide range of applications including bacterial and viral diseases, biodefense, food safety and cardiovascular disease. These include single-dose, oral vaccines that protect against important disease-causing infectious agents, a treatment to reduce complement-mediated tissue damage associated with cardiac by-pass surgery, and a novel, proprietary vaccine candidate for cholesterol management. 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 1 clinical trials and one or more Phase 2 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 commercialization of an oral human rotavirus vaccine, the development of an oral cholera 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.

AVANT’s web site is located at <http://www.avantimmune.com>. On AVANT’s web site, investors can obtain a copy of AVANT’s annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act of 1934, as amended, as soon as reasonably practicable after AVANT files such material electronically with, or furnishes it to, the Securities and Exchange Commission.

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 vaccines and immunotherapeutics. This portfolio includes:

- *Cholera*- and *Salmonella*-vectored vaccine delivery technologies;
- platform technology for the expression of viral disease antigens, such as influenza, based on novel virus-like particles “VLPs”;
- patent rights directed to a rotavirus strain;
- our VitriLife® patented drying system for the preservation of proteins, cells, bacteria and viruses;
- technology and patents for complement inhibitors based on sCR1 “TP10”; and
- technology and patents supporting our CETP product candidates, which are aimed at increasing levels of HDL, or “good” cholesterol.

We currently have three products on the market and four products 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, commercial sales have only been generated from Rotarix® and our Megan poultry vaccines. We have had no commercial revenues from sales of our human therapeutic or other human vaccine products and we have had 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 AVANT. These risks are disclosed more fully in “Item 1A. Risk Factors.”

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 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.

In February 2007, we licensed a vaccines platform technology from Select Vaccines Limited, an Australian biotechnology company, for the expression of viral disease antigens based on novel virus-like particles. A joint research and development program will initially be focused on the development of vaccines against influenza including both epidemic and pandemic forms of vaccine, with the opportunity to expand the collaboration to other disease targets.

In January 2003, we acquired the technology and intellectual property portfolio of Universal Preservation Technologies, Inc. (“UPT”), a privately held company based in San Diego, California, and licensed certain patent rights from Elan Drug Delivery Limited (formerly a subsidiary of Elan Corporation plc, now Innovata plc). 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.

On December 1, 2000, we acquired Megan Health, Inc. (“Megan”), a Delaware corporation, pursuant to an Agreement and Plan of Merger dated as of November 20, 2000 by and among AVANT, AVANT Acquisition Corp., a Delaware corporation and our wholly-owned subsidiary, and Megan.

On August 21, 1998, we acquired Virus Research Institute, Inc. (“VRI”), a Delaware corporation, pursuant to an Agreement and Plan of Merger dated as of May 12, 1998 by and among AVANT, TC Merger Corp., a Delaware corporation and our wholly-owned subsidiary, and VRI.

Using our expertise in immunology, we are building business franchises in three major disease areas: bacterial vaccines, viral vaccines and immunotherapeutics for cardiovascular diseases including cholesterol management. Each of our business franchises addresses large market opportunities for which current therapies are inadequate or non-existent. We have pursued some of these opportunities independently in a highly focused manner. In other cases, we have leveraged the financial support and development capabilities of corporate and public sector partners to bring our development projects to fruition. The research we have so diligently pursued over the past several years has matured into an exciting portfolio of product candidates.

Our products are derived from a broad set of complementary technologies which have the ability to utilize the human immune system and enable the creation of preventative and therapeutic agents. We are using these technologies to develop vaccines and immunotherapeutics that prevent or treat disease caused by infectious organisms, and treatment vaccines that modify undesirable activity by the body’s own proteins or cells. Our products are in various stages of research and development. Below is a table of our currently active programs:

## CURRENT PROGRAMS AND PARTNERSHIPS

Technology	Product	Indication/Field	Partner	Status
<b>Bacterial Vaccines</b>				
Global Health	CholeraGarde® Ty800	Cholera	IVI	Phase 2b
		Typhoid fever	NIH	Phase 1/2
Travelers'	ETEC	Enterotoxigenic <i>E coli</i> infection	—	Pre-clinical
		Shigella	—	Pre-clinical
		Campylobacter	—	Pre-clinical
BioDefense	Oral Anthrax & Plague	Anthrax & Plague infections	DoD/DVC and NIH	Pre-clinical
Food Safety and Animal Health	Megan®Vac 1 Megan®Egg	<i>Salmonella</i> infection in chicken	Lohmann	Marketed
		<i>Salmonella</i> infection in laying hens and eggs	Lohmann	Marketed
		Bacterial contamination of food sources and animal health	Pfizer	Pre-clinical
	Other Food Safety and Animal Health Vaccines			
<b>Viral Vaccines</b>	Rotarix®	Rotavirus infection	GlaxoSmithKline	Marketed
<b>Immunotherapeutics</b>				
Cardiovascular Diseases	TP10 CETi	Cardiac by-pass surgery	—	Phase 2b
		Cholesterol management	—	Phase 2

### B. Development Strategy

AVANT's strategy is to utilize our expertise to design and develop vaccines and immunotherapeutics that have significant and growing market potential; to establish governmental and corporate alliances to fund development; and to commercialize our products either through corporate partners or, in appropriate circumstances, by our own direct selling efforts. Our goal is to demonstrate clinical proof-of-concept for each product, and then seek partners to help see those products which we cannot develop ourselves 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. Implementation of this strategy is exemplified by the following lead programs:

*Rotavirus Vaccine:* Rotavirus is a major cause of diarrhea and vomiting in infants and children. We initiated a Phase 2 efficacy study of an in-licensed oral rotavirus vaccine in 1997. The trial enrolled a total of 215 infants, examined the vaccine's ability to prevent rotavirus disease and assessed the safety of the vaccine. Positive results from the trial showed that approximately 90 percent of the vaccinated infants were protected from rotavirus disease. In 1997, AVANT licensed this rotavirus vaccine to GlaxoSmithKline ("Glaxo") and all of the ongoing development for this program has been conducted and funded by Glaxo. Glaxo gained approval for Rotarix® in Mexico in July 2004, which represented the first in a series of worldwide approvals and commercial launches for the product. Rotarix® is now licensed in over 50 countries worldwide in addition to the European Union market. AVANT expects Glaxo to file for United States market approval in 2007.

AVANT licensed the Rotarix® technology in 1995 from Cincinnati Children's Hospital Medical Center ("CCH") and owes CCH a license fee of 30% on net royalties received from Glaxo. In May 2005, AVANT entered into an agreement whereby an affiliate of Paul Royalty Fund ("PRF") purchased an interest in the net royalties AVANT will receive on worldwide sales of Rotarix® (see Note 10 of our audited consolidated financial statements).

*Bacterial Vaccines:* AVANT is developing a series of single-dose, genetically-attenuated, live bacterial vaccines to prevent diarrhea and dysentery. These diarrheal vaccines are targeted to address the U.S. and European travelers' market as well as the healthcare requirements of developing countries, where for example the need for cholera and typhoid fever vaccines is particularly acute. We believe that vaccines for the travelers' market are appropriate indications for a small company such as AVANT to pursue independently with our own sales and marketing effort in the United States and with partners outside the United States.

Development of a safe and effective cholera vaccine is the first step in establishing AVANT's single-dose, oral bacterial vaccine franchise. During 2002, AVANT completed a Phase 2 dose-ranging study with CholeraGarde® in the U.S. which assessed the safety and immunogenicity of this vaccine and supported the start of Phase 2 trials in December 2002 with the International Vaccine Institute ("IVI") in Bangladesh where cholera is endemic. In July 2005, the Bangladesh study results in children and infants showed CholeraGarde® to be well tolerated and highly immunogenic, with 77% of children aged 9 months to 5 years generating protective immune responses. Previously published results showed the vaccine to be well tolerated and immunogenic against the cholera organism in the adult portion of this Bangladesh trial.

In August 2006, IVI received \$21 million in funding from the Bill & Melinda Gates Foundation for a Cholera Vaccine Initiative (CHOVI), which will include conducting further clinical trials of CholeraGarde®, AVANT's cholera vaccine. IVI plans to conduct Phase 2 clinical trials of CholeraGarde® in Bangladesh and India beginning in 2007 followed by Phase 3 field studies. IVI will be purchasing clinical materials produced at AVANT's Fall River, MA manufacturing facility for the trials. We see the initiation of these trials as serving the dual role of addressing a significant health issue in the developing world and advancing development of AVANT's vaccine franchise.

AVANT is also developing an oral typhoid fever vaccine, Ty800, for global health needs. The National Institute of Allergy and Infectious Disease ("NIAID") of the NIH has funded a Phase 1/2 in-patient dose-ranging clinical trial aimed at demonstrating the safety and immunogenicity of the Ty800 vaccine. NIAID has funded the production of Ty800 vaccine for clinical testing and is completing the Phase 1/2 trial at a NIH-funded clinical site in February 2006. The NIAID trial seeks to confirm the safety and immunogenicity of the Ty800 oral vaccine observed in an earlier physician-sponsored Ty800 vaccine study. Enrollment in this study was completed during the third quarter of 2006 and results are expected during the first half of 2007. AVANT plans to initiate its own sponsored Phase 2 trial of Ty800 in mid-2007.

Finally, AVANT is developing additional bacterial vaccines against enterotoxigenic *E. coli* ("ETEC"), *Shigella*, *Salmonella paratyphi* and *Campylobacter*—all important causes of serious diarrheal diseases worldwide. These programs are in pre-clinical development. In the second half of 2007, AVANT expects to initiate a Phase 1 trial of its ETEC vaccine candidate. AVANT's long-term goal is to develop a combination vaccine containing CholeraGarde®, Ty800, *Salmonella paratyphi*, and ETEC as a "super enteric vaccine" to address the travelers' market.

*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. AVANT believes its vector technologies may prove useful for improving and expanding America's vaccine arsenal against microbial agents used in wars or terrorist attacks.

In January 2003, AVANT was awarded a subcontract by DVC, LLC (formerly, Dynport Vaccine Company LLC (“DVC”)) to develop for the U.S. Department of Defense an oral combination vaccine against anthrax and plague using AVANT’s proprietary vaccine technologies. As of December 31, 2006, AVANT had received a number of additional subcontract modifications from DVC to support further development and pre-clinical animal testing of vaccine constructs of anthrax and plague vaccine candidates for use in the oral combination vaccine. Total contract funding awarded by DVC now totals approximately \$12 million.

*Cardiovascular Programs:* AVANT has developed two cardiovascular programs to the point where we are seeking partners to help see these programs through commercialization which we have chosen not to develop further ourselves.

**Complement Inhibitors**—We are developing a new class of immunotherapeutics that inhibits the complement system, a key triggering mechanism for the body’s inflammatory response. Medical problems that result from excessive complement activation represent multi-billion dollar market opportunities. These include reperfusion injury, the vascular and tissue damage that occurs following a heart attack, stroke or surgical procedure where the patient’s blood supply is shut off and then restored; ischemic injury and humoral rejection following transplantation; and the growth of abnormal blood vessels associated with age-related macular degeneration “AMD.”

AVANT has developed a lead compound, TP10, for cardiac surgery. In February 2002, AVANT announced that TP10 had not achieved a significant reduction in the primary endpoint of a Phase 2 adult cardiac surgery trial conducted in 564 patients. However, further analysis of the study data demonstrated an important treatment benefit in male patients participating in the trial directly related to mortality; however, no treatment benefit was observed in female patients. In February 2006, AVANT reported that a Phase 2b females-only study in 300 women did not meet its primary endpoint, thus confirming the results for female subjects in the previous TP10 trial. Given the strong efficacy data in males shown in the previous study, AVANT believes there is a clinical development pathway for a males-only indication for TP10 in cardiac bypass surgery. However, AVANT is seeking a corporate partner to complete the development and commercialization of TP10, for male-only cardiac bypass surgery indication, an organ transplantation indication, or an AMD indication.

**Cholesterol Management Vaccine**—AVANT is developing an immunotherapeutic vaccine (CETi) 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). AVANT is developing a vaccine to stimulate an immune response against CETP, which preclinical studies suggest may improve the ratio of HDL to LDL cholesterol and reduce the progression of atherosclerosis, reducing the risk of heart attack or stroke.

In October 2003, AVANT completed the CETi vaccine Phase 2 efficacy study in approximately 200 patients with low levels of HDL cholesterol. The results of the study confirmed that blocking cholesterol transfer could raise HDL levels. In addition, the CETi vaccine worked as designed to elicit anti-CETP antibodies in a high percentage of patients treated, approximately 90%, however, the levels of anti-CETP antibodies were not as high as expected. In pre-clinical testing, AVANT has identified a new adjuvanted formulation for the vaccine that elicits more than a 10-fold increase in anti-CETP antibody titers when compared to the CETi vaccine. AVANT is seeking a corporate partner to complete development and to commercialize the newly formulated CETP vaccine.

Factors that may significantly harm our commercial success, and ultimately the market price of our common stock, include but are not limited to, announcements of technological innovations or new commercial products by our competitors, disclosure of unsuccessful results of clinical testing or regulatory proceedings and governmental approvals, adverse developments in patent or other proprietary rights, public concern about the safety of products developed by AVANT and general economic and market conditions. See “Item 1A. Risk Factors.”

## C. Viral Vaccine Development Programs

### 1. Rotavirus Vaccine

We have developed a novel vaccine against rotavirus infection. Rotavirus, a major cause of diarrhea and vomiting in infants, affects approximately 80% of the approximately 4 million infants born each year in the United States. As a result, on an annual basis, about 500,000 infants require medical attention and 50,000 are hospitalized. The economic burden in the United States is estimated at over \$1 billion in direct medical and indirect societal costs. We anticipate that in the United States a vaccine against rotavirus disease will become a universal pediatric vaccine. In the rest of the world, rotavirus is a cause of significant infant mortality. We completed Phase 1 clinical trials of the orally delivered live human rotavirus vaccine selected to elicit a broadly protective immune response to the most prevalent strains of rotavirus. During 1997, we completed a Phase 1/2 clinical trial designed to define the optimal vaccine dose and optimal age for immunization. Based on the assessment of the safety and immunogenicity of the vaccine, we initiated a Phase 2 efficacy study in 1997. This trial, conducted at four U.S. medical centers, was designed to examine the vaccine's ability to prevent rotavirus disease and to further study the safety of the vaccine. A total of 215 infants were enrolled in the study and were immunized with the vaccine. In 1998, we announced positive results from this trial, which were published in *Lancet* in July 1999. The results showed that approximately 90 percent of the vaccinated infants were protected from rotavirus disease and demonstrated a statistical significance at  $p < 0.001$ . Examination of the safety data revealed that mild fever in a small number of infants was the only side effect significantly more common in the vaccine group than in the placebo group.

AVANT and Glaxo have collaborated on the development and commercialization of our oral rotavirus vaccine, Rotarix®. As discussed under "F. Collaborative Agreements", with the successful completion of the Phase 2 clinical trial and the development by Glaxo of a viable manufacturing process, Glaxo has assumed financial responsibility for all subsequent clinical and development activities and paid us an initial milestone payment of \$500,000. Glaxo completed Phase 1/2 bridging studies in over 6,500 infants in Europe, Latin America and Asia using the two-dose oral Rotarix® vaccine. Glaxo initiated global Phase 3 clinical trials of Rotarix® in the third quarter of 2003 and AVANT recognized a \$1.0 million milestone payment. AVANT licensed-in the Rotarix® technology in 1995 and owes a license fee of 30% to CCH on net royalties received from Glaxo. AVANT is obligated to maintain a license with CCH with respect to the Glaxo agreement.

Glaxo gained approval for Rotarix® in Mexico during 2004, which represented the first in a series of worldwide approvals and commercial launches for the product. During 2005, Glaxo launched Rotarix® in additional Latin American countries as well as Asia Pacific countries, and they filed for market approval with the European regulatory authorities, which triggered a \$2 million milestone fee payable to AVANT, which was paid in January 2005. In February 2006, the European Commission granted approval of Rotarix® in the European Union, which triggered a \$4 million milestone payment from Glaxo, 50% of which is creditable against future royalties. Assuming product development and commercialization continues satisfactorily, we may receive an additional milestone payment totaling \$1.5 million upon market approval of Rotarix® by U.S. regulatory authorities. Rotarix® is now licensed in over 50 countries worldwide in addition to the European Union market. AVANT expects Glaxo to file for U.S. market approval in 2007.

In May 2005, AVANT entered into an agreement whereby an affiliate of PRF purchased an interest in the net royalties AVANT will receive on worldwide sales of Rotarix® (see Note 10 of our audited consolidated financial statements). Under the PRF agreement, AVANT retains 50% of the \$4 million milestone payment from Glaxo for the European Commission approval discussed above and of any future Glaxo milestone payments, with the balance payable to PRF and CCH.

Royalty rates on Rotarix® escalate from 7% to 10% based on net product sales in countries that have valid patent protection. These royalty rates are discounted by 30% for “non-patent” countries (primarily international markets). In September 2006, AVANT received notice from Glaxo that Glaxo would begin paying royalties on sales of Rotarix® vaccine at the lower of the two royalty rates under their 1997 license agreement. Glaxo’s decision to pay the lower royalty rate (which is 70% of the full rate) is based upon Glaxo’s assertion that Rotarix® is not covered by the patents Glaxo licensed from AVANT in Australia and certain European countries.

## **2. Virus-Like Particles**

In February 2007, AVANT entered into a research and development partnership with Select Vaccines Limited (“Select Vaccines”), an Australian biotechnology company, focused on the use of Select Vaccines’ virus-like particles (“VLPs”) as a platform technology for the development of viral vaccines. Research and development efforts will initially target the development of vaccines against influenza including both epidemic and pandemic forms of vaccine, with the opportunity to expand the collaboration to other disease targets. In preclinical studies, Select Vaccines has demonstrated proof-of-principle for expressing vaccine antigens on Select Vaccines VLPs with approximately 10 different antigens. Completion of the partnership agreement is subject to the approval of Select Vaccines’ shareholders.

VLPs in their second-generation application are constructs that can be engineered to carry foreign antigens on their surface and mimic viruses in their ability to stimulate strong immune responses, in this case against foreign antigens. Two types of licensed vaccines (hepatitis B and human papilloma virus vaccines) and several vaccine candidates employ first-generation VLP technology, thus providing proof-of-concept for this approach to vaccine delivery.

Select Vaccines has developed novel VLPs that differ from previous approaches in several ways that suggest they may offer a particularly robust and flexible platform for vaccine development. First, Select Vaccines VLPs are much larger than other VLPs, which enables the expression of much larger foreign vaccine antigens than can be expressed on other types of VLPs and also offers the prospect for distinctive antigen processing. At the same time, Select Vaccines VLPs are themselves more weakly immunogenic than other VLPs, which may better focus the induced antibody response on the expressed vaccine antigen instead of on the VLP carrier itself. A further benefit of Select Vaccines’ technology is the ability to manufacture their VLPs in yeast, thus doing away with the need to grow flu vaccines in eggs, a slow, time-consuming and inefficient process. The Select Vaccine technology is particularly promising for addressing viral disease targets, which complements AVANT’s bacterial vaccine pipeline and allows AVANT to more fully address the total vaccine market, which industry experts estimate will exceed \$20 billion by 2010.

## **3. Therapore®**

AVANT has been developing a proprietary immunotherapeutic delivery system for the prevention and/or treatment of infectious diseases and some forms of cancers. In 1998, we received a non-exclusive license from the NIH to further secure our Therapore® technology rights. We have conducted pre-clinical research to evaluate this system for the treatment of persistent viral infections, such as Hepatitis B, Hepatitis C, HIV and some forms of cancer.

We have entered into a collaborative agreement for Walter Reed Army Institute of Research (“WRAIR”) to fund and perform the first human clinical trial of a Therapore®-based product, a vaccine candidate under development by the U.S. Army against HIV. This HIV clinical trial of a Therapore®-component was initiated in May 2004 and preliminary results of the trial have shown the vaccine candidate to be well tolerated. However, AVANT has received notice that WRAIR is not pursuing further development of the Therapore®-based product because two other products in development at WRAIR

have advanced further with better clinical outcomes. We have suspended all in-house development efforts on Therapore®.

#### **D. Bacterial Vaccine Development Programs**

##### **Overview**

Modern biotechnology offers great potential for improving 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 the 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 acquired 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 bacterial vaccines that have an ideal product profile: safe and effective, oral, single-dose, rapidly protective with temperature stable products.

AVANT is developing a series of single-dose, genetically-attenuated, live bacterial vaccines to protect travelers and endemic populations from diarrhea and dysentery. AVANT's single-dose oral vaccine technology is currently addressed to serious bacterial diseases, but combines the advantages of rapid onset of protection with the flexibility to address a variety of different causes of disease. The attenuated live bacteria used to create these 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 can extend the protective ability of its single-dose oral vaccines to a wide variety of illnesses. Thus, our vector technologies may prove useful for improving and expanding America's vaccine arsenal against microbial agents used in war or terrorist attacks. AVANT has also partnered with Pfizer Inc ("Pfizer"), who will apply AVANT's vaccine technology to animal health and human food safety markets.

In November 2004, we opened our 11,800 square foot vaccine manufacturing facility in Fall River, Massachusetts to support the clinical development of our portfolio of bacterial vaccines, including vaccines for biodefense, as well other next-generation bacterial vaccines for clinical trials and eventually commercial sale. In November 2005 and December 2006, we leased an additional 2,500 square feet and 1,900 square feet, respectively, of space at the Fall River facility. This facility will also implement our VitriLife® preservation technology. In July 2005, AVANT reported that it and Harvard Medical School would receive approximately \$500,000 from the NIH to apply AVANT's VitriLife® formulation to CholeraGarde®. AVANT plans to utilize VitriLife®, a proprietary technology that confers thermostability to live bacterial vaccines, at the Fall River manufacturing facility for its bacterial vaccines.

##### **1. Global Health**

AVANT's oral, bacterial vaccine technology can address the healthcare requirements of developing countries, where, for example, the need for cholera and typhoid vaccines is particularly acute. These vaccine technologies may provide avenues to disease prevention and treatment with notable advantages over drugs in terms of ease of use, patient compliance, thermostability and cost. Thus, they may offer strategies to solve global health problems.

*CholeraGarde® Vaccine:* We are developing an attenuated form of the bacterium *Vibrio cholerae* as a potential cholera vaccine. In several Phase 1/2 clinical studies, single oral doses of the cholera vaccine, CholeraGarde® (or Peru-15), were administered to more than 75 human subjects and shown to be safe, immunogenic and protective against infection with the virulent organism. In 1999, we announced the

collaboration on a Phase 2b clinical trial of the Peru-15 vaccine with WRAIR and the NIH. AVANT and the NIAID of the NIH also signed a Clinical Trial Agreement that allowed for the clinical evaluation of the Peru-15 vaccine formulation at CCH. AVANT and WRAIR have successfully manufactured clinical supplies of the vaccine at WRAIR's facility for use in the study.

The Phase 2b trial, which began in October 2000 at CCH, tested the safety, immunogenicity and protective capacity of the vaccine against a challenge with live virulent cholera. Results of the study demonstrated the ability of AVANT's vaccine candidate, CholeraGarde®, to provide complete protection against the trial's primary endpoint, moderate and severe diarrhea. During 2002, AVANT completed a Phase 2 dose-ranging study with CholeraGarde® to assess the safety and immunogenicity of this vaccine and supported the start of trials in December 2002 with the IVI in Bangladesh where cholera is endemic.

In January 2004, we announced positive preliminary results of the adult portion from the Phase 2 clinical trial of CholeraGarde® in Bangladesh. In 70 adult patients, enrolled as part of this ongoing study that is assessing the safety and immunogenicity of the vaccine in adults prior to moving into progressively younger pediatric populations, vaccination with the single-dose, oral cholera vaccine was well tolerated. Moreover, over 70% of the vaccinated adults responded with a favorable immune response. In July 2005, the Bangladesh study results in children and infants showed CholeraGarde® to be well tolerated and highly immunogenic, with 77% of children aged 9 months to 5 years generating protective immune responses. These results showed the vaccine to be consistently well tolerated and immunogenic against the cholera organism in all portions of this trial.

In July 2005, AVANT reported that it and Harvard Medical School would receive approximately \$500,000 from the National Institutes of Health to apply AVANT's VitriLife® formulation to CholeraGarde®. In the future, AVANT plans to utilize VitriLife®, a proprietary technology that confers thermostability to live bacterial vaccines, and other drying and preservation technologies at the Fall River facility for its other bacterial vaccines.

In August 2006, IVI received \$21 million in funding from the Bill & Melinda Gates Foundation for a Cholera Vaccine Initiative ("CHOVI"), which will include conducting further clinical trials of CholeraGarde®, AVANT's cholera vaccine. IVI plans to conduct Phase 2 clinical trials of CholeraGarde® in Bangladesh and India beginning in 2007 followed by Phase 3 field studies. IVI will be purchasing clinical materials produced at AVANT's Fall River, MA manufacturing facility for the trials. We see the initiation of these trials as serving the dual role of addressing a significant health issue in the developing world and advancing development of AVANT's vaccine franchise.

AVANT has decided to focus only on the fully-funded opportunity for CholeraGarde® in the developing world. AVANT has determined that the high clinical costs of our own Phase 3 clinical trials in the United States and the investment in a commercial manufacturing facility are not justified by the limited market opportunities for a cholera vaccine in developed countries at this time. This decision frees up both financial and manufacturing resources for our Ty800 and ETEC programs, as well as our new influenza vaccine program.

*Ty800 Typhoid Fever Vaccine:* AVANT has developed an oral vaccine to offer rapid, single-dose protection against *Salmonella typhi*, the cause of typhoid fever. The NIAID and AVANT have entered into a cooperative agreement for the NIAID to conduct a Phase 1/2 in-patient dose ranging clinical trial aimed at demonstrating the safety and immunogenicity of the Ty800 typhoid fever vaccine. NIAID has funded the production of Ty800 vaccine for clinical testing and is completing the Phase 1/2 trial at a NIH-funded clinical site in February 2006. The NIAID trial seeks to confirm the safety and immunogenicity of the Ty800 oral vaccine observed in an earlier physician sponsored Ty800 vaccine study. Enrollment in this study was completed during the third quarter of 2006 and results are expected during the first half of 2007. AVANT plans to initiate its own sponsored Phase 2 trial of Ty800 in mid-2007.

## 2. Travelers' Vaccines

With our acquisition of Megan in 2000, AVANT gained access to technologies for developing vaccines against *Campylobacter* and ETEC. When combined with our existing *Shigella* vaccine program, AVANT now has a number of travelers' vaccine programs in pre-clinical development—all addressing important causes of serious diarrheal diseases worldwide. AVANT is presently developing bacterial vaccines against ETEC, *Shigella*, *Salmonella paratyphi* and *Campylobacter*—all important causes of serious diarrheal diseases worldwide. In April 2005, AVANT was awarded a Phase I SBIR grant to support the development of a live attenuated salmonella vaccine against *Campylobacter* from the NIAID. The NIAID award provided approximately \$107,000 in funding and work was completed by AVANT during the second quarter of 2006. In the second half of 2007, AVANT expects to initiate a Phase 1 trial of its ETEC vaccine candidate. AVANT's long-term goal is to develop a combination vaccine containing CholeraGarde®, Ty800, *S. paratyphi* and ETEC as a "super enteric vaccine" to address the travelers' market.

## 3. BioDefense Vaccine Programs

The attenuated live bacteria used to create AVANT's single-dose oral vaccines also can 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 DVC a license for exclusive rights to use certain components of AVANT's anthrax vaccine technology. In October 2002, DVC initiated a Phase 1 dose-ranging study of a new injectable recombinant anthrax vaccine in approximately 70 volunteers. The vaccine candidate includes a highly purified protein—Protective Antigen—derived from the anthrax bacterium using recombinant technology and production processes licensed from AVANT. The study is evaluating tolerability, safety and immunogenicity of DVC's anthrax vaccine. In June 2003, AVANT was awarded a subcontract by DVC, in the amount of \$344,000, which covers stability testing of DVC'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. On August 5, 2005, AVANT received notice from DVC of termination of the license agreement, effective November 5, 2005. DVC plans to complete the ongoing Phase 1 clinical trial.

In July 2002, AVANT was awarded a Phase I Small Business Innovation Research ("SBIR") grant to support the development of our single oral-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 award provided approximately \$125,000 in funding and work was completed by AVANT in 2003.

Further, in January 2003, AVANT was awarded a subcontract by DVC to develop for the U.S. Department of Defense (the "DoD") an oral combination vaccine against anthrax and plague using AVANT's proprietary vaccine technologies. As of December 31, 2006, AVANT had received a number of additional subcontract modifications from DVC to support further development and pre-clinical animal testing of vaccine constructs of anthrax and plague vaccine candidates being developed by AVANT for use in the oral combination vaccine. Total contract funding awarded by DVC now totals approximately \$12 million. 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.

Through December 31, 2006, AVANT had received approximately \$9.3 million in payments under the subcontract agreements, all of which relate to approved subcontract awards. These agreements expire in 2007, although they may be terminated by DVC at any time upon 30 days notice.

#### **4. Animal Health and Food Safety Vaccine Programs**

On December 1, 2000, AVANT acquired all of the outstanding capital stock of Megan, a company engaged in the discovery and development of human and animal vaccines using patented gene modification technologies. In connection with our acquisition of Megan, we entered into a licensing agreement with Pfizer whereby Pfizer has licensed from us Megan's technology for the development of animal health and food safety vaccines. In accordance with this agreement, Megan's existing poultry health and food safety products fall outside the Pfizer collaboration.

In addition to developing proprietary and patented bacterial gene technologies, Megan has commercialized three veterinary vaccines; Argus™ SC, licensed by the United States Department of Agriculture ("USDA") in March 1998 and marketed by Intervet, Inc., and Megan®Vac 1 and Megan®Egg, licensed by the USDA in November 1998 and 2003, respectively, and currently marketed by Lohmann Animal Health International ("LAHI").

*Megan®Vac 1:* Megan®Vac 1 is a double gene-deleted modified vaccine for use in chickens for protection against multiple species and/or strains of Salmonella bacteria. The vaccine is administered to chicks at the hatchery in a spray cabinet with a field boost generally given at around two weeks of age. The objective of the vaccine is to eliminate or reduce the overall load of *Salmonella spp.* in the bird and environment, thus reducing bacteria levels on broiler carcasses in the processing plant. While the reduction of *Salmonella spp.* in the broiler may provide some direct health benefit to the chicken, the primary purpose of the vaccine is to increase food safety. Megan®Vac 1 is also registered in New Zealand. Registration activities are underway for Australia, South Korea, Canada, Israel, Turkey, Egypt and the Dominican Republic.

*Megan®Egg:* Megan®Egg is from the same master seed as Megan®Vac 1 with titer, dosage recommendations, and product configuration specifically targeting the layer (commercial table-egg pullets) and breeder hen markets. Pullets generally receive three vaccinations during the growing period and are protected throughout the lay period without further vaccination. In the case of table-egg layers and breeder hens, the primary objective is elimination or reduction of Salmonella enteritidis levels in the eggs, birds, and poultry houses.

Because AVANT's focus is on human health care, in September 2002 we appointed LAHI as the exclusive distributor of our Megan Health poultry vaccines in North America. LAHI, an established animal health company, has taken over marketing and distribution of Megan's currently marketed products for the commercial poultry market.

## **E. Immunotherapeutic Programs**

### **1. Complement Inhibitors**

We have been developing a new class of immunotherapeutics that inhibit a part of the immune system called the complement system. The complement system is a series of proteins that are important initiators of the body's acute inflammatory response against disease, infection and injury. Excessive complement activation also plays a role in some persistent inflammatory conditions. Our lead compound, TP10, a soluble form of naturally occurring Complement Receptor 1, has effectively shown to inhibit the activation of the complement cascade in animal models and in human clinical trials. We believe that regulating the complement system could have therapeutic and prophylactic applications in several acute and chronic conditions, including reperfusion injury from surgery or ischemic disease, organ transplant, multiple sclerosis, rheumatoid arthritis, age-related macular degeneration ("AMD"), and myasthenia gravis. Medical problems that result from excessive complement activation represent multi-billion dollar market opportunities. In the United States, several million people are afflicted with these complement-mediated conditions.

We elected to develop and commercialize TP10 for cardiac surgery. The objective of our clinical studies was to assess the ability of TP10 to mitigate the injury to the heart, brain and other organs that occurs when patients are placed on cardiopulmonary bypass ("CPB") circuits, thus potentially improving post-operative outcomes. 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 2 adult cardiac surgery trial conducted in 564 patients. However, further analysis of the study data demonstrated an important treatment benefit in male patients participating in the trial, with no significant treatment benefit observed in 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 morbidity and mortality and the benefit seen was highly significant. Results of this Phase 2 adult trial were presented at the American Heart Association's Annual Meeting in November 2003 and were published in *Circulation* in September 2004.

In February 2004, AVANT announced plans to start a Phase 2b double-blind, placebo-controlled trial of TP10 in approximately 300 women undergoing cardiopulmonary by-pass surgery. The trial was designed to examine the effect of TP10 versus placebo at approximately 30 sites throughout the United States. The goals of the trial were to determine the efficacy of TP10 in 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. In February 2006, AVANT reported that the females-only study did not meet the primary endpoint, thus confirming the results for female subjects in the previous TP10 trial. Therefore, given the efficacy data in males shown in this previous study, AVANT believes there is a clinical development pathway for a males-only indication for TP10 in cardiac bypass surgery. Males represent 75% of the U.S. market opportunity in cardiac bypass surgery. AVANT believes that the TP10 program is positioned for a males-only cardiac bypass surgery indication. However, AVANT is seeking a corporate partner to complete the development and commercialization of TP10, for a male-only cardiac bypass surgery indication, an organ transplantation indication, or an AMD indication.

In addition to TP10, AVANT has identified other product candidates to inhibit activation of the complement system. The lead candidate under research evaluation is a form of sCR1 ("TP10") that has been modified by the addition of sialyl Lewis x ("sLe<sup>x</sup>") carbohydrate side chains yielding sCR1sLe<sup>x</sup>. sLe<sup>x</sup> is a carbohydrate which mediates binding of leukocytes including neutrophils to selectin proteins. Selectin-mediated binding of neutrophils to activated endothelial cells is a critical event in inflammation. We have confirmed the presence of the desired carbohydrate structures and confirmed the presence of both anti-

complement and selectin-binding functions in *in vitro* experiments. Research results published in the July 1999 issue of *Science* showed that the sCR1sLe<sup>x</sup> molecule, which simultaneously blocks complement activation and cell-mediated inflammatory events, can significantly limit damage to cerebral tissue in a mouse model of ischemic stroke. sCR1sLe<sup>x</sup> may be effective in complement- and selectin-dependent indications such as stroke and myocardial infarction. We believe that sCR1sLe<sup>x</sup> has the ability to target the complement-inhibiting activity of sCR1 to the site of inflammation and, at the same time, inhibit the leukocyte/endothelial cell adhesion process.

AVANT plans to seek partnering arrangements to capture the value inherent in the complement inhibitor programs and their strong intellectual property. AVANT can offer a worldwide license for all fields as a part of such a partnership arrangement.

## **2. 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 and LDL. We are developing this vaccine (“CETi”) 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 preclinical studies of rabbits which had been administered the CETi vaccine and fed a high-cholesterol, high-fat diet. In these studies, vaccine-treated rabbits exhibited reduced lesions in their blood vessels compared to a control group of untreated rabbits which developed significant blood vessel lesions. These studies have demonstrated, in animal models, the ability of CETi vaccine to elevate HDL and reduce the development of blood vessel lesions.

Atherosclerosis is one of the leading causes of morbidity and mortality in the United States and most of the Western world. Current pharmacologic treatments require daily administration and can result in high costs and poor patient compliance. A vaccine directed at lowering CETP activity, such as the one we are developing, may offer several advantages over conventional approaches, including requiring less frequent dosing, lower costs, reduced side effects, and improved patient compliance.

In 1996, the NIH awarded us a \$100,000 Phase I SBIR grant for the development of a novel transgenic rat atherosclerosis model, affording better comparison to human atherosclerosis. In early 1997, the NIH awarded us a second \$100,000 Phase I SBIR grant to develop a novel plasmid-based vaccine to prevent or treat atherosclerosis. In late 1997, the NIH awarded us a \$678,000 Phase II SBIR grant which provided funding over a two year period for the continued development of the novel transgenic rat model of atherosclerosis. In 1998, we received a \$96,000 Phase I SBIR grant from the NIH for the development of a novel peptide vaccine to prevent or treat atherosclerosis.

In June 1999, we initiated a double-blinded placebo controlled, Phase 1 clinical trial of our CETi vaccine in adult volunteers. The object of the study was to demonstrate the safety of single administrations of the vaccine at four different dose levels. AVANT completed the Phase 1 clinical trial in late 2000 and results indicated that 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. In early 2001, AVANT announced results from a double-blinded placebo controlled extension of the earlier completed Phase 1 trial of the CETi vaccine in 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 and suggested a dose-response relationship.

These data were helpful in moving the program forward to a placebo controlled Phase 2 study, which was initiated in August 2001, in approximately 200 patients with low levels of HDL cholesterol. The objectives of the study were to evaluate the safety, immunogenicity and dose-response relationship of the

CETi product in patients who received initial immunizations followed by a booster. In October 2003, AVANT completed the CETi vaccine Phase 2 efficacy study. The results of the study demonstrated proof-of-concept in humans, in that high anti-CETP antibodies correlated with increased HDL levels. In addition, the CETi vaccine worked as designed to elicit anti-CETP antibodies in a high percentage of patients treated, approximately 90%, however, the levels of anti-CETP antibodies were not as high as expected.

AVANT is evaluating the next steps for development of this vaccine. In pre-clinical testing, AVANT has identified a new adjuvanted formulation for the vaccine that elicits more than a 10-fold increase in anti-CETP antibody titers when compared to the CETi vaccine. AVANT is seeking a corporate partner to complete development and to commercialize the newly formulated CETP vaccine.

#### **F. Collaborative Agreements**

*GlaxoSmithKline ("Glaxo")*: In 1997, we entered into an agreement with Glaxo to collaborate on the development and commercialization of our oral rotavirus vaccine. Under the terms of the agreement, Glaxo received an exclusive worldwide license to commercialize our rotavirus vaccine. We were responsible for continuing the Phase 2 clinical efficacy study of the rotavirus vaccine, which was completed in August 1998. Subject to the development by Glaxo of a viable manufacturing process, Glaxo assumed responsibility for all subsequent clinical trials and all other development activities. Glaxo made an initial license payment of \$250,000 in 1997 upon execution of the agreement. In June 1999, we received a milestone payment of \$500,000 from Glaxo for successfully completing the Phase 2 clinical efficacy study and establishing a commercially viable process to manufacture the vaccine. Glaxo initiated global Phase 3 clinical trials of Rotarix® in the third quarter of 2003, and AVANT recognized a \$1.0 million milestone. Glaxo gained approval for Rotarix® in Mexico during 2004, which represented the first in a series of worldwide approvals for the product. Glaxo filed for market approval with the European regulatory authorities in late 2004, triggering a \$2 million milestone fee payable to AVANT. In February 2006, the European Commission granted approval of Rotarix® in the European Union, which triggered a \$4 million milestone payment from Glaxo. Assuming product development and commercialization continues satisfactorily, we may receive an additional milestone payment totaling \$1.5 million upon market approval of Rotarix® by U.S. regulatory authorities.

Royalty rates on Rotarix® ramp up from 7% to 10% based on net product sales in countries for which we have valid patent protection. These royalty rates are discounted by 30% for "non-patent" countries (primarily international markets). Our internal commercialization models for Rotarix® suggest a blended royalty rate ranging from mid to high single digits over the next three years. The term of this agreement is through the expiration of the last of the relevant patents covered by the agreement, although Glaxo may terminate the agreement upon 90 days prior written notice. In September 2006, AVANT received notice from Glaxo that Glaxo would begin paying royalties on sales of Rotarix® vaccine at the lower of the two royalty rates under their 1997 license agreement. Glaxo's decision to pay the lower royalty rate (which is 70% of the full rate) is based upon Glaxo's assertion that Rotarix® is not covered by the patents Glaxo licensed from AVANT in Australia and certain European countries.

AVANT licensed the Rotarix® technology from CCH in 1995 and owes a license fee of 30% to CCH on net royalties received from Glaxo. In May 2005, AVANT entered into an agreement whereby an affiliate of PRF purchased an interest in the net royalties AVANT will receive on worldwide sales of Rotarix® (see Note 10 of our audited consolidated financial statements). Under the PRF agreement, AVANT will retain 50% of future Glaxo milestone payments, with the balance payable to PRF and CCH.

*Pfizer Inc ("Pfizer")*: In connection with our acquisition of Megan in 2000, we entered into a licensing agreement with Pfizer whereby Pfizer licensed Megan's technology for the development of animal health and food safety vaccines. Upon execution of the agreement, Pfizer made an initial license payment of

\$2.5 million together with a \$3 million equity investment. In December 2002, we received a milestone payment of \$500,000 from Pfizer as a result of the submission of an application with the USDA for licensure of a food safety vaccine. Under the agreement, we may receive additional milestone payments of up to \$3 million based upon attainment of specified milestones. We have received research and development funding from Pfizer through November 2002 totaling \$1 million and may receive royalty payments on eventual product sales. The term of this agreement is through the expiration of the last of the patents covered by the agreement. AVANT has no obligations to incur any research and development costs in connection with this agreement.

On June 1, 2006, AVANT entered into a Collaborative Research and Development Agreement with Pfizer aimed at the discovery and development of vaccines to protect animals. The collaboration will employ vaccine technologies owned by AVANT. Under the agreement, Pfizer and AVANT will conduct a joint research program funded by Pfizer to develop prophylactic and therapeutic vaccines to protect livestock and companion animals from respiratory and enteric diseases. AVANT considers its June 2006 arrangement with Pfizer to be a revenue arrangement with multiple deliverables. AVANT expects to recognize revenue as the research and development service deliverables are completed and delivered to Pfizer.

*DynPort Vaccine Company LLC ("DVC"):* In October 2001, AVANT granted DVC a license 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. On August 5, 2005, AVANT received notice from DVC of termination of the license agreement, effective November 5, 2005. Under the agreement, AVANT has received \$200,000 in annual license maintenance payments, and milestone payments of \$100,000. In June 2003, we were awarded a subcontract by DVC in the amount of \$344,000, which covers stability testing of DVC's injectable anthrax vaccine, which is currently in Phase I clinical testing. 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. DVC plans to complete the ongoing Phase I clinical trial.

During 2003, AVANT entered into an agreement with DVC for funding production of the replacement of AVANT's recombinant Protective Antigen ("rPA") clinical materials used by DVC in the Phase I clinical trial described above. Under a separate agreement with the Walter Reed Army Institute of Research ("WRAIR"), AVANT was obligated to provide rPA for a clinical trial. AVANT recorded the \$1 million received from DVC as deferred revenue in 2003. In 2004, the agreement with WRAIR was amended and AVANT was no longer obligated to provide rPA. Accordingly, AVANT recognized the previously deferred \$1 million as revenue in the first quarter of 2004. DVC, a subsidiary of Computer Sciences Corporation, 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. DVC has a 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.

Further, in January 2003, AVANT was awarded a subcontract by DVC to develop for the U.S. Department of Defense an oral combination vaccine against anthrax and plague using AVANT's proprietary vaccine technologies. As of December 31, 2006, AVANT had received a number of additional subcontract modifications from DVC to support further development and pre-clinical animal testing of vaccine constructs of anthrax and plague vaccine candidates being developed by AVANT for use in the oral combination vaccine. Total contract funding awarded by DVC now totals approximately \$12 million. 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. Through December 31, 2006, AVANT had received approximately \$9.3 million in payments under the subcontract

agreements. These agreements expire in 2007, although they may be terminated by DVC at any time upon 30 days notice.

*Lohmann Animal Health International ("LAHI"):* In September 2002, we appointed 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 marketed products for the commercial poultry market. Under the distribution agreement, AVANT receives a percentage of Megan® Vac 1 and Megan® Egg product sales in the form of royalty payments. From the inception of the agreement to December 31, 2006, AVANT has received approximately \$588,700 in royalties under the agreement. Royalties received in 2006, 2005 and 2004 were \$116,595, \$126,598 and \$177,685, respectively. The initial term of the agreement is five years with automatic extensions thereafter unless the agreement is terminated by either party.

*Inflazyme Pharmaceuticals Ltd. ("Inflazyme", formerly AdProTech, Ltd ("AdProTech")):* In March 2004, AVANT granted a license to AdProTech for non-exclusive rights to use certain components of its intellectual property surrounding complement inhibition. In April 2004, AVANT received an initial license payment of \$1 million from AdProTech and AdProTech was acquired by Inflazyme which assumed the license. AVANT has no continuing involvement or obligation under this license agreement, thus it recognized the \$1 million as revenue during the first quarter of 2004. Under the agreement, AVANT is entitled to annual license fees, milestone payments of up to \$13.5 million in the aggregate and royalties on eventual product sales. AVANT has no obligations to incur any research and development costs in connection with this agreement.

*Select Vaccines Limited ("Select Vaccines"):* In February 2007, AVANT entered into a research and development partnership with Select Vaccines Limited, an Australian biotechnology company, focused on the use of Select Vaccines' virus-like particles ("VLPs") as a platform technology for the development of viral vaccines. Research and development efforts will initially target the development of vaccines against influenza including both epidemic and pandemic forms of vaccine, with the opportunity to expand the collaboration to other disease targets. Completion of the partnership agreement is subject to the approval of Select Vaccines' shareholders. Under the terms of the agreement, AVANT will make an upfront equity investment in Select Vaccines and fund influenza vaccine research and development for two years, as well as provide payments to Select Vaccines for the achievement of specific preclinical and clinical development milestones. AVANT also gains the exclusive right to apply Select Vaccines' technology to a second target within the next two years, and a third target within the next three years. Select Vaccines would also be eligible to receive royalties based on net sales of any approved products arising out of this collaboration that are successfully marketed.

We depend on our collaborative relationships and may enter into more of them in the future. Some of the above referenced agreements give our collaborator substantial responsibility to commercialize a product and to make decisions about the amount and timing of resources that are devoted to developing and commercializing a product. As a result, we do not have complete control over how resources are used toward some of our products.

In addition, some of these agreements relate to products in the early stages of research and development. Others require AVANT and our collaborator to jointly decide on the feasibility of developing a particular product using our technologies. In either case, these agreements may terminate without benefit to us if the underlying products are not fully developed. Moreover, once specific products are chosen for development, the agreements relating to them may require AVANT to meet specified milestones, to invest money and other resources in the development process or to negotiate additional licenses and other agreements, which may not be possible or advantageous. If we fail to meet our obligations under those agreements, they could terminate and we might need to enter into relationships with other collaborators and to spend additional time, money, and other valuable resources in the process.

Moreover, we cannot predict whether our collaborators will continue their development efforts or, if they do, whether their efforts will achieve success. Many of our collaborators face the same kinds of risks and uncertainties in their business that we face. A delay or setback to a collaborator will, at a minimum, delay the commercialization of any affected products, and may ultimately prevent it. Moreover, any collaborator could breach its agreement with us or otherwise not use best efforts to promote our products. A collaborator may choose to pursue alternative technologies or products that compete with our technologies or products. In either case, if a collaborator failed to successfully develop one of our products, we would need to find another collaborator. Our ability to do so would depend upon our legal right to do so at the time and whether the product remained commercially viable.

#### **G. Competition**

Competition in the biotechnology and vaccine industries is intense. We face competition from many companies in the United States and abroad, including a number of large pharmaceutical companies, firms specialized in the development and production of vaccines, adjuvants and vaccine and immunotherapeutic delivery systems and major universities and research institutions. These competitors include Glaxo, Merck, Novartis, Pfizer, Roche, Sanofi Pasteur, Acambis, Cambridge Biostability, Crucell, Emergent, Intercell, Iomai, Novavax, VaxGen and Vical. Most of our competitors have substantially greater resources, more extensive experience in conducting pre-clinical studies and clinical testing and obtaining regulatory approvals for their products, greater operating experience, greater research and development and marketing capabilities and greater production capabilities than those of AVANT. There can be no assurance that our competitors will not develop technologies and products that are safer or more effective than any which are being developed by us or which would render our technology and products obsolete and noncompetitive. In addition, our competitors may succeed in obtaining approval from the Food and Drug Administration ("FDA") for products more rapidly than we do. There can be no assurance that the vaccines and immunotherapeutic products under development by us and our collaborators will be able to compete successfully with existing products or products under development by other companies, universities and other institutions or that they will obtain regulatory approval in the United States or elsewhere. We believe that the principal competitive factors in the vaccine and immunotherapeutic market are product quality, measured by efficacy and safety, ease of administration and price.

Our competitive position will also depend upon our ability to attract and retain qualified personnel, obtain patent protection or otherwise develop proprietary products or processes and secure sufficient capital resources for the often lengthy period between technological conception and commercial sales. We will require substantial capital resources to complete development of some or all of our products, obtain the necessary regulatory approvals and successfully manufacture and market our products. In order to secure capital resources, we anticipate having to sell additional capital stock, which would dilute existing stockholders. We may also attempt to obtain funds through research grants and agreements with commercial collaborators. However, these types of fundings are uncertain because they are at the discretion of the organizations and companies that control the funds. As a result, we may not receive any funds from grants or collaborations. Alternatively, we may borrow funds from commercial lenders, likely at high interest rates, which would increase the risk of any investment in AVANT.

## H. Manufacturing

We have no experience in volume manufacturing and we rely upon collaborators or contractors to manufacture our proposed products for both clinical and commercial purposes. While we believe that there is currently sufficient capacity worldwide for the production of our potential products by our collaborators or through contract manufacturers, establishing long-term relationships with contract manufacturers and securing multiple sources for the necessary quantities of clinical and commercial materials required can be a challenge. Qualifying the initial source of clinical and ultimately commercial material is a time consuming and expensive process due to the highly regulated nature of the pharmaceutical / biotech industry. These costs are hopefully mitigated in the economies of scale realized in commercial manufacture and product sale. The key difficulty in qualifying more than one source for each product is the duplicated time and expense in doing so without the potential to mitigate these costs if the secondary source is never utilized.

To date, we have been arranging with contract manufacturers for the manufacture of clinical trial supplies of TP10, CETi and our rotavirus vaccine. Future manufacture of our rotavirus vaccine is the responsibility of Glaxo, which has received from us a world-wide exclusive license to commercialize this vaccine.

We have contracted with Lonza Biologics plc for process development and scale-up of TP10 for clinical trials. The CETi vaccine was manufactured under contracts with NeoMPS, Inc. and Bioconcepts, Inc. WRAIR has manufactured Cholera Peru-15, Bengal-15 and Ty800 vaccines under collaborative agreements with us. WRAIR manufactured the Therapore®-HIV product.

The manufacturing processes for our other vaccine and immunotherapeutic delivery systems and vaccines utilize known technologies. We believe that the products we currently have under development can be scaled up to permit manufacture in commercial quantities. However, there can be no assurance that we will not encounter difficulties in scaling up the manufacturing processes.

Use of third party manufacturers limits our control over and ability to monitor the manufacturing process. As a result, we may not be able to detect a variety of problems that may arise and may face additional costs in the process of interfacing with and monitoring the progress of our contract manufacturers. If third party manufacturers fail to meet our manufacturing needs in an acceptable manner, we would face delays and additional costs while we develop internal manufacturing capabilities or find alternative third party manufacturers. It may not be possible to have multiple third party manufacturers ready to supply us with needed material at all or without incurring significant costs.

We intend to establish manufacturing arrangements with manufacturers that comply with the FDA's requirements and other regulatory standards, although there can be no assurance that we will be able to do so. We have established our own manufacturing facility to produce bacterial vaccine products that we may develop at scale for clinical trials. In order for us to establish a commercial manufacturing facility, we will require substantial additional funds and will be required to hire and retain significant additional personnel and comply with the extensive cGMP regulations of the FDA applicable to such facility. The product manufacturing facility would also need to be licensed for the production of vaccines by the FDA.

In 2003, we reached agreement with MassDevelopment, an economic development entity for the Commonwealth of Massachusetts, for AVANT to occupy and build-out an 11,800 square foot manufacturing facility in Fall River, Massachusetts. We have completed construction and have validated this facility, its systems and equipment. The facility became operational in the third quarter of 2005. In November 2005 and December 2006, we leased an additional 2,500 square feet and 1,900 square feet, respectively, of space from MassDevelopment at the Fall River facility. The Fall River facility complements our research and clinical expertise with the capability to develop and manufacture our own

portfolio of bacterial vaccines, as well as to utilize our patented thermo-stable preservation technology, VitriLife®.

## **I. Marketing**

Under the terms of existing and future collaborative agreements, we rely and expect to continue to rely on the efforts of our collaborators for the sale and marketing of our products. We have agreements with, among others, Glaxo, Pfizer, Inflazyme (formerly AdProTech), LAHI and Select Vaccines for the development and commercialization of some of our products. The relevant aspects of these relationships have been previously discussed under the heading “F. Collaborative Agreements.” There can be no assurance that our collaborators will develop and market vaccine products incorporating our technologies, or, if marketed, that such efforts will be successful. The failure of our collaborators to successfully market products would harm our business.

We have retained, and in the future intend to retain, marketing rights to some of our product candidates, including vaccine and immunotherapeutic delivery systems and vaccine candidates, in selected geographic areas and for specified indications. We intend to seek marketing and distribution agreements and/or co-promotion agreements for the distribution of our products in these geographic areas and for these indications. We believe that these arrangements could enable us to generate greater financial return than might be obtained from early stage licensing and collaboration agreements. We have no marketing and sales staff and limited experience relating to marketing and distribution of commercial products, including vaccines. If we determine in the future to engage in direct marketing of our products, we will be required to recruit an experienced marketing group, develop a supporting distribution capability and incur significant additional expenditures. There can be no assurance that we will be able to establish a successful marketing force. We may choose or find it necessary to enter into strategic partnerships on uncertain, but potentially unfavorable, terms to sell, market and distribute our products. Any delay in the marketing or distribution of our products, whether it results from problems with internal capabilities or with a collaborative relationship, could harm the value of an investment in AVANT.

## **J. Patents, Licenses and Proprietary Rights**

AVANT’s policy is to protect our technology by filing patent applications and obtaining patent rights covering our own technology, both in the United States and in foreign countries. In addition, we have acquired and will seek to acquire as needed or desired, exclusive rights of others through assignment or license to complement our portfolio of patent rights. We also rely on trade secrets, unpatented know-how and technological expertise and innovation to develop and maintain our competitive position.

*Patents:* The successful development and marketing of products by AVANT will depend in part on our ability to create and maintain intellectual property, including patent rights. We have established a proprietary patent position in the areas of complement inhibitor technology, cholesterol regulation technology, vaccine technologies, and preservation technologies, and we are the owner or exclusive licensee of numerous patents and pending applications around the world. Although we continue to pursue patent protection for our products, no assurance can be given that any pending application will issue as a patent, that any issued patent will have a scope that will be of commercial benefit, or that we will be able to successfully enforce our patent position against infringers.

We are the owner or exclusive licensee of 433 patents and patent applications and co-owner or non-exclusive licensee of an additional 58 patents and patent applications around the world covering inventions relating to our business. In the area of complement inhibitor technology, we have rights to 134 patents and patent applications worldwide with the key patents in this area expiring in 2009 and 2016. In the area of cholesterol regulation, we have rights to 60 patents and patent applications worldwide with the key patents in this area expiring in 2016 and 2019. In the area of rotavirus vaccines, we have rights to 20 patents and

patent applications worldwide with the key patents in this area expiring in 2011 and 2014. In the area of cholera and typhoid vaccines, we have rights to 194 patents and patent applications worldwide with the key patents in this area expiring between 2008 and 2018.

In the area of complement inhibitors, we are co-owner with The Johns Hopkins University and Brigham & Women's Hospital, whose rights AVANT has exclusively licensed, of patents and applications covering inventions relating to soluble complement receptor type I ("sCR1"). These rights are based in part on the work of Dr. Douglas Fearon and include U.S. and foreign patents which claim nucleic acid sequences encoding CR1, sCR1 and active fragments; purification methods; and therapeutic uses of sCR1. We also own a number of other issued patents and patent applications relating to modified sCR1 molecules ("sCR1-sLe<sup>x</sup>") and their uses.

We have an exclusive license to four United States patents, and corresponding foreign patents and applications, directed to vectors that are used in our VibrioVec® vaccine delivery system. We have exclusive licenses to sixteen U.S. patents, and corresponding foreign patents and applications, directed to vectors that are used in our SalmoVec® vaccine delivery system. We also have an exclusive license to nineteen issued U.S. and foreign patents directed to a rotavirus strain that forms the basis of our rotavirus vaccine. We also have an exclusive license in a defined field to fifteen U.S. and foreign patents directed to technology that may be useful for our Therapore® system. We have fifty-one issued patents and additional pending patent applications in the U.S. and selected foreign countries relating to control of CETP activity through vaccination. We also have one issued patent and a pending application on the use of a recombinantly produced single protein of *B. anthracis* for vaccination against anthrax, as well as pending applications in the U.S. and selected countries on new live, attenuated bacterial strains for delivering isolated anthrax and/or plague antigens, to provide effective oral vaccines for anthrax and plague.

In December 2000, we acquired Megan and by this acquisition obtained exclusive rights to vaccine technology patents and applications based on the work of Dr. Roy Curtiss III. These patent rights complement and expanded the existing patent rights of AVANT in this technological area. In connection with our acquisition of Megan, we entered into a licensing agreement with Pfizer whereby Pfizer has licensed Megan's technology for the development of animal health and food safety vaccines.

Our 2003 acquisition of intellectual property from Pharmacia relating to immunological control of cholesterol, coupled with our September 2001 acquisition of a portfolio of granted and pending patents from The Immune Response Corporation, consolidated AVANT's ownership of the intellectual property that covers the technology of anti-atherosclerosis vaccines. AVANT now owns 51 granted patents around the world relating to CETP vaccine technology.

In January 2003, AVANT completed licensing and acquisition agreements which gave us ownership or exclusive rights in certain defined fields to a portfolio of patents and applications filed by Universal Preservation Technologies, Inc. and Elan Drug Delivery Ltd. (now Innovata plc). This portfolio affords AVANT exclusive rights in a particular technology of foam preservation of biomolecules and cells. This technology should be especially useful in AVANT's vaccine programs to produce vaccine dosage forms that are shelf stable at room temperatures and do not require refrigeration.

There can be no assurance that patent applications owned by or licensed to AVANT will result in granted patents or that, if granted, the resultant patents will afford protection against competitors with similar technology. It is also possible that third parties may obtain patents or other proprietary rights that may be necessary or useful to AVANT. In cases where third parties are first to invent a particular product or technology, it is possible that those parties will obtain patents that will be sufficiently broad to prevent us from using important technology or from further developing or commercializing important vaccine and immunotherapeutic systems and vaccine candidates. If licenses from third parties are necessary but cannot be obtained, commercialization of the covered products might be delayed or prevented. Even if these

licenses can be obtained, they would probably require us to pay ongoing royalties and other costs, which could be substantial.

Although a patent has a statutory presumption of validity in the United States, the issuance of a patent is not conclusive as to validity or as to the enforceable scope of the patent claims. The validity or enforceability of a patent after its issuance by the Patent and Trademark Office can be challenged in litigation. As a business that uses a substantial amount of intellectual property, we face a heightened risk of intellectual property litigation. If the outcome of the litigation is adverse to the owner of the patent, third parties may then be able to use the invention covered by the patent without authorization or payment. There can be no assurance that our issued patents or any patents subsequently issued to or licensed by us will not be successfully challenged in the future. In addition, there can be no assurance that our patents will not be infringed or that the coverage of our patents will not be successfully avoided by competitors through design innovation.

We are aware that others, including universities and companies, have filed patent applications and have been granted patents in the United States and other countries which claim subject matter potentially useful or necessary to the commercialization of our products. The ultimate scope and validity of existing or future patents which have been or may be granted to third parties, and the availability and cost of acquiring rights in those patents necessary to the manufacture, use or sale of our products presently cannot be determined by AVANT.

We use a mutated *Vibrio cholerae* in our VibrioVec® vaccine delivery system. We are aware of an issued U.S. patent which claims a culture of mutated *Vibrio cholerae*. We believe that only one claim (the “Claim”) of the patent may be pertinent to our VibrioVec® system. The remaining claims of the patent cover other cultures, which we believe are not pertinent to VibrioVec®. We have received an opinion of counsel from Fish & Richardson, P.C. that, based on the analysis set forth in their opinion and the facts known to them, the Claim is invalid. While a party challenging the validity of a patent has the burden of proving invalidity, the outcome of any litigation cannot be predicted with certainty. Accordingly, there can be no assurance that, if litigated, a court would conclude that the Claim is invalid.

In addition to the patent referred to in the previous paragraph, there may be other patent applications and issued patents belonging to competitors that may require us to alter our vaccine candidates and vaccine and immunotherapeutic delivery systems, pay licensing fees or cease some of our activities. If our product candidates conflict with patents that have been or may be granted to competitors, universities or others, the patent owners could bring legal action against us claiming damages and seeking to enjoin manufacturing and marketing of the patented products. If any of these actions are successful, in addition to any potential liability for damages, we could be required to obtain a license in order to continue to manufacture or market the affected products. There can be no assurance that we would prevail in any such action or that any license required under any such third party patent would be made available on acceptable terms or at all. We believe that there may be significant litigation in the biotechnology and vaccine industries regarding patent and other intellectual property rights. If we become involved in that litigation, we could consume substantial resources.

*Licenses:* We have entered into several significant license agreements relating to technology that is being developed by AVANT and/or its collaborators, including licenses from the following: Harvard College relating to proprietary technology involving genetically altered *Vibrio cholerae* and *Salmonella* strains; Cincinnati Children’s Hospital involving proprietary rights and technologies relating to an attenuated rotavirus strain for a rotavirus vaccine; and the NIH for the proprietary technology related to Therapore®, a novel immunotherapy delivery system to be developed for delivery of products for the treatment of persistent viral infections. In general, these institutions (except the NIH) have granted us an exclusive worldwide license (with right to sublicense) to make, use and sell products embodying the licensed technology, subject to the reservation by the licensor of a non-exclusive right to use the

technologies for non-commercial research purposes. Generally, the term of each license is through the expiration of the last of the patents issued with respect to the technologies covered by the license. We have generally agreed to use reasonable efforts to develop and commercialize licensed products and to achieve specified milestones and pay license fees, milestone payments and royalties based on the net sales of the licensed products or to pay a percentage of sublicense income. If we breach our obligations, the licensor has the right to terminate the license, and, in some cases, convert the license to a non-exclusive license. Generally, we control and are responsible for the cost of defending the patent rights of the technologies that we license.

*Proprietary Rights:* We also rely on unpatented technology, trade secrets and confidential information, and no assurance can be given that others will not independently develop substantially equivalent information and techniques or otherwise gain access to our know-how and information, or that we can meaningfully protect our rights in such unpatented technology, trade secrets and information. We require each of our employees, consultants and advisors to execute a confidentiality agreement at the commencement of an employment or consulting relationship with AVANT. The agreements generally provide that all inventions conceived by the individual in the course of employment or in providing services to AVANT and all confidential information developed by, or made known to, the individual during the term of the relationship shall be the exclusive property of AVANT and shall be kept confidential and not disclosed to third parties except in limited specified circumstances. There can be no assurance, however, that these agreements will provide meaningful protection for our information in the event of unauthorized use or disclosure of such confidential information.

#### **K. Government Regulation**

Our activities and products are significantly regulated by a number of governmental entities, including the FDA in the United States and by comparable authorities in other countries and by the USDA with respect to products developed for animal health and food safety. These entities regulate, among other things, the manufacture, testing, safety, effectiveness, labeling, documentation, advertising and sale of our products. We must obtain regulatory approval for a product in all of these areas before we can commercialize the product. Product development within this regulatory framework takes a number of years and involves the expenditure of substantial resources. Many products that initially appear promising ultimately do not reach the market because they are found to be unsafe or ineffective when tested. Our inability to commercialize a product would impair our ability to earn future revenues.

In the United States, vaccines and immunotherapeutics for human use are subject to FDA approval as “biologics” under the Public Health Service Act and “drugs” under the Federal Food, Drug and Cosmetic Act. The steps required before a new product can be commercialized include: pre-clinical studies in animals, clinical trials in humans to determine safety and efficacy and FDA approval of the product for commercial sale.

Data obtained at any stage of testing is susceptible to varying interpretations, which could delay, limit or prevent regulatory approval. Moreover, during the regulatory process, new or changed drug approval policies may cause unanticipated delays or rejection of our product. We may not obtain necessary regulatory approvals within a reasonable period of time, if at all, or avoid delays or other problems in testing our products. Moreover, even if we received regulatory approval for a product, the approval may require limitations on use, which could restrict the size of the potential market for the product.

The FDA provides that human clinical trials may begin thirty (30) days after receipt and review of an Investigational New Drug (“IND”) application, unless the FDA requests additional information or changes to the study protocol within that period. An IND must be sponsored and filed by AVANT for each of our proposed products. Authorization to conduct a clinical trial in no way assures that the FDA will ultimately approve the product. Clinical trials are usually conducted in three sequential phases. In a Phase 1 trial, the

product is given to a small number of healthy volunteers to test for safety (adverse effects). Phase 2 trials are conducted on a limited group of the target patient population; safety, optimal dosage and efficacy are studied. A Phase 3 trial is performed in a large patient population over a wide geographic area to provide evidence for the safety of the product and to prove and confirm efficacy. The FDA has ongoing oversight over all these trials and can order a temporary or permanent discontinuation if warranted. Such an action could materially harm AVANT. Clinical tests are critical to the success of our products but are subject to unforeseen and uncontrollable delay, including delay in enrollment of patients. Any delay in clinical trials could delay our commercialization of a product.

A product's safety and effectiveness in one test is not necessarily indicative of its safety and effectiveness in another test. Moreover, we may not discover all potential problems with a product even after completing testing on it. Some of our products and technologies have undergone only pre-clinical testing. As a result, we do not know whether they are safe or effective for humans. Also, regulatory authorities may decide, contrary to our findings, that a product is unsafe or not as effective in actual use as its test results indicated. This could prevent the product's widespread use, require its withdrawal from the market or expose us to liability.

The results of the clinical trials and all supporting data are submitted to the FDA for approval. A Biologics License Application ("BLA") is submitted for a biologic product; a New Drug Application ("NDA") for a drug product. The interval between IND filing and BLA/NDA filing is usually at least several years due to the length of the clinical trials, and the BLA/NDA review process can take over a year. During this time the FDA may request further testing or additional trials or may turn down the application. Even with approval, the FDA frequently requires post-marketing safety studies (known as Phase 4 trials) to be performed.

The FDA requires that the manufacturing facility that produces a licensed product meet specified standards, undergo an inspection and obtain an establishment license prior to commercial marketing. Subsequent discovery of previously unknown problems with a product or its manufacturing process may result in restrictions on the product or the manufacturer, including withdrawal of the product from the market. Failure to comply with the applicable regulatory requirements can result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution.

In the United States, vaccines for animal health and food safety use are subject to USDA approval. The steps required before a new product can be commercialized include: pre-clinical studies in animals; clinical trials in animals to determine safety and efficacy; and USDA approval of the product for commercial sale. The registration of these vaccines may be subject to numerous delays or possibly outright rejection of the product by the agency. Delays may occur at any stage of testing, clinical results may be subject to unfavorable interpretation by the agency and regulatory approval, if received, may require limitations on use which could restrict the size of the potential market for the product. The USDA requires that the manufacturing facility that produces a licensed product meet specified standards, undergo an inspection and obtain an establishment license prior to commercial marketing. Under USDA regulations, this license is held by the manufacturer of the product, not the developer of the product, such as Megan. Failure to comply with applicable USDA regulatory requirements can result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution.

The Advisory Committee on Immunization Practices ("ACIP") of the Centers for Disease Control ("CDC") has a role in setting the public market in the United States for the vaccine products we intend to develop. The ACIP makes recommendations on the appropriate use of vaccines and related products and the CDC develops epidemiologic data relevant to vaccine requirements and usage.

Because we may market our products abroad, we will be subject to varying foreign regulatory requirements. Although international efforts are being made to harmonize these requirements, applications must currently be made in each country. The data necessary and the review time vary significantly from one country to another. Approval by the FDA does not ensure approval by the regulatory bodies of other countries.

Our collaborators are also subject to all of the above-described regulations in connection with the commercialization of products utilizing our technology.

#### **L. Product Liability**

The risk of product liability claims, product recalls and associated adverse publicity is inherent in the testing, manufacturing, marketing and sale of medical products. If and when we manufacture vaccines that are recommended for routine administration to children, we will be required to participate in the National Vaccine Injury Compensation Program. This program compensates children having adverse reactions to certain routine childhood immunizations with funds collected through an excise tax from the manufacturers of these vaccines.

We have clinical trial liability insurance coverage in the amount of \$5 million. However, there can be no assurance that such insurance coverage is or will continue to be adequate or available. We may choose or find it necessary under our collaborative agreements to increase our insurance coverage in the future. We may not be able to secure greater or broader product liability insurance coverage on acceptable terms or at reasonable costs when needed. Any liability for mandatory damages could exceed the amount of our coverage. A successful product liability claim against us could require us to pay a substantial monetary award. Moreover, a product recall could generate substantial negative publicity about our products and business and inhibit or prevent commercialization of other product candidates.

#### **M. Employees; Scientific Consultants**

As of March 1, 2007, we employed 86 full time persons and 13 part time or temporary persons, 12 of whom have doctoral degrees. Of these employees, 86 were engaged in or directly support research and development activities.

## Item 1A. Risk Factors

You should consider carefully these risk factors together with all of the information included or incorporated by reference in this Annual Report. 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 \$256.2 million, as of December 31, 2006. 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:

<u>Product</u>	<u>Use</u>	<u>Stage</u>
CholeraGarde® vaccine	Cholera	Clinical phase 2b
Ty800 vaccine	Typhoid fever	Clinical phase 1/2
ETEC vaccine	Enterotoxigenic <i>E. coli</i> infection	Pre-clinical
Shigella vaccine	Dysentery	Pre-clinical
Campylobacter vaccine	<i>Campylobacter</i> infection	Pre-clinical
Oral Anthrax & Plague vaccines	Anthrax & plague infection	Pre-clinical
CETi vaccine	Cholesterol management	Clinical phase 2
TP10	Cardiac surgery	Clinical phase 2b

In anticipation of FDA 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 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 December 31, 2006, we had cash and cash equivalents of \$40.9 million, which, at that time, we believed would support expected operations for more than 12 months. We anticipate using cash in the range of \$1.8-\$2.2 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 share 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 2005 through December 2006, the market price of our common stock has fluctuated from a high of \$2.54 per share in the first quarter of 2006, to a low of \$1.16 per share in the second quarter of 2005. 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 volumes, 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 February 2004, we completed a direct equity placement of 8,965,000 shares of common stock to institutional investors at a price of \$2.75 per share which generated gross proceeds totaling approximately \$25 million. 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 3,281,154 shares that employees may purchase under stock options at prices ranging from \$1.08 to \$14.69 per share, can be resold in the public securities markets without restriction. These shares in total account for approximately 43.7% of our total common stock outstanding as of March 1, 2007. If large numbers of shares are sold over a short period of time, the price of our stock may decline rapidly or fluctuate widely.

**Our products and product candidates are subject to extensive regulatory scrutiny.**

All of our products and product candidates are at various stages of development and commercialization and our activities, products and product candidates are significantly regulated by a number of governmental entities, including the FDA in the United States and by comparable authorities in other countries and by the USDA in the United States with respect to products developed for animal health and food safety. These entities regulate, among other things, the manufacture, testing, safety, effectiveness, labeling, documentation, advertising and sale of our products and product candidates. We must obtain regulatory approval for a product candidate in all of these areas before we can commercialize the product candidate. Product development within this regulatory framework takes a number of years and involves the expenditure of substantial resources. This process typically requires extensive pre-clinical and clinical testing, which may take longer or cost more than we anticipate, and may prove unsuccessful due to numerous factors. Many product candidates that initially appear promising ultimately do not reach the market because they are found to be unsafe or ineffective when tested. Companies in the pharmaceutical, biotechnology and vaccines industries have suffered significant setbacks in advanced clinical trials, even

after obtaining promising results in earlier trials. Our inability to commercialize a product or product candidate would impair our ability to earn future revenues.

**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 1 clinical tests. Phase 1 testing generally lasts between 6 and 24 months. If phase 1 test results are satisfactory and the FDA gives its approval, we can begin phase 2 clinical tests. Phase 2 testing generally lasts between 6 and 36 months. If phase 2 test results are satisfactory and the FDA gives its approval, we can begin phase 3 pivotal studies. Phase 3 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 DVC, 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; and
- 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.

**Any delay in obtaining regulatory approval would have an adverse impact on our ability to earn future revenues.**

It is possible that none of the products or product candidates that we develop will obtain the regulatory approvals necessary for us to begin commercializing them. The time required to obtain FDA

and other approvals is unpredictable but often can take years following the commencement of clinical trials, depending upon the nature of the product candidate. Any analysis we perform of data from clinical activities is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. Any delay or failure in obtaining required approvals could have a material adverse effect on our ability to generate revenues from the particular product candidate. Furthermore, if we, or our partners, do not reach the market with our products before our competitors offer products for the same or similar uses, or if we, or our partners, are not effective in marketing our products, our revenues from product sales, if any, will be reduced.

We face intense competition in our development activities. We face competition from many companies in the United States and abroad, including a number of large pharmaceutical companies, firms specialized in the development and production of vaccines, adjuvants and vaccine and immunotherapeutic delivery systems and major universities and research institutions. These competitors include Glaxo, Merck, Novartis, Pfizer, Roche, Sanofi Pasteur, Acambis, Cambridge Biostability, Crucell, Emergent, Intercell, Iomai, Novavax, VaxGen and Vical. Most of our competitors have substantially greater resources, more extensive experience in conducting pre-clinical studies and clinical testing and obtaining regulatory approvals for their products, greater operating experience, greater research and development and marketing capabilities and greater production capabilities than those of AVANT. These companies might succeed in obtaining regulatory approval for competitive products more rapidly than we can for our products, especially if we experience any delay in obtaining required regulatory approvals.

**Failure to comply with applicable regulatory requirements would adversely impact our operations.**

Even after receiving regulatory approval, our products are subject to extensive regulatory requirements, and our failure to comply with applicable regulatory requirements will adversely impact our operations. In the United States, the FDA and USDA, as applicable, require that the manufacturing facility that produces a product meet specified standards, undergo an inspection and obtain an establishment license prior to commercial marketing. Under USDA regulations, this license is held by the manufacturer of the product and not the developer of the product. Subsequent discovery of previously unknown problems with a product or its manufacturing process may result in restrictions on the product or the manufacturer, including withdrawal of the product from the market. Failure to comply with the applicable regulatory requirements can result in fines, suspensions of regulatory approvals, product recalls, operating restrictions and criminal prosecution.

**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 Dr. M. Timothy Cooke, our Chief Operating Officer, Avery W. Catlin, our Chief Financial Officer, Dr. Ronald W. Ellis, our Senior Vice President of Research and Development, Dr. Henry C. Marsh, Jr., our Vice President of Research, or Dr. Taha Keilani, our Vice President of Medical and Regulatory Affairs, could harm us. We have employment agreements with Dr. Ryan, Dr. Cooke 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. and foreign contract manufacturers as these 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., NeoMPS, Inc., 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, Cincinnati Children's Hospital Medical Center, The Cleveland Clinic, Radiant Research, Inc., Biobridges, LLC, Glaser Research Group, 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 100% of our project management and 100% of our medical and 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, DVC, Inflazyme (formerly AdProTech), LAHI, and Select Vaccines 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 cardiovascular products if they are approved for sale. To the extent that we choose to market and distribute the cardiovascular 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 the demand and sales for and profitability of Megan® Vac 1 and Megan® Egg could adversely affect our revenues.**

Both the demand for and ultimately the profitability of Megan® Vac 1 and Megan® Egg are components to our success. Because our focus is on human health care, as of September 1, 2002 we appointed LAHI as the exclusive distributor of our Megan poultry vaccines in North America. LAHI, an established animal health company, has taken over marketing and distribution of Megan's currently marketed products for the commercial poultry market. Under the distribution agreement, we receive a percentage of Megan® Vac 1 and Megan® Egg product sales in the form of royalty payments. The following are potential factors, without limitation, that may negatively affect the demand for Megan® Vac 1 and Megan® Egg:

- Our competitors may develop, manufacture and market products that are more effective or less expensive than Megan® Vac 1 and/or Megan® Egg;
- Megan® Vac 1 and Megan® Egg 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 and Megan® Egg. Instead, we contract with Maine Biological Laboratories ("MBL"), a subsidiary of LAHI, to manufacture Megan® Vac 1 and Megan® Egg for us.

Any one of these factors could reduce demand for Megan® Vac 1 and Megan® Egg to a level which may lead to LAHI's and/or our discontinuation of the product. Should LAHI or we be unable to realize acceptable profits from sales of Megan® Vac 1 and Megan® Egg, LAHI or we may choose to scale back our commercialization efforts. In addition, if our partner, LAHI, is unable to continue to distribute Megan® Vac 1 and Megan® Egg 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.

**Certain factors could negatively affect the demand for and sales and profitability of Rotarix®, which would have a material adverse affect on our revenues.**

Both the demand and ultimately the profitability of Rotarix® are components to our success. We have licensed our oral rotavirus vaccine, Rotarix®, to Glaxo for the purposes of Glaxo developing and commercializing Rotarix® worldwide. Glaxo gained approval for Rotarix® in Mexico in July 2004 and in the European Union in February 2006. In May 2005, AVANT entered into an agreement whereby an affiliate of PRF purchased an interest in the net royalties we will receive on worldwide sales of Rotarix® (see Note 10 of our audited consolidated financial statements) and we will retain 50% of future Glaxo milestone payments, with the balance payable to PRF and CCH. The following are potential factors, without limitation, that may negatively affect the demand for Rotarix®:

- Our competitors in the pharmaceuticals, biotechnology and vaccines market have greater financial and management resources than we do, and significantly more experience in bringing products to market, and may develop, manufacture and market products that are more effective or less expensive than Rotarix®;

- Rotarix® could be replaced by a novel product and may become obsolete;
- We and Glaxo may be unable to prevent third parties from infringing upon our proprietary rights related to Rotarix®;
- Users may not accept such a recently approved product without years of proven history; and
- We are dependent on Glaxo for the manufacturing, testing, acquisition of regulatory approvals, marketing, distribution and commercialization of Rotarix®.

Any of these factors could have a material adverse effect on the sales of Rotarix® and our results of operations.

**Other factors could affect the demand for and sales and profitability of Megan® Vac 1, Megan® Egg, Rotarix® and any other of our current or future products.**

In general, other factors that could affect the demand for and sales and profitability of our products include, but are not limited to:

- The timing of regulatory approval, if any, of competitive products;
- Our, Megan's, Glaxo's or any other of our partners' pricing decisions, as applicable, including a decision to increase or decrease the price of a product, and the pricing decisions of our competitors;
- Government and third-party payer reimbursement and coverage decisions that affect the utilization of our products and competing products;
- Negative safety or efficacy data from new clinical studies conducted either in the U.S. or internationally by any party could cause the sales of our products to decrease or a product to be recalled;
- The degree of patent protection afforded our products by patents granted to or licensed by us and by the outcome of litigation involving our or any of our licensor's patents;
- The outcome of litigation involving patents of other companies concerning our products or processes related to production and formulation of those products or uses of those products;
- The increasing use and development of alternate therapies;
- The rate of market penetration by competing products; and
- The termination of, or change in, existing arrangements with our partners.

Any of these factors could also have a material adverse effect on our sales of Megan® Vac 1, Megan® Egg, Rotarix® and any other of our current or future products and results of operations.

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

During 2007, we expect to have one Phase 1 clinical trial and one Phase 2 clinical trial in progress under our management. 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 3) 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.

**We face the risk of product liability claims, which could exceed our insurance coverage, and produce recalls, each of which could deplete our cash resources.**

The pharmaceutical, biotechnology and vaccines industries expose us to the risk of product liability claims alleging that use of our products or product candidates caused an injury or harm. These claims can arise at any point in the development, testing, manufacture, marketing or sale of our products or product candidates and may be made directly by patients involved in clinical trials of our products, by consumers or healthcare providers or by individuals, organizations or companies selling our products. Product liability claims can be expensive to defend, even if the product or product candidate did not actually cause the alleged injury or harm.

Insurance covering product liability claims becomes increasingly expensive as a product candidate moves through the development pipeline to commercialization. We have clinical trial liability insurance coverage in the amount of \$5 million. However, there can be no assurance that such insurance coverage is or will continue to be adequate or available. We may choose or find it necessary under our collaborative agreements to increase our insurance coverage in the future. We may not be able to secure greater or broader product liability insurance coverage on acceptable terms or at reasonable costs when needed. Any liability for damages resulting from a product liability claim could exceed the amount of our coverage, require us to pay a substantial monetary award from our own cash resources and have a material adverse effect on our business, financial condition and results of operations. Moreover, a product recall, if required, could generate substantial negative publicity about our products and business and inhibit or prevent commercialization of other products and product candidates.

In addition, some of our licensing and other agreements with third parties require or might require us to maintain product liability insurance. If we cannot maintain acceptable amounts of coverage on commercially reasonable terms in accordance with the terms set forth in these agreements, the corresponding agreements would be subject to termination, which could have a material adverse impact on our operations.

**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. We also conduct joint research and development programs, such as the one with Select Vaccines focused on vaccines to treat influenza and possibly other viral infections, which may require us to share trade secrets under the terms of research and

development partnership or similar agreements. Despite our efforts to protect our trade secrets, 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 cannot 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 products, and those companies could influence research and development or restrict our use of it.**

Companies that license technologies to us that 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 fully perform our obligations under a license, 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.

In February 2007, we licensed a vaccines platform technology from Select Vaccines for the expression of viral disease antigens based on Select Vaccines' proprietary virus-like particles and agreed to pursue a joint research and development program initially focused on vaccines against influenza, with the opportunity to expand the collaboration to other disease targets. Assuming Select Vaccines' shareholders approve the transaction, we will make an upfront equity investment in Select Vaccines and fund the joint program for two years. We may be unable to realize any benefit from our agreement with Select Vaccines and may face the loss of our investment of financial resources and time in the joint development program. While we believe that Select Vaccines technology offers opportunities to develop vaccines that treat

influenza and possibly other viral infections, we cannot predict whether our joint efforts with Select Vaccines will succeed in developing any new, safe and effective vaccine. Our agreement also obligates us to make payments to Select Vaccines for the achievement of specific preclinical and clinical development milestones and royalties based on net sales of any approved products arising out of this collaboration that are successfully marketed.

**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 Glaxo, Merck, Novartis, Pfizer, Roche, Sanofi Pasteur, Acambis, Cambridge Biostability, Crucell, Emergent, Intercell, Iomai, Novavax, VaxGen and Vical. 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; which 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. In the event of an accident, an injured party will likely 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, what their impact on us will be. However, we expect that adoption of any reform proposed will impair our ability to market products at acceptable prices.

**Item 1B. UNRESOLVED STAFF COMMENTS**

None.

**Item 2. PROPERTIES**

We currently lease approximately 54,300 square feet of laboratory and office space in Needham, Massachusetts at a current annual base rent of \$1,561,600 through April 30, 2007. In November 2005, we entered into a lease amendment which extended the lease through April, 2017. The lease amendment calls for the complete renovation of the Needham facility by the landlord and AVANT and reduces AVANT's leased space to approximately 35,200 square feet of laboratory and office space. The current projected costs for the tenant improvements portion of the renovations project are approximately \$9.3 million. As an incentive for AVANT to enter into the lease amendment, the landlord has agreed to contribute up to \$3.6 million towards tenant improvement costs. Under this lease amendment, we are obligated to pay an escalating base annual rent ranging from \$879,700 to \$1,161,200 during the extension term. Aggregate rental payments including common area maintenance costs for the years ended December 31, 2006 and 2005 for this facility were \$2,274,738 and \$2,069,170, respectively.

AVANT leases approximately 12,400 square feet of laboratory and office space in Overland, Missouri near St. Louis. In February 2004, we extended our lease through September 30, 2007. Under the extended lease agreement, we are obligated to pay an escalating base annual rent ranging from \$158,400 to \$161,500 during the extension term plus common area maintenance costs. Aggregate rental payments including common area maintenance costs for the years ended December 31, 2006 and 2005 for this facility were \$161,460 and \$163,852, respectively.

We lease a manufacturing facility of approximately 16,200 square feet in Fall River, Massachusetts. The lease has an initial seven-year term which expires in December 2010. Under the lease agreement, we are obligated to pay an annual rent of approximately \$230,100 plus certain common area maintenance costs, subject to annual rent adjustments in the final two years. The landlord is providing a tenant incentive allowance of \$49,740 against the cost of alterations and improvements required by AVANT to be made to the expanded space. Aggregate rental payments including common area maintenance costs for the year ended December 31, 2006 and 2005 for this facility were \$293,670 and \$230,776, respectively.

**Item 3. LEGAL PROCEEDINGS**

None.

**Item 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS**

None.

## PART II

### Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock began trading on the Nasdaq National Market (the "Nasdaq") under the symbol "AVAN" on August 24, 1998. Prior to that date, we were traded on the Nasdaq under the symbol "TCEL". The following table sets forth for the periods indicated the high and low closing sales prices for our common stock as reported by Nasdaq.

#### Fiscal Period

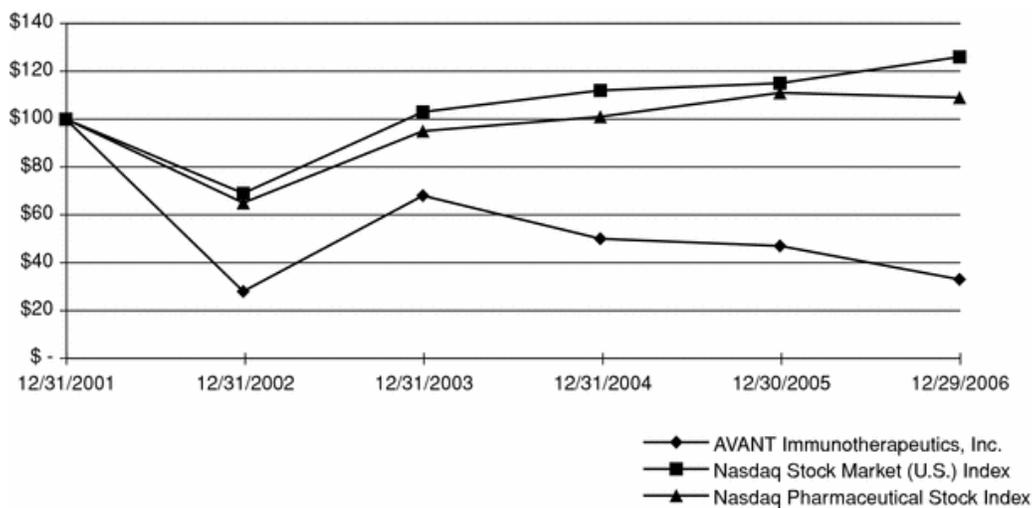
	<u>High</u>	<u>Low</u>
<b>Year Ended December 31, 2005</b>		
1Q (Jan. 1 – March 31, 2005)	\$2.17	\$1.59
2Q (April 1 – June 30, 2005)	1.60	1.16
3Q (July 1 – Sept. 30, 2005)	1.46	1.19
4Q (Oct. 1 – Dec. 31, 2005)	2.13	1.26
<b>Year Ended December 31, 2006</b>		
1Q (Jan. 1 – March 31, 2006)	\$2.54	\$1.66
2Q (April 1 – June 30, 2006)	2.30	1.46
3Q (July 1 – Sept. 30, 2006)	1.65	1.27
4Q (Oct. 1 – Dec. 31, 2006)	1.62	1.29

As of March 1, 2007, there were approximately 667 shareholders of our common stock. The price of the common stock was \$1.41 as of the close of the market on March 1, 2007. We have not paid any dividends on our common stock since our inception and do not intend to pay any dividends in the foreseeable future. Declaration of dividends will depend, among other things, upon our operating and future earnings, our capital requirements and general business conditions.

The graph below compares the cumulative total stockholder return on the common stock for the period from December 31, 2001 through December 31, 2006, with the cumulative return on (i) NASDAQ Market Index—U.S. Companies and (ii) NASDAQ Pharmaceutical Index. The comparison assumes investment of \$100 on December 31, 2001 in our common stock and in each of the indices and, in each case, assumes reinvestment of all dividends.

**COMPARISON OF CUMULATIVE TOTAL RETURN AMONG AVANT  
IMMUNOTHERAPEUTICS, INC., NASDAQ MARKET INDEX-U.S. AND  
PEER GROUP INDICES**

Dollars



	<u>12/31/01</u>	<u>12/31/02</u>	<u>12/31/03</u>	<u>12/31/04</u>	<u>12/30/05</u>	<u>12/29/06</u>
AVANT Immunotherapeutics, Inc.	\$ 100	\$ 28	\$ 68	\$ 50	\$ 47	\$ 33
Nasdaq Stock Market (U.S.) Index	\$ 100	\$ 69	\$ 103	\$ 112	\$ 115	\$ 126
Nasdaq Pharmaceutical Stock Index	\$ 100	\$ 65	\$ 95	\$ 101	\$ 111	\$ 109

See Item 12 for information regarding our equity compensation plan.

**Item 6. SELECTED FINANCIAL DATA**

The selected consolidated financial data presented below for the years ended December 31, 2006, 2005, 2004, 2003, and 2002 have been derived from the audited consolidated financial statements of AVANT. All amounts are in thousands except per share data.

<b>CONSOLIDATED STATEMENTS OF OPERATIONS DATA</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>
<b>REVENUE:</b>					
Product Development and Licensing	\$ 2,855	\$ 242	\$ 4,566	\$ 1,608	\$ 6,275
Government Contracts and Grants	1,409	2,720	2,115	2,857	138
Product Sales and Royalty	667	126	178	168	292
Total Revenue	<u>4,931</u>	<u>3,088</u>	<u>6,859</u>	<u>4,633</u>	<u>6,705</u>
<b>OPERATING EXPENSE:</b>					
Research and Development	18,066	14,063	13,574	10,021	14,709
Other Operating Expense	9,232	7,890	6,867	6,346	6,428
Total Operating Expense	<u>27,298</u>	<u>21,953</u>	<u>20,441</u>	<u>16,367</u>	<u>21,137</u>
Investment and Other Income, Net	2,113	768	378	240	603
Loss Before Provision for Income Taxes	(20,254)	(18,097)	(13,204)	(11,494)	(13,829)
Provision for Income Taxes	120	—	—	—	—
Net Loss Before Cumulative Effect of Change in Accounting Principle	(20,374)	(18,097)	(13,204)	(11,494)	(13,829)
Cumulative Effect of Change in Accounting Principle	—	—	—	(1,175)	—
Net Loss	<u>\$ (20,374)</u>	<u>\$ (18,097)</u>	<u>\$ (13,204)</u>	<u>\$ (12,669)</u>	<u>\$ (13,829)</u>
<b>Basic and Diluted Net Loss Per Common Share:</b>					
Net Loss Per Common Share Before Cumulative Effect of Change in Accounting Principle	(0.27)	(0.24)	(0.18)	(0.18)	(0.23)
Cumulative Effect of Change in Accounting Principle Per Common Share	—	—	—	(0.02)	—
Basic and Diluted Net Loss Per Common Share	<u>\$ (0.27)</u>	<u>\$ (0.24)</u>	<u>\$ (0.18)</u>	<u>\$ (0.20)</u>	<u>\$ (0.23)</u>
Shares Used in Calculating Basic and Diluted Earnings per Share	<u>74,216</u>	<u>74,143</u>	<u>72,965</u>	<u>62,513</u>	<u>60,461</u>
<b>CONSOLIDATED BALANCE SHEET DATA</b>	<b>2006</b>	<b>2005</b>	<b>2004</b>	<b>2003</b>	<b>2002</b>
Working Capital	\$ 32,319	\$ 20,912	\$ 29,089	\$ 18,924	\$ 22,427
Total Assets	61,480	36,452	45,804	31,305	35,233
Long Term Liabilities	49,234	11,870	2,103	184	456
Accumulated Deficit	(256,246)	(235,872)	(217,776)	(204,572)	(191,903)
Total Stockholders' Equity	2,161	20,889	38,408	27,920	31,344

**Safe Harbor Statement under the Private Securities Litigation Reform Act of 1995** Statements contained in the following, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, that are not historical facts may be forward-looking statements that are subject to a variety of risks and uncertainties. There are a number of important factors that could cause the actual results to differ materially from those expressed in any forward-looking statements made by AVANT. These factors include, but are not limited to: (1) the integration of multiple technologies and programs; (2) the ability to adapt AVANT's vectoring systems to develop new, safe and effective orally administered vaccines against anthrax and plague or other any other microbes used as bioweapons and other disease causing agents; (3) the ability to successfully complete development and commercialization of TP10, CETi-1, CholeraGarde® (Peru-15), Ty800, ETEC E. coli, VLPs and other products and AVANT's expectations regarding market growth; (4) the cost, timing, scope and results of ongoing safety and efficacy trials of TP10, CETi-1, CholeraGarde® (Peru-15), Ty800, ETEC E. coli and other preclinical and clinical testing; (5) the ability to successfully complete product research and further development, including animal, pre-clinical and clinical studies of TP10, CETi-1, CholeraGarde® (Peru-15), Ty800, ETEC E. coli and other products; (6) the ability of AVANT to manage multiple late stage clinical trials for a variety of product candidates; (7) the volume and profitability of product sales of Megan®Vac 1, Megan®Egg and other future products; (8) the process of obtaining regulatory approval for the sale of Rotarix® in major commercial markets, as well as the timing and success of worldwide commercialization of Rotarix® by our partner, Glaxo; (9) Glaxo's strategy and business plans to launch and supply Rotarix® worldwide, including in the U.S. and other major markets and its payment of royalties to AVANT; (10) changes in existing and potential relationships with corporate collaborators and partners; (11) the availability, cost, delivery and quality of clinical and commercial grade materials supplied by contract manufacturers; (12) the timing, cost and uncertainty of obtaining regulatory approvals to use TP10, CETi-1, CholeraGarde® (Peru-15) and Ty800, ETEC E. coli, among other purposes, for adults undergoing cardiac surgery, to raise serum HDL cholesterol levels and to protect travelers and people in endemic regions from diarrhea causing diseases, respectively; (13) the ability to obtain substantial additional funding; (14) the ability to develop and commercialize products before competitors that are superior to the alternatives developed by competitors; (15) the ability to retain certain members of management; (16) AVANT's expectations regarding research and development expenses and general and administrative expenses; (17) DVC's ability to complete clinical trials and perform under its agreement; (18) AVANT's expectations regarding CETP's ability to improve cholesterol levels and AVANT's ability to develop and commercialize CETP; (19) AVANT's expectations regarding cash balances, capital requirements, anticipated royalty payments (including those from Glaxo) revenues and expenses, including infrastructure expenses; (20) our belief regarding the validity of our patents and potential litigation; and (21) other factors detailed from time to time in filings with the Securities and Exchange Commission. In addition, the factors described under "Item 1A. Risk Factors" in this report 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 report, 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.

## **Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS**

### **OVERVIEW**

AVANT's principal 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.

AVANT's focus is unlocking 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 vaccines and immunotherapeutics. AVANT has three products on the market and four of AVANT's products are in clinical development. AVANT's pipeline includes products for biodefense,

travelers' vaccines, global health, and pandemic flu needs based on AVANT's oral, rapid-protecting, single-dose and temperature stable vaccine technology. The development of immunotherapeutic vaccines like CETi and the marriage of innovative vector delivery technologies and novel VLP 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. ("UPT"):* In January 2003, AVANT completed the acquisition of certain technology and intellectual property of UPT, a privately held company, and the licensure of certain patent rights from Elan Drug Delivery Limited ("EDD"), a subsidiary of Elan Corporation plc. EDD's license to AVANT gives AVANT exclusive rights to the VitriLife® process for use in orally administered vaccines and certain other non-injectable applications, and non-exclusive rights in certain other fields. 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. AVANT has 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. ("Megan"):* On December 1, 2000, AVANT acquired all of the outstanding capital stock of Megan, a company engaged in the discovery and development of human and animal vaccines using patented gene modification technologies. In connection with the acquisition, AVANT 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. As of December 31, 2006, none of the acquired research and development projects had reached technological feasibility.

*Virus Research Institute, Inc. ("VRI"):* On August 21, 1998, AVANT acquired 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 December 31, 2006, none of the acquired research and development projects had reached technological feasibility, except for the rotavirus vaccine, Rotarix®.

## 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, and 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:

<u>Clinical Phase</u>	<u>Estimated Completion Period</u>
Phase 1	1-2 Years
Phase 2	1-5 Years
Phase 3	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 2) 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 2002, is set forth below under "Program Developments." During the past five years through the end of 2006, AVANT incurred an aggregate of \$70 million in research and development costs. During the year ended December 31, 2006, AVANT incurred an aggregate of \$18 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, 2006, 2005, 2004, 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.

	Years Ended December 31,				
	2006	2005	2004	2003	2002
<i>Bacterial Vaccines:</i>					
CholeraGarde®	\$ 5,427,800	\$ 1,257,200	\$ 123,100	\$ 695,800	\$ 5,959,100
Ty800	1,402,300	404,500	688,300	186,300	2,203,600
Other	1,873,600	528,900	332,500	137,500	204,400
<i>BioDefense Vaccines:</i>					
	1,558,600	2,470,700	3,082,800	3,524,500	239,900
<i>Food Safety &amp; Animal Health Vaccines:</i>					
	6,700	9,900	12,600	49,400	450,600
<i>Viral Vaccines:</i>					
Rotarix® vaccine	648,600	—	500,000	200,000	400,000
Avian Flu	711,600	4,200	—	—	—
Therapore®/HIV	8,200	11,800	184,900	72,400	346,800
<i>Cholesterol Management Vaccine:</i>					
CETi	922,700	650,800	816,900	3,404,000	3,176,800
<i>Complement Inhibitors:</i>					
TP10/TP20	4,466,400	8,327,200	7,706,300	1,648,700	1,714,800
<i>Other Programs:</i>	1,040,000	398,100	426,400	102,700	—
<i>Discontinued Programs:</i>	—	—	—	—	12,500
<b>Total R&amp;D Expense</b>	<b><u>\$18,066,500</u></b>	<b><u>\$14,063,300</u></b>	<b><u>\$13,873,800</u></b>	<b><u>\$10,021,300</u></b>	<b><u>\$14,708,500</u></b>

## Program Developments

*Rotavirus Vaccine:* Rotavirus is a major cause of diarrhea and vomiting in infants and children. In 1997, AVANT licensed its oral rotavirus vaccine to Glaxo. All of the ongoing development and commercialization for this program is being conducted and funded by Glaxo. Glaxo gained approval for Rotarix® in Mexico during 2004, which represented the first in a series of worldwide approvals and commercial launches for the product. During 2005, Glaxo launched Rotarix® in additional Latin American countries as well as Asia Pacific countries, and filed for market approval with the European regulatory authorities, which triggered a \$2 million milestone fee payable to AVANT. In February 2006, the European Commission granted approval of Rotarix® in the European Union, which triggered a \$4 million milestone payment from Glaxo. Glaxo has agreed to make an additional payment of \$1.5 million upon achievement of market approval in the United States. Rotarix® is now licensed in over 50 countries worldwide in addition to the European Union market. AVANT expects Glaxo to file for United States market approval in 2007.

AVANT licensed the Rotarix® technology in 1995 from CCH and owes CCH a license fee of 30% on net royalties received from Glaxo. In May 2005, AVANT entered into an agreement whereby an affiliate of Paul Royalty Fund ("PRF") purchased an interest in the net royalties AVANT will receive on worldwide sales of Rotarix®. Under the PRF agreement, AVANT retains 50% of the \$4 million milestone payment from Glaxo for the European Commission approval discussed above and of any future Glaxo milestone payments, with the balance payable to PRF and CCH.

Royalty rates on Rotarix® escalate from 7% to 10% based on net product sales in countries that have valid patent protection. These royalty rates are discounted by 30% for "non-patent" countries (primarily international markets). In September 2006, AVANT received notice from Glaxo that Glaxo would begin paying royalties on sales of Rotarix® vaccine at the lower of the two royalty rates under their 1997 license agreement. Glaxo's decision to pay the lower royalty rate (which is 70% of the full rate) is based upon Glaxo's assertion that Rotarix® is not covered by the patents Glaxo licensed from AVANT in Australia and certain European countries.

*Complement Inhibitors:* In February 2002, AVANT announced that TP10 had not achieved a significant reduction in the primary endpoint of a Phase 2 adult cardiac surgery trial conducted in 564 patients. However, further analysis of the study data demonstrated an important treatment benefit in male patients participating in the trial directly related to mortality; however, no treatment benefit was observed in female patients. In February 2004, AVANT started a Phase 2b double-blind, placebo-controlled trial of TP10 in approximately 300 women undergoing cardiopulmonary by-pass surgery. The goals of the trial were to clarify the treatment effect that TP10 has for women undergoing high risk cardiac surgery, as well as augment the safety data for that patient population to allow for the design of a subsequent registration-directed trial. In February 2006, AVANT reported that the females-only study did not meet the primary endpoint, thus confirming the results for female subjects in the previous TP10 trial. Given the strong efficacy data in males shown in this previous study, AVANT believes there is a clinical development pathway for a males-only indication for TP10 in cardiac bypass surgery. AVANT is seeking a corporate partner to complete the development and commercialization of TP10.

During the period January 1, 2002 through December 31, 2006, AVANT incurred approximately \$23.9 million in research, development, contract manufacturing and clinical costs associated with its complement inhibitor program.

*Bacterial Vaccines:* AVANT's goal is to become a leading developer of innovative bacterial vaccines that address health care needs on a global basis. In this regard, AVANT acquired VitriLife®, a technology with the potential to reduce manufacturing costs and improve product stability, eliminating the need for vaccine refrigeration during shipping and storage. With this technology and AVANT's *Cholera-* and *Salmonella-*vectored delivery technologies, named VibrioVec® and SalmoVec®, AVANT can now develop a new generation of vaccines that have an ideal product profile: safe, effective, oral, single-dose, rapidly protective and temperature stable.

Development of a safe and effective cholera vaccine is the first step in establishing AVANT's single-dose, oral bacterial vaccine franchise. During 2002, AVANT completed a Phase 2 dose-ranging study with CholeraGarde® which assessed the safety and immunogenicity of this vaccine and supported the start of Phase 2 trials in December 2002 with the International Vaccine Institute ("IVI") in Bangladesh where cholera is endemic. In July 2005, Bangladesh study results in children and infants showed CholeraGarde® to be well tolerated and highly immunogenic, with 77% of children aged 9 months to 5 years generating protective immune responses. Previously published results showed the vaccine to be well tolerated and immunogenic against the cholera organism in the adult portion of this trial.

In July 2005, AVANT reported that it and Harvard Medical School would receive approximately \$500,000 from the National Institutes of Health to apply AVANT's VitriLife® formulation to CholeraGarde®. In the future, AVANT plans to utilize VitriLife®, a proprietary technology that confers thermostability to live bacterial vaccines, and other drying and preservation technologies at the Fall River facility for its other bacterial vaccines.

In August 2006, IVI received \$21 million in funding from the Bill & Melinda Gates Foundation for a Cholera Vaccine Initiative ("CHOVI"), which will include conducting further clinical trials of CholeraGarde®, AVANT's cholera vaccine. IVI plans to conduct Phase 2 clinical trials of CholeraGarde® in Bangladesh and India beginning in 2007 followed by Phase 3 field studies. IVI will be purchasing clinical materials produced at AVANT's Fall River, MA manufacturing facility for the trials. AVANT sees the initiation of these trials as serving the dual role of addressing a significant health issue in the developing world and advancing development of AVANT's vaccine franchise.

AVANT has decided to focus only on the fully-funded opportunity for CholeraGarde® in the developing world. AVANT has determined that the high clinical costs of our own Phase 3 clinical trials in the United States and the investment in a commercial manufacturing facility are not justified by the limited market opportunities for a cholera vaccine in developed countries at this time. This decision frees up both financial and manufacturing resources for our Ty800 and ETEC programs, as well as our new influenza vaccine program.

During the period January 1, 2002 through December 31, 2006, AVANT incurred approximately \$13.5 million in research, development and clinical costs on its CholeraGarde® program.

AVANT is also developing an oral typhoid fever vaccine, Ty800, for global health needs. The National Institute of Allergy and Infectious Disease ("NIAID") of the National Institutes of Health ("NIH") and AVANT agreed for the NIAID to conduct a Phase 1/2 in-patient dose-ranging clinical trial aimed at demonstrating the safety and immunogenicity of the Ty800 vaccine. NIAID has funded the production of Ty800 vaccine for clinical testing and is completing the Phase 1/2 trial at a NIH-funded clinical site in February 2006. The NIAID trial seeks to confirm the safety and immunogenicity of the Ty800 oral vaccine observed in an earlier physician-sponsored Ty800 vaccine study. Enrollment in this study was completed during the third quarter of 2006 and results are expected during the first half of 2007. AVANT plans to initiate its own sponsored Phase 2 trial of Ty800 in mid-2007. During the period January 1, 2002 through December 31, 2006, AVANT incurred approximately \$4.9 million in research, development, contract manufacturing and clinical costs on its Ty800 program.

Finally, AVANT is developing additional bacterial vaccines against enterotoxigenic *E. coli* ("ETEC"), *Shigella*, *Salmonella paratyphi* and *Campylobacter*—all important causes of serious diarrheal diseases worldwide. These programs are in pre-clinical development. In April 2005, AVANT was awarded a Phase I Small Business Innovation Research (SBIR) grant to support the development of a live attenuated salmonella vaccine against *Campylobacter*. The NIAID award provided approximately \$107,000 in funding and work was completed by AVANT during the second quarter of 2006. In the second half of 2007, AVANT expects to initiate a Phase I trial of its ETEC vaccine candidate. AVANT's long-term goal is to develop a combination vaccine containing CholeraGarde®, Ty800, *S. paratyphi* and ETEC as a "super enteric vaccine" to address the travelers' market. During the period January 1, 2002 through December 31, 2006, AVANT incurred approximately \$3.1 million in research, development, contract manufacturing and clinical costs on these pre-clinical programs.

*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. AVANT believes its 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 DVC LLC ("DVC," formerly DynPort Vaccine Company LLC) a license for exclusive rights to use certain components of AVANT's anthrax vaccine technology. In October 2002, DVC initiated 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 DNA technology and production processes licensed from AVANT. The study will evaluate tolerability, safety and immunogenicity of DVC's new vaccine. On August 5, 2005, AVANT received notice from DVC of termination of the license agreement, effective November 5, 2005. DVC plans to complete the ongoing Phase I clinical trial.

Further, in January 2003, AVANT was awarded a subcontract by DVC in the amount of \$2.5 million to develop for the U.S. Department of Defense an oral combination vaccine against anthrax and plague using AVANT's proprietary vaccine technologies. As of December 31, 2006, AVANT had received a number of additional subcontract modifications from DVC to support further development and pre-clinical animal testing of vaccine constructs of anthrax and plague vaccine candidates being developed by AVANT for use in the oral combination vaccine. Total contract funding awarded by DVC now totals approximately \$12 million. 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. For the twelve months ended December 31, 2006 and 2005, AVANT recognized \$1,157,381 and \$2,408,936, respectively, in government contract revenue from DVC. Through December 31, 2006, AVANT had received approximately \$9.3 million in payments under the subcontract agreements. These agreements expire in 2007, although they may be terminated by DVC at any time upon 30 days notice.

During the period January 1, 2002 through December 31, 2006, AVANT incurred approximately \$10.9 million in research and development costs on its biodefense vaccine program.

*Food Safety and Animal Health Vaccines:* AVANT has partnered with Pfizer Inc. ("Pfizer"), who will apply AVANT's vaccine technologies to animal health and human food safety markets. The Pfizer research program achieved an important milestone in late 2002, which resulted in a payment of \$500,000 to AVANT. As of June 1, 2006, AVANT entered into a Collaborative Research and Development Agreement with Pfizer aimed at the discovery and development of vaccines to protect animals. Under the agreement, Pfizer and AVANT will conduct a joint research program funded by Pfizer. AVANT expects to recognize revenue as the research and development service deliverables are completed and delivered to

Pfizer. During the period January 1, 2002 through December 31, 2006, AVANT incurred approximately \$0.5 million in research and development costs on its food safety and animal health vaccines program.

*Cholesterol Management Vaccine:* AVANT is 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). AVANT is developing this vaccine, CETi, to stimulate an immune response against CETP, which it believes may improve the ratio of HDL to LDL cholesterol and reduce the progression of atherosclerosis which often leads to a heart attack.

In October 2003, AVANT completed the CETi vaccine Phase 2 efficacy study in approximately 200 patients with low levels of HDL cholesterol. The results of the study demonstrated proof-of-concept in humans, with increased HDL levels seen in subjects with high anti-CETP antibody titers. In addition, the CETi-1 vaccine worked as designed to elicit anti-CETP antibodies in a high percentage of patients treated, approximately 90%, however, the levels of anti-CETP antibodies were not as high as expected.

AVANT is evaluating the next steps for development of this vaccine. In pre-clinical testing, AVANT has identified a new adjuvanted formulation for the vaccine that elicits more than a 10-fold increase in anti-CETP antibody titers when compared to the CETi vaccine. AVANT is seeking a corporate partner to complete development and to commercialize the newly formulated CETP vaccine. During the period January 1, 2002 through December 31, 2006, AVANT incurred approximately \$9.0 million in research, development and clinical costs associated with the CETP program.

### **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 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.

*Inflazyme (formerly AdProTech):* In March 2004, AVANT granted a license to AdProTech for non-exclusive rights to use certain components of its intellectual property surrounding complement inhibition. Financial terms of the agreement with AdProTech include license fees, milestone payments and royalties. In April 2004, AdProTech was acquired by Inflazyme, which assumed the license.

### **CRITICAL ACCOUNTING POLICIES**

Our significant accounting policies are described in Note 1 to the consolidated financial statements included in Item 8 of this Form 10-K. We believe our most critical accounting policies include revenue recognition for agreements entered into with various collaborators, the amortization policy for acquired intangible assets and the estimates of costs incurred and assumptions made in recording accrued clinical research and contract manufacturing costs and assumptions made in calculating the fair value of stock-based compensation expense.

*Revenue Recognition:* AVANT has entered into various license and development agreements with pharmaceutical and biotechnology companies. The terms of the agreements typically include non-refundable license fees, funding of research and development, payments based upon achievement of certain milestones and royalties on net product sales. Non-refundable license fees are recognized as product development and licensing revenue when AVANT has a contractual right to receive such payments, provided a contractual arrangement exists, the contract price is fixed or determinable, the collection of the resulting receivable is reasonably assured and AVANT has no further performance obligations under the license agreement. When AVANT has performance obligations under the terms of a

contract, non-refundable fees are recognized as revenue as AVANT completes its obligations. Where AVANT's level of effort is relatively constant over the performance period, the revenue is recognized on a straight-line basis. The determination of the performance period involves judgment on management's part. Revenue is limited to the lesser of the cumulative amount of payments received or the cumulative amount of revenue earned, as of the period ending date. Funding of research and development is recognized over the term of the applicable contract as costs are incurred related to that contract.

Revenues from milestone payments related to arrangements under which we have no continuing performance obligations are recognized upon achievement of the related milestone. Revenues from milestone payments related to arrangements under which we have continuing performance obligations are recognized as revenue upon achievement of the milestone only if all of the following conditions are met: the milestone payments are non-refundable; achievement of the milestone was not reasonably assured at the inception of the arrangement; substantive effort is involved in achieving the milestone; and, the amount of the milestone is reasonable in relation to the effort expended or the risk associated with achievement of the milestone. If any of these conditions are not met, the milestone payments are deferred and recognized as revenue over the term of the arrangement as AVANT completes its performance obligations.

Revenues from government contracts are recorded as effort is expended on the contracted work and billed to the government. Royalty revenue consists of payments received from licensees for a portion of sales proceeds from products that utilize AVANT's licensed technologies and are recognized when the amount of and basis for such royalty payments are reported to us in accurate and appropriate form and in accordance with the related license agreement. Payments received in advance of activities being performed are recorded as deferred revenue.

Product royalties related the sale of a royalty interest on the worldwide sales of Rotarix<sup>®</sup>, to PRF is recognized as revenue in accordance with the guidance in EITF 88-18 "Sale of Future Revenues." Upfront unconditional payments have been recorded by AVANT as deferred revenue. Revenues will be recognized and calculated based on the ratio of total royalties received from Glaxo and remitted to PRF over expected total amounts to be received by PRF and then applying this percentage to the total cumulative consideration received from PRF to date. The expected total of payments to be paid to PRF is an estimate which AVANT will update from time to time to determine that the estimate continues to be reasonable in the light of then current events and circumstances. Any significant changes in our estimates or assumptions could impact our revenue recognition.

Effective July 1, 2003, we adopted EITF 00-21, *Accounting For Revenue Arrangements with Multiple Deliverables*, which establishes criteria for whether revenue on a deliverable can be recognized separately from other deliverables in a multiple deliverable arrangement. The criteria considers whether the delivered item has stand-alone value to the customer, whether the fair value of the delivered item can be reliably determined and the customer's right of return for the delivered item.

*Long-Lived Assets:* In the ordinary course of our business, we incur substantial costs to construct property and equipment. The treatment of costs to construct these assets depends on the nature of the costs and the stage of construction. Costs incurred in the project planning and design phase, and in the construction and installation phase, are capitalized as part of the cost of the asset. We stop capitalizing costs when the asset is substantially complete and ready for its intended use. Determining the appropriate period during which to capitalize costs, and assessing whether particular costs qualify for capitalization, requires us to make significant judgments. These judgments can have a material impact on our reported results.

For manufacturing property and equipment, we also capitalize the cost of validating these assets for the underlying manufacturing process. We complete the capitalization of validation costs when the asset is substantially complete and ready for its intended use. Costs capitalized include incremental labor and

fringe benefits, and direct consultancy services. Determining whether to capitalize validation costs require judgment and can have a material impact on our reported results.

Property and equipment is stated at cost and depreciated over the estimated useful lives of the related assets using the straight-line method. Laboratory equipment and office furniture and equipment are depreciated over a five year period and computer equipment is depreciated over a three year period. Manufacturing equipment is amortized over a seven to ten year period. Leasehold improvements are amortized over the shorter of the estimated useful life or the noncancelable term of the related lease, including any renewals that are reasonably assured of occurring. Property and equipment under construction is classified as construction in progress and is depreciated or amortized only after the asset is placed in service. Expenditures for maintenance and repairs are charged to expense whereas the costs of significant improvements which extend the life of the underlying asset are capitalized. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are eliminated and the related gains or losses are reflected in net income. Determining the economic lives of property and equipment requires us to make significant judgments that can materially impact our operating results.

*Amortization of Intangible Assets:* We have acquired intangible assets, which include core technology, developed technology and strategic partner agreement, through the acquisitions of Megan and UPT. These acquired intangible assets are being amortized on a straight-line basis over their estimated lives which range from 5 to 17 years. The determination of the amortization period involves estimates and judgment on management's part. Any significant changes in our estimates or assumptions could impact the carrying value of acquired intangible assets. We evaluate the recoverability of these assets when facts and circumstances suggest the asset could be impaired in accordance with Statement of Financial Accounting Standards No. 144 ("SFAS 144"), "Accounting for the Impairment of Long-Lived Assets".

As a result of the adoption of SFAS No. 142, effective January 1, 2002, we ceased amortization of goodwill and perform an impairment assessment annually or whenever events or changes in circumstances indicate that our goodwill may be impaired. On July 1, 2006, 2005 and 2004, we conducted an annual impairment assessment as required under SFAS No. 142 by comparing our fair value to our net assets, including goodwill, as of July 1, 2006, 2005 and 2004. Because our fair value exceeded the carrying value of our net assets at July 1, 2006, 2005 and 2004, we determined that our goodwill was not impaired.

*Accounting for Patent Costs:* In 2003, we changed our accounting for patent costs and now expense all patent costs as incurred. Certain patent costs are reimbursed by our product development and licensing partners. Any reimbursed patent costs are recorded as product development and licensing agreement revenues and general and administrative expenses in our financial statements.

*Accrued Clinical Research and Contract Manufacturing Costs:* The preparation of financial statements requires management to make estimates and assumptions that affect the reported amount of assets, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the period reported. Specifically, AVANT's management must make estimates of costs incurred to date, but not yet invoiced by external entities such as clinical research organizations ("CROs") and contract manufacturers. For CROs, management analyzes the progress of clinical trials, invoices received, and budgeted costs when evaluating the adequacy of the accrued liability. For contract manufacturers, management analyzes the progress of process development and scale-up efforts and the production of clinical materials, contract amendments signed for specific work, invoices received, and budgeted costs when evaluating the adequacy of the accrued liability. Significant management judgments and estimates must be made and used in connection with the accrued balance in any accounting period. Actual results may differ from the amount and timing of the accrued balance for any period.

*Stock-Based Compensation Expense:* On January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123 (revised 2004), "Share-Based Payment," ("SFAS 123(R)") which

requires the measurement and recognition of compensation expense for all share-based payment awards made to its employees and directors including employee stock options and employee stock purchases related to the 2004 Employee Stock Purchase Plan (“employee stock purchases”) based on estimated fair values. The Company adopted SFAS 123(R) using the modified prospective transition method, which requires the application of the accounting standard as of January 1, 2006, the first day of the Company’s fiscal year 2006. The Company’s Consolidated Financial Statements as of and for the year ended December 31, 2006 reflect the impact of SFAS 123(R). In accordance with the modified prospective transition method, the Company’s Consolidated Financial Statements for prior periods have not been restated to reflect, and do not include, the impact of SFAS 123(R). Stock-based compensation expense recognized under SFAS 123(R) for the year ended December 31, 2006 was \$1,626,756, which consisted of stock-based compensation expense related to employee and non-employee director stock options and restricted stock units of \$401,756 and \$1,225,000, respectively. There was no stock-based compensation expense related to employee and non-employee director stock options and employee stock purchases recognized during the years ended December 31, 2005 and 2004. Stock-based compensation expense of \$538,000 and \$328,000 related to restricted stock unit awards was recognized during the years ended December 31, 2005 and 2004, respectively. See Note 5 to the Consolidated Financial Statements for additional information. No significant stock-based compensation expenses were recorded for employee stock purchases.

The determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by our stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to the expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors. The weighted average estimated fair value of employee stock options granted during the year ended December 31, 2006 was \$1.45 per share using the Black-Scholes option pricing model with the following assumptions:

	<b>Year ended December 31, 2006</b>
Expected stock price volatility (employees)	85 – 76%
Expected stock price volatility (non-employee directors)	80 – 76%
Expected option term (employees)	6.25 Years
Expected option term (non-employee directors)	5.5 Years
Risk-free interest rate	4.3 - 5.2%
Expected dividend yield	None

The Company used its historical stock price volatility as the basis for its expected volatility assumption consistent with SFAS 123(R) and SAB 107 for its employee and non-employee director stock options and employee stock purchases. Prior to fiscal 2006, the Company had also used its historical stock price volatility in accordance with SFAS 123 for purposes of its pro forma information. The Company has assessed that its historical volatility is representative of expected future stock price trends.

The risk-free interest rate assumption is based upon observed interest rates appropriate for the expected term of the Company's employee and non-employee director stock options and employee stock purchases. The dividend yield assumption is based on the Company's history of zero dividend payouts and expectation that no dividends will be paid in the foreseeable future.

The expected term of employee and non-employee director stock options represents the weighted-average period the stock options are expected to remain outstanding. SAB 107 provides for a simplified method for estimating expected term for "plain-vanilla" options. The simplified method is based on the vesting period and the contractual term for each grant or for each vesting tranche for awards with graded vesting. The mid-point between the vesting date and the expiration date is used as the expected term under this method. The Company has elected to follow the guidance of SAB 107 and adopt this simplified method in determining expected term for its stock option awards. There were 70,000 stock option grants to non-employee directors during the year ended December 31, 2006.

Forfeitures were estimated based on historical experience by applying a 9 and zero percent forfeiture rate to employee and non-employee director stock option awards granted during the year ended December 31, 2006, respectively.

If factors change and AVANT employs different assumptions in the application of SFAS 123(R) in future periods, the compensation expense that the Company records under SFAS 123(R) may differ significantly from what AVANT has recorded in the current period.

Inflation and changing prices have not had a significant effect on continuing operations and are not expected to have any in the near future.

## **RESULTS OF OPERATIONS**

### ***Fiscal Year Ended December 31, 2006 compared with Fiscal Year ended December 31, 2005***

AVANT reported a net loss of \$20,373,932, or \$0.27 per share, for the year ended December 31, 2006, an increase of \$2,277,363, or 12.6%, compared to a net loss of \$18,096,569, or \$0.24 per share, for the year ended December 31, 2005. The increase in net loss between periods was due to increased operating expenses, offset partially by increased revenues, investment and other income. The weighted average common shares outstanding used to calculate the net loss per common share was 74,216,450 in 2006 and 74,143,454 in 2005.

#### *Revenue*

Total revenue increased \$1,842,756, or 59.7%, to \$4,931,097 in 2006 from \$3,088,341 in 2005.

Product development and licensing revenue increased \$2,613,174 to \$2,855,266 in 2006 from \$242,092 in 2005. In February 2006, the European Commission granted approval of Rotarix® in the European Union, which triggered a one-time \$4 million milestone payment from Glaxo, 50% of which is creditable against future royalties. Product development and licensing revenue of \$2.6 million was recorded in the first quarter of 2006 and the remaining \$1.4 million was remitted to PRF in accordance with the PRF agreement. In the first quarter of 2006, AVANT recognized \$550,803 in product royalty revenue related to PRF's purchased interests in the net royalties that AVANT receives from Rotarix® worldwide net sales.

AVANT has received a number of subcontracts from its partner, DVC, to develop anthrax and plague vaccines for the U.S. Department of Defense. We will be reimbursed by DVC on a time and materials basis for vaccine development research work performed by us. Under these agreements and several SBIR grants, AVANT recognized \$1,408,434 and \$2,719,651 in government contract and grant revenue during 2006 and 2005, respectively. The decrease in government contract and grant revenue in 2006 compared to 2005 primarily represents a decrease in the level of research work billable to DVC. AVANT expects the amount of research work to be performed for DVC during 2007 to approximate the amount of research work performed during 2006.

In 2002, AVANT transferred the marketing and distribution of the Megan poultry product line to its partner, LAHI. Product royalty payments received by AVANT for Megan®Vac 1 and Megan®Egg product sales in 2006 and 2005 totaled \$116,594 and \$126,598, respectively. We expect royalty payments from LAHI to increase in 2007.

#### *Operating Expense*

Total operating expense increased \$5,344,998, or 24.3%, to \$27,298,356 in 2006 compared to \$21,953,358 in 2005. The increase in total operating expense in 2006 compared to 2005 is primarily due to increased research and development expenses as a result of increased R&D personnel and related expenses, non-personnel operating and facility-related costs associated with a full year of operations of the Fall River facility and increased general and administrative expenses.

Research and development expense increased \$4,003,097, or 28.5%, to \$18,066,392 in 2006 compared to \$14,063,295 in 2005. The increase in 2006 compared to 2005 is primarily due to \$600,000 of license fee expense recorded in the first quarter of 2006 for amounts which will be payable to CCH in connection with Glaxo's 2006 milestone payment. AVANT also experienced increases in research and development personnel and related costs of \$1,883,416, consultant fees of \$130,452, contract research costs of \$354,856, other license fees of \$148,566, contract manufacturing costs of \$697,915 and non-personnel operating and facility-related costs of \$1,143,906 associated with operations of the Fall River facility in 2006 compared to 2005. These increases were offset in part by a decrease in clinical trials costs of \$1,552,123 as a result of the completion of the TP10 Phase 2b female clinical trial in 2005. We expect research and development expense to increase in 2007 as AVANT initiates a Phase 2 study of its Ty800 vaccine candidate and a Phase 1 study of its ETEC vaccine candidate, as payment of royalties are made to CCH on Rotarix® worldwide sales and as the Fall River facility runs at full operational status manufacturing clinical materials for bacterial vaccine clinical studies.

General and administrative expense increased \$1,341,901, or 19.5%, to \$8,236,852 in 2006 compared to \$6,894,951 in 2005. The increase in 2006 is primarily attributed to increases in stock-based compensation expense of \$934,669, professional and consultant fees of \$349,999 primarily associated with audit, tax and Sarbanes-Oxley compliance, and investor relations expenses of \$103,370. These increases are partly offset by a decrease in legal fees of \$102,428. AVANT expects general and administrative expense to continue at this level in 2007.

Amortization expense of acquired intangible assets remained the same at \$995,110 in 2006 and \$995,112 in 2005.

#### *Investment and Other Income, Net*

Net investment and other income increased \$1,344,879 to \$2,113,327 in 2006 compared to \$768,448 in 2005. The increase is primarily due to higher average interest rates and higher average cash balances during 2006 compared to 2005. During 2006 and 2005, the average month-end cash balances were approximately \$45,468,900 and \$25,600,800, respectively. The average effective interest rates during 2006 and 2005 were approximately 4.81% and 3.06%, respectively.

### *Provision for Income Taxes*

The \$40 million milestone payment received from PRF during the first quarter of 2006 will result in taxable income for AVANT. The regular taxable income generated by this transaction has been fully offset with available federal and state net operating loss carryforwards. AVANT recorded a provision of \$120,000 in 2006 for the alternative minimum tax that will result from receipt of this milestone.

### ***Fiscal Year Ended December 31, 2005 compared with Fiscal Year ended December 31, 2004***

AVANT reported a net loss of \$18,096,569, or \$0.24 per share, for the year ended December 31, 2005, an increase of \$4,892,790, or 37.1%, compared to a net loss of \$13,203,779, or \$0.18 per share, for the year ended December 31, 2004. The increase in net loss between periods was due to reduced revenues and increased operating expenses, offset partially by increased investment and other income. The weighted average common shares outstanding used to calculate the net loss per common share was 74,143,454 in 2005 and 72,964,640 in 2004.

### *Revenue*

Total revenue decreased \$3,770,257, or 55%, to \$3,088,341 in 2005 from \$6,858,598 in 2004.

Product development and licensing revenue decreased \$4,323,574 to \$242,092 in 2005 from \$4,565,666 in 2004. The decrease in product development and licensing revenue primarily reflects the recognition in 2004 of a one-time milestone fee of \$2 million from Glaxo for the European filing of an application for market approval of Rotarix®, the recognition of \$1 million in revenue from DVC for rPA clinical materials and an upfront license fee of \$1 million from AdProTech (now Inflazyme). Fifty percent of the \$2 million Glaxo milestone fee in 2004 is creditable against future royalties.

AVANT has received a number of subcontracts from its partner, DVC, to develop anthrax and plague vaccines for the U.S. Department of Defense. We will be reimbursed by DVC on a time and materials basis for vaccine development research work performed by us. Under these agreements and several SBIR grants, AVANT recognized \$2,719,651 and \$2,115,247 in government contract and grant revenue during 2005 and 2004, respectively. The increase in government contract and grant revenue in 2005 compared to 2004 primarily represents an increase in the level of research work billable to DVC.

In 2002, AVANT transferred the marketing and distribution of the Megan poultry product line to its partner, LAHI. Product royalty payments received by AVANT for Megan®Vac 1 and Megan®Egg product sales in 2005 and 2004 totaled \$126,598 and \$177,685, respectively.

### *Operating Expense*

Total operating expense increased \$1,512,388, or 7.4%, to \$21,953,358 in 2005 compared to \$20,440,970 in 2004. The increase in total operating expense in 2005 compared to 2004 is primarily due to increased research and development expenses due to an increase in clinical trial costs associated with AVANT's TP10 Phase 2b study in women undergoing cardiac bypass surgery, increased personnel and facility costs incurred at our new Fall River facility and increased general and administrative expenses.

Research and development expense increased \$189,469 to \$14,063,295 in 2005 compared to \$13,873,826 in 2004. The increase in 2005 compared to 2004 is primarily due to increased personnel, consulting, operating and facility-related costs of \$1,292,913 associated with operations of the Fall River facility, increases in research laboratory supplies of \$297,356 and increases in clinical trial costs of \$236,053 associated with the TP10 program. These increases were offset in part by decreases in contract manufacturing costs of \$975,991, license fees of \$500,000 and insurance costs of \$56,388. In the fourth quarter of 2004, we recorded \$300,000 as an accrual for license fee obligations with respect to the portion of Glaxo's milestone payment that will offset future royalties.

General and administrative expense increased \$1,322,919, or 23.7%, to \$6,894,951 in 2005 compared to \$5,572,032 in 2004. The increase in 2005 is primarily attributed to increased personnel and related expenses of \$551,826, legal fees of \$342,756 primarily associated with the PRF royalty transaction and patent matters, and other professional services and consulting costs of \$121,329 related to project management and Sarbanes-Oxley compliance.

Amortization expense of acquired intangible assets remained the same at \$995,112 in 2005 and 2004.

#### *Investment and Other Income, Net*

Net investment and other income increased \$389,855 to \$768,448 in 2005 compared to \$378,593 in 2004. The increase is primarily due to higher average interest rates, offset in part by lower average cash balances during 2005 compared to 2004. During 2005 and 2004, the average month-end cash balances were approximately \$25,600,800 and \$35,812,400, respectively. The average effective interest rates during 2005 and 2004 were approximately 3.06% and 1.26%, respectively.

#### **LIQUIDITY AND CAPITAL RESOURCES**

At December 31, 2006, AVANT's principal sources of liquidity consisted of cash and cash equivalents of \$40,911,539 compared to cash and cash equivalents at December 31, 2005 of \$23,419,434. AVANT's cash and cash equivalents are highly liquid investments with a maturity of three months or less at the date of purchase and consist of time deposits and investments in money market mutual funds with commercial banks and financial institutions, short-term commercial paper, and U.S. Government and other investment grade debt securities. At December 31, 2006, all investments were in money market mutual funds. Also, AVANT maintains cash balances with financial institutions in excess of insured limits. AVANT does not anticipate any losses with respect to such cash balances.

The use of AVANT's cash flows for operations has primarily consisted of salaries and wages for its employees, facility and facility-related costs for its offices and laboratories, fees paid in connection with preclinical studies, clinical studies, contract manufacturing, laboratory supplies and services, consulting fees, and legal fees. To date, the primary sources of cash flows from operations have been payments received from AVANT's collaborative partners, from government entities and from financial institutions such as Paul Royalty Fund ("PRF"). In general, AVANT's sources of cash flows from operations for the foreseeable future will be upfront license payments, payments for the achievement of milestones, product royalty payments, payments under government contracts and grants, funded research and development under collaboration agreements that AVANT may receive and the monetization of future royalty payments by financial institutions such as PRF. The timing of any new collaboration agreements, government contracts or grants and any payments under these agreements, contracts or grants cannot be easily predicted and may vary significantly from quarter to quarter.

Net cash provided by operating activities increased to \$27,000,319 in 2006 compared to net cash used in operating activities of \$6,016,630 in 2005. The increase is primarily attributed to the net increase in deferred revenue of \$39,449,197 related primarily to the \$40 million PRF milestone payment received in the first quarter of 2006, the increase in accounts payable and accrued expenses of \$1.8 million due to timing of payments and the increase in deferred rent of \$2.8 million primarily related to the Needham renovations project. These amounts were offset partly by the increase in prepaid and other current assets and the increase in net loss incurred in 2006 compared to 2005. AVANT expects that cash used in operations will increase in 2007 as it continues to develop its products in clinical trials, contracts for the manufacture of clinical materials, runs its Fall River facility at full operational status, makes license and royalty payments and advances new products into preclinical development. The expected increase in cash used would be partially offset by receipt of anticipated payments under AVANT's government contracts and grants and anticipated product royalty and milestone payments.

Net cash used in investing activities was \$9,309,790 in 2006 compared to net cash used in investing activities of \$2,173,768 in 2005. The increase is due to increased investment in property and equipment in 2006 primarily towards the renovations of the Needham facility and for the Fall River facility compared to 2005. AVANT expects it will continue to use cash in its investing activities as it expands its infrastructure at the Fall River facility and completes the tenant renovations of its Needham facility, which are projected at a cost of approximately \$5.7 million, net of amounts expected to be paid by the landlord.

Net cash used in financing activities was \$198,424 in 2006 compared to \$131,662 in 2005. The increase in cash used in financing activities between years is due to the increase in payments of long-term liabilities and a decrease in proceeds from the exercise of stock options and warrants.

In August 2002, our Board of Directors approved a share 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 \$227,600 and an average price of \$1.03 per share.

In February 2004, we completed a direct equity placement of 8,965,000 shares of common stock to institutional investors at a price of \$2.75 per share which generated gross proceeds totaling approximately \$24.7 million. Expenses associated with the transaction totaled approximately \$1,602,800.

AVANT believes that cash inflows from existing collaborations, interest income on invested funds and its current cash and cash equivalents will be sufficient to meet estimated working capital requirements and fund operations beyond December 31, 2007. 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. In February 2006, Glaxo, AVANT's partner for the commercialization of the Rotarix® vaccine, received approval from the European Commission to market this product in the European Union ("EU"). This approval triggered a \$4 million milestone payment to AVANT from Glaxo. Further, under AVANT's agreement with PRF, Glaxo's 2006 launch of Rotarix® in the European Union market triggered a \$40 million milestone payment to AVANT from PRF. During 2007 and 2008, AVANT may 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.

## AGGREGATE CONTRACTUAL OBLIGATIONS

The following table summarizes AVANT's contractual obligations at December 31, 2006 and the effect such obligations and commercial commitments are expected to have on its liquidity and cash flow in future years. These obligations, commitments and supporting arrangements represent payments based on current operating forecasts, which are subject to change:

	<u>Total</u>	<u>2007</u>	<u>2008-2010</u>	<u>2011-2012</u>	<u>Thereafter</u>
<b>Contractual obligations:</b>					
Operating lease obligations	\$19,711,800	\$2,197,300	\$5,450,400	\$3,806,400	\$8,257,700
Loan payable*	1,464,300	139,500	391,200	238,000	695,600
Note payable*	756,000	177,200	531,500	47,300	—
Licensing obligations	930,000	85,000	255,000	170,000	420,000
Construction contracts	4,005,700	4,005,700	—	—	—
Total contractual obligations	<u>\$26,867,800</u>	<u>\$6,604,700</u>	<u>\$6,628,100</u>	<u>\$4,261,700</u>	<u>\$9,373,300</u>
<b>Commercial commitments:</b>					
Clinical development	\$ 270,100	\$ 270,100	\$ —	\$ —	\$ —
Manufacturing development	930,900	930,900	—	—	—
Total commercial commitments	<u>\$ 1,201,000</u>	<u>\$1,201,000</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

\* includes interest obligations

## RECENT ACCOUNTING PRONOUNCEMENTS

*SFAS 157:* In September 2006, the FASB issued SFAS No. 157, Fair Value Measurements ("SFAS 157"), which defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles (GAAP), and expands disclosures about fair value measurements. SFAS 157 applies under other accounting pronouncements that require or permit fair value measurements, the Board of Directors having previously concluded in those accounting pronouncements that fair value is the relevant measurement attribute. Accordingly, SFAS 157 does not require any new fair value measurements. However, for some entities, the application of SFAS 157 will change current practice. SFAS 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. We have not yet determined the effect if any that adopting SFAS 157 will have on AVANT's financial statements.

*SAB 108:* In September 2006, the Securities and Exchange Commission ("SEC") released Staff Accounting Bulletin No. 108, Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Financial Statements ("SAB 108"), which establishes an approach that requires quantification of financial statement errors based on the effects of the error on each of AVANT's financial statements and the related disclosures. This model is commonly referred to as the "dual approach" because it essentially requires that errors be quantified under both the "iron-curtain" method and the "roll-over" method. The adoption of SAB 108 had no impact on AVANT's financial position and results of operations.

*FIN 48:* In July 2006, the FASB issued Interpretation No. 48, Accounting for Uncertainty in Income Taxes ("FIN 48"). FIN 48 addresses the recognition and measurement of uncertain income tax positions using a "more-likely-than-not" threshold and introduces a number of new disclosure requirements. The new guidance is effective for fiscal years beginning after December 15, 2006. Because of AVANT's tax loss position, the adoption of FIN 48 will not have a material impact on AVANT's near-term financial position and results of operations.

**OFF-BALANCE SHEET ARRANGEMENTS.**

None.

**Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

We own financial instruments that are sensitive to market risk as part of our investment portfolio. Our investment portfolio is used to preserve our capital until it is used to fund operations, including our research and development activities. None of these market-risk sensitive instruments are held for trading purposes. We invest our cash primarily in money market mutual funds and U.S. Government and other investment grade debt securities. These investments are evaluated quarterly to determine the fair value of the portfolio. We have implemented investment policies regarding the amount and credit ratings of investments. Because of the short-term nature of these investments, we do not believe we have material exposure due to market risk. The impact to our financial position and results of operations from likely changes in interest rates is not material.

We do not utilize derivative financial instruments. See Note 1 to the Consolidated Financials Statements for a description of our use of other financial instruments. The carrying amounts reflected in the consolidated balance sheet of cash and cash equivalents, accounts receivables and accounts payable approximates fair value at December 31, 2006 due to the short-term maturities of these instruments.

**Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

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## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To The Board of Directors and Stockholders of  
AVANT Immunotherapeutics, Inc.:

We have completed integrated audits of AVANT Immunotherapeutics, Inc.'s consolidated financial statements and of its internal control over financial reporting as of December 31, 2006, in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions, based on our audits, are presented below.

### *Consolidated financial statements*

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of AVANT Immunotherapeutics, Inc. and its subsidiary at December 31, 2006 and 2005, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2006 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 5 to the consolidated financial statements, the Company changed the manner in which it accounts for stock-based compensation in 2006.

### *Internal control over financial reporting*

Also, in our opinion, management's assessment, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A, that the Company maintained effective internal control over financial reporting as of December 31, 2006 based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2006, based on criteria established in *Internal Control—Integrated Framework* issued by the COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

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

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

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP  
Boston, Massachusetts  
March 16, 2007

**AVANT IMMUNOTHERAPEUTICS, INC.  
CONSOLIDATED BALANCE SHEETS**

	<u>December 31, 2006</u>	<u>December 31, 2005</u>
<b>ASSETS</b>		
Current Assets:		
Cash and Cash Equivalents	\$ 40,911,539	\$ 23,419,434
Accounts Receivable	320,941	418,380
Prepaid and Other Current Assets	<u>1,171,014</u>	<u>767,082</u>
Total Current Assets	42,403,494	24,604,896
Property and Equipment, Net	13,967,800	5,743,663
Intangible and Other Assets, Net	4,071,963	5,067,073
Goodwill	<u>1,036,285</u>	<u>1,036,285</u>
Total Assets	<u>\$ 61,479,542</u>	<u>\$ 36,451,917</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current Liabilities:		
Accounts Payable	\$ 2,552,089	\$ 1,140,578
Accrued Expenses	2,674,544	2,303,724
Current Portion of Deferred Revenue	4,380,074	—
Current Portion of Long-Term Liabilities	<u>477,606</u>	<u>248,441</u>
Total Current Liabilities	<u>10,084,313</u>	<u>3,692,743</u>
Deferred Revenue	45,069,123	10,000,000
Other Long-Term Liabilities	<u>4,165,126</u>	<u>1,870,051</u>
Commitments and Contingent Liabilities (Notes 2 and 12)		
Stockholders' Equity:		
Convertible Preferred Stock, 4,513,102 Shares Authorized; None Issued and Outstanding at December 31, 2006 and 2005	—	—
Common Stock, \$.001 Par Value 100,000,000 Shares Authorized; 74,402,867 Issued and 74,182,548 Outstanding at December 31, 2006; 74,387,087 Issued and 74,166,768 Outstanding at December 31, 2005	74,403	74,387
Additional Paid-In Capital	258,560,628	258,139,855
Deferred Compensation	—	(1,225,000)
Less: 220,319 Common Treasury Shares at Cost at December 31, 2006 and 2005	(227,646)	(227,646)
Accumulated Deficit	<u>(256,246,405)</u>	<u>(235,872,473)</u>
Total Stockholders' Equity	2,160,980	20,889,123
Total Liabilities and Stockholders' Equity	<u>\$ 61,479,542</u>	<u>\$ 36,451,917</u>

The accompanying notes are an integral part of the consolidated financial statements.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**

	Year Ended December 31, 2006	Year Ended December 31, 2005	Year Ended December 31, 2004
<b>REVENUE:</b>			
Product Development and Licensing Agreements	\$ 2,855,266	\$ 242,092	\$ 4,565,666
Government Contracts and Grants	1,408,434	2,719,651	2,115,247
Product Royalties	667,397	126,598	177,685
Total Revenue	<u>4,931,097</u>	<u>3,088,341</u>	<u>6,858,598</u>
<b>OPERATING EXPENSE:</b>			
Research and Development	18,066,392	14,063,295	13,873,826
General and Administrative	8,236,854	6,894,951	5,572,032
Amortization of Acquired Intangible Assets	995,110	995,112	995,112
Total Operating Expense	<u>27,298,356</u>	<u>21,953,358</u>	<u>20,440,970</u>
Operating Loss	(22,367,259)	(18,865,017)	(13,582,372)
Investment and Other Income, Net	2,113,327	768,448	378,593
Loss Before Provision for Income Taxes	(20,253,932)	(18,096,569)	(13,203,779)
Provision for Income Taxes	120,000	—	—
Net Loss	<u>\$(20,373,932)</u>	<u>\$(18,096,569)</u>	<u>\$(13,203,779)</u>
Basic and Diluted Net Loss Per Common Share	<u>\$ (0.27)</u>	<u>\$ (0.24)</u>	<u>\$ (0.18)</u>
Shares Used in Calculating Basic and Diluted Earnings per Share	<u>74,216,450</u>	<u>74,143,454</u>	<u>72,964,640</u>

The accompanying notes are an integral part of the consolidated financial statements.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
**FOR THE YEARS ENDED DECEMBER 31, 2006, 2005 AND 2004**

	Shares	Common Stock Par Value	Additional Paid-In Capital	Deferred Compensation	Treasury Stock Cost	Accumulated Deficit	Total Stockholders' Equity
<b>Balance at December 31, 2003</b>	<b>64,928,388</b>	<b>64,928</b>	<b>233,643,574</b>	<b>(989,000)</b>	<b>(227,646)</b>	<b>(204,572,125)</b>	<b>27,919,731</b>
Shares Issued upon Exercise of Stock Options	391,904	392	294,361	□	□	□	294,753
Shares Issued upon Cashless Exercise of Warrants	57,912	58	(58)	□	□	□	□
Employee Stock Purchase Plan Issuances	8,367	8	17,936	□	□	□	17,944
Net Proceeds from Stock Issuance	8,965,000	8,965	23,042,012	□	□	□	23,050,977
Issuance of Restricted Stock Units	□	□	832,000	(832,000)	□	□	□
Amortization of Deferred Compensation	□	□	□	328,000	□	□	328,000
Net Loss	□	□	□	□	□	(13,203,779)	(13,203,779)
<b>Balance at December 31, 2004</b>	<b>74,351,571</b>	<b>\$74,351</b>	<b>\$257,829,825</b>	<b>\$(1,493,000)</b>	<b>\$(227,646)</b>	<b>\$(217,775,904)</b>	<b>\$38,407,626</b>
Shares Issued upon Exercise of Stock Options	30,375	30	34,597	□	□	□	34,627
Shares Issued upon Cashless Exercise of Warrants	536	1	(1)	□	□	□	□
Employee Stock Purchase Plan Issuances	4,605	5	5,434	□	□	□	5,439
Issuance of Restricted Stock Units	□	□	270,000	(270,000)	□	□	□
Amortization of Deferred Compensation	□	□	□	538,000	□	□	538,000
Net Loss	□	□	□	□	□	(18,096,569)	(18,096,569)
<b>Balance at December 31, 2005</b>	<b>74,387,087</b>	<b>\$74,387</b>	<b>\$258,139,855</b>	<b>\$(1,225,000)</b>	<b>\$(227,646)</b>	<b>\$(235,872,473)</b>	<b>\$20,889,123</b>
Shares Issued upon Exercise of Stock Options	4,188	4	5,130	□	□	□	5,134
Employee Stock Purchase Plan Issuances	11,592	12	13,887	□	□	□	13,899
Share-Based Compensation	□	□	1,626,756	□	□	□	1,626,756
Reclassification of Deferred Compensation upon Adoption of FAS 123R	□	□	(1,225,000)	1,225,000	□	□	□
Net Loss	□	□	□	□	□	(20,373,932)	(20,373,932)
<b>Balance at December 31, 2006</b>	<b>74,402,867</b>	<b>\$74,403</b>	<b>\$258,560,628</b>	<b>\$</b>	<b>\$(227,646)</b>	<b>\$(256,246,405)</b>	<b>\$ 2,160,980</b>

The accompanying notes are an integral part of the consolidated financial statements.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

	Year Ended December 31, 2006	Year Ended December 31, 2005	Year Ended December 31, 2004
<b>Cash Flows From Operating Activities:</b>			
Net Loss	\$(20,373,932)	\$(18,096,569)	\$(13,203,779)
Adjustments to Reconcile Net Loss to Cash			
Provided by (Used in) Operating Activities:			
Depreciation and Amortization	2,095,617	1,591,659	1,388,172
(Gain) Loss on Disposal of Assets	(14,854)	(1,150)	797
Stock-Based Compensation	1,626,756	538,000	328,000
Changes in Assets and Liabilities			
Accounts Receivable	97,439	1,811,970	(757,540)
Prepaid and Other Current Assets	(403,932)	(199,166)	17,294
Accounts Payable and Accrued Expenses	1,751,347	(1,618,686)	3,349,083
Deferred Revenue	39,449,197	9,988,296	(1,444,493)
Other Long-Term Liabilities	2,772,681	(30,984)	(25,492)
Net Cash Provided by (Used in) Operating Activities	<u>27,000,319</u>	<u>(6,016,630)</u>	<u>(10,347,958)</u>
<b>Cash Flows From Investing Activities:</b>			
Other Non Current Assets	—	1,000	(11,231)
Acquisition of Property and Equipment	(9,324,644)	(2,175,918)	(3,651,488)
Proceeds from Disposal of Assets	14,854	1,150	6,000
Proceeds from the Maturity of Marketable Securities	—	—	4,000,000
Purchases of Marketable Securities	—	—	(2,000,000)
Net Cash Used in Investing Activities	<u>(9,309,790)</u>	<u>(2,173,768)</u>	<u>(1,656,719)</u>
<b>Cash Flows From Financing Activities:</b>			
Net Proceeds from Stock Issuance	—	—	23,050,977
Proceeds from Exercise of Stock Options and Warrants	19,033	40,066	312,697
Proceeds from (Payment of) Long-Term Liabilities	(217,457)	(171,728)	2,131,457
Net Cash Provided by (Used in) Financing Activities	<u>(198,424)</u>	<u>(131,662)</u>	<u>25,495,131</u>
Increase (Decrease) in Cash and Cash Equivalents	17,492,105	(8,322,060)	13,490,454
Cash and Cash Equivalents at Beginning of Period	23,419,434	31,741,494	18,251,040
Cash and Cash Equivalents at End of Period	<u>\$ 40,911,539</u>	<u>\$ 23,419,434</u>	<u>\$ 31,741,494</u>
<i>Supplemental Disclosure of Cash Flow Information</i>			
Cash paid for interest	\$ 103,750	\$ 108,408	—
Income Taxes Paid	400,000	—	—

The accompanying notes are an integral part of the consolidated financial statements.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

*(A) Nature of Business and Overview*

AVANT Immunotherapeutics, Inc. (“AVANT” or “the Company”) is a biopharmaceutical company engaged in the discovery, development and commercialization of products that harness the human immune response to prevent and treat disease. AVANT has actively developed and acquired innovative technologies—especially novel approaches to vaccine creation—that harness the human immune system. The Company develops and commercializes products on a proprietary basis and in collaboration with established pharmaceutical partners and other collaborators, including GlaxoSmithKline plc, Pfizer Inc, DVC LLC and Lohmann Animal Health International.

In February 2004, AVANT completed a direct equity placement of 8,965,000 shares of common stock to institutional investors at a price of \$2.75 per share which generated net proceeds totaling \$23,050,977. In July 2003, the Company closed a private placement of approximately 4.4 million shares of common stock at \$2.25 per share and warrants to purchase 444,444 shares of common stock at \$3.00 per share to an institutional investor which generated net proceeds totaling \$9,207,779.

AVANT’s cash and cash equivalents at December 31, 2006 were \$40,911,539. AVANT’s working capital at December 31, 2006 was \$32,319,181. The Company incurred a loss of \$20,373,932 for the year ended December 31, 2006. AVANT believes that cash inflows from existing grants and 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 December 31, 2007. The working capital requirements of AVANT are dependent on several factors including, but not limited to, the costs associated with research and development programs, pre-clinical and clinical studies, manufacture of clinical materials and the scope of collaborative arrangements. In February 2006, GlaxoSmithKline (“Glaxo”), AVANT’s partner for the commercialization of the Rotarix® vaccine, received approval from the European Commission to market this product in the European Union (“EU”). This approval triggered a \$4 million milestone payment to AVANT from Glaxo. Further, under AVANT’s agreement with an affiliate of Paul Royalty Fund II, L.P. (“PRF”), the market launch of Rotarix® by Glaxo in the European Union market during 2006 led to a \$40 million milestone payment to AVANT from PRF.

*(B) Basis of Presentation*

The consolidated financial statements include the accounts of AVANT Immunotherapeutics, Inc. and its wholly-owned subsidiary, Megan Health, Inc. (“Megan”). All intercompany transactions have been eliminated.

*(C) Cash and Cash Equivalents*

Cash and cash equivalents consist of cash and short-term investments with original maturities of three months or less. Cash and cash equivalents are stated at cost, which approximates fair value. At December 31, 2006, all investments were in money market mutual funds.

Investments in marketable securities are accounted for in accordance with SFAS 115, “Accounting for Certain Investments in Debt and Equity Securities”. At December 31, 2006 and 2005, there were no outstanding investments in marketable securities.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

AVANT generally invests its non-operating cash in debt instruments of financial institutions, government entities and corporations, and mutual funds. The Company has established guidelines relative to credit ratings, diversification and maturities to mitigate risk and maintain liquidity.

*(D) Fair Value of Financial Instruments*

AVANT enters into various types of financial instruments in the normal course of business. Fair values for cash, cash equivalents, accounts receivable, accounts payable and accrued expenses approximate carrying value at December 31, 2006 and 2005, due to the nature and the relatively short maturity of these instruments, other than long-term liabilities discussed in Note 11.

*(E) Revenue Recognition*

AVANT has entered into various license and development agreements with pharmaceutical and biotechnology companies. The terms of the agreements can include non-refundable license fees, funding of research and development, payments based upon achievement of certain milestones and royalties on net product sales. Non-refundable license fees are recognized as product development and licensing revenue when AVANT has a contractual right to receive such payments, provided a contractual arrangement exists, the contract price is fixed or determinable, the collection of the resulting receivable is reasonably assured and AVANT has no further performance obligations under the license agreement. When AVANT has performance obligations under the terms of a contract, non-refundable fees are recognized as revenue as AVANT completes its obligations. Where AVANT's level of effort is relatively constant over the performance period, the revenue is recognized on a straight-line basis. Revenue is limited to the lesser of the cumulative amount of payments received or the cumulative amount of revenue earned as of the period ending date. The determination of the performance period involves judgment on management's part. Funding of research and development is recognized over the term of the applicable contract as costs are incurred related to that contract.

Revenues from milestone payments related to arrangements under which we have no continuing performance obligations are recognized upon achievement of the related milestone. Revenues from milestone payments related to arrangements under which we have continuing performance obligations are recognized as revenue upon achievement of the milestone only if all of the following conditions are met: the milestone payments are non-refundable; achievement of the milestone was not reasonably assured at the inception of the arrangement; substantive effort is involved in achieving the milestone; and, the amount of the milestone is reasonable in relation to the effort expended or the risk associated with achievement of the milestone. If any of these conditions are not met, the milestone payments are deferred and recognized as revenue over the term of the arrangement as AVANT completes its performance obligations.

Revenues from government contracts are recorded as effort is expended on the contracted work and billed to the government. Royalty revenue consists of payments received from licensees for a portion of sales proceeds from products that utilize AVANT's licensed technologies and are recognized when the amount of and basis for such royalty payments are reported to us in accurate and appropriate form and in accordance with the related license agreement. Payments received in advance of activities being performed are recorded as deferred revenue.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

Product royalties related to the sale of a royalty interest on the worldwide sales of Rotarix® to PRF is recognized as revenue in accordance with the guidance in EITF 88-18 "Sale of Future Revenues". Upfront unconditional payments have been recorded by AVANT as deferred revenue. Revenues will be recognized and calculated based on the ratio of total royalties received from Glaxo and remitted to PRF over expected total amounts to be received by PRF and then applying this percentage to the total cumulative consideration received from PRF to date. The expected total of payments to be paid to PRF is an estimate which AVANT will update from time to time to determine that the estimate continues to be reasonable in the light of then current events and circumstances. Any significant changes in our estimates or assumptions could impact our revenue recognition.

Effective July 1, 2003, we adopted EITF 00-21, *Accounting For Revenue Arrangements with Multiple Deliverables*, which establishes criteria for whether revenue on a deliverable can be recognized separately from other deliverables in a multiple deliverable arrangement. The criteria considers whether the delivered item has stand-alone value to the customer, whether the fair value of the delivered item can be reliably determined and the customer's right of return for the delivered item.

*(F) Research and Development Costs*

Research and development costs, including internal and contract research costs, are expensed as incurred.

*(G) Trade and Other Accounts Receivable*

Trade accounts receivable are recorded at the invoiced amount and do not bear interest. AVANT has not historically experienced credit losses from our trade accounts receivable and therefore has not established an allowance for doubtful accounts. The Company does not have any off-balance-sheet credit exposure related to its customers.

Accounts receivable consists of the following:

	<u>December 31, 2006</u>	<u>December 31, 2005</u>
Trade Receivables	\$183,830	\$383,416
Other Receivables	137,111	34,964
	<u>\$320,941</u>	<u>\$418,380</u>

Other receivables at December 31, 2006 and 2005 represent interest receivable from a bank.

*(H) Long-Lived Assets:*

In the ordinary course of our business, we incur substantial costs to construct property and equipment. The treatment of costs to construct these assets depends on the nature of the costs and the stage of construction. Costs incurred in the project planning and design phase, and in the construction and installation phase, are capitalized as part of the cost of the asset. We stop capitalizing costs when the asset is substantially complete and ready for its intended use.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

For manufacturing property and equipment, we also capitalize the cost of validating these assets for the underlying manufacturing process. We complete the capitalization of validation costs when the asset is substantially complete and ready for its intended use. Costs capitalized include incremental labor and fringe benefits, and direct consultancy services.

Property and equipment is stated at cost and depreciated over the estimated useful lives of the related assets using the straight-line method. Laboratory equipment and office furniture and equipment are depreciated over a five year period and computer equipment is depreciated over a three year period. Manufacturing equipment is amortized over a seven to ten year period. Leasehold improvements are amortized over the shorter of the estimated useful life or the noncancelable term of the related lease, including any renewals that are reasonably assured of occurring. Property and equipment under construction is classified as construction in progress and is depreciated or amortized only after the asset is placed in service. Expenditures for maintenance and repairs are charged to expense whereas the costs of significant improvements which extend the life of the underlying asset are capitalized. Upon retirement or sale, the cost of assets disposed of and the related accumulated depreciation are eliminated and the related gains or losses are reflected in net income.

*(I) Accounting for Patent Costs:*

Patent costs are expensed as incurred. Certain patent costs are reimbursed by our product development and licensing partners. Any reimbursed patent costs are recorded as product development and licensing agreement revenues and general and administrative expenses in our financial statements.

*(J) Interest Capitalization*

AVANT capitalizes interest cost as part of the historical cost of acquiring certain assets during the period of time required to get the asset ready for its intended use. The amount of capitalized interest is limited to the amount of interest incurred by AVANT. In 2006 and 2005, AVANT capitalized interest costs of \$92,240 and \$115,796, respectively, incurred in financing leasehold improvements and laboratory and manufacturing equipment at its Needham and Fall River facilities. The total amount of interest costs incurred by AVANT in 2006 and 2005 were \$102,720 and \$115,796, respectively.

*(K) Operating Leases*

The Company has three facilities which are located at Needham and Fall River, Massachusetts and Overland, Missouri under non-cancellable operating lease agreements for office, laboratory and manufacturing space. The rent payments for the three locations escalate over the lease term. The Company expenses its obligations under these lease agreements on a straight-line basis over the term of each lease, including any renewals that are reasonably assured of occurring.

*(L) Intangible Assets*

AVANT has acquired intangible assets, which include core technology, developed technology and a strategic partner agreement, through the acquisitions of Megan and Universal Preservation Technologies, Inc. ("UPT"). These acquired intangible assets are being amortized on a straight-line basis over their estimated lives which range from 5 to 17 years. The determination of the amortization period involves

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

estimates and judgments on management's part. Any significant changes in our estimates or assumptions could impact the carrying value of acquired intangible assets. The Company evaluates the recoverability of these assets when facts and circumstances suggest the asset could be impaired in accordance with Statement of Accounting Standards No. 144 ("SFAS 144"), "Accounting for the Impairment of Long-Lived Assets".

*(M) Loss Per Share*

AVANT computes and reports earnings per share in accordance with the provisions of SFAS No. 128, "Earnings Per Share". The computations of basic and diluted loss per common share are based upon the weighted average number of common shares outstanding and potentially dilutive securities. Potentially dilutive securities include stock options, restricted stock units and warrants. Options and warrants to purchase 3,725,598, 3,419,394 and 3,470,131 shares of common stock and Restricted Stock Units totaling 0, 1,000,000, and 800,000 shares were not included in the 2006, 2005 and 2004 computation of diluted net loss per share, respectively, because inclusion of such shares would have an anti-dilutive effect on net loss per share. In 2006, restricted stock units totaling 1,000,000 shares were included in the computation of basic and diluted net loss per share as all necessary conditions for their issuance had been satisfied and an insignificant amount of cash consideration will be received upon issuance.

*(N) Comprehensive Income*

Comprehensive income is comprised of two components, net income and other comprehensive income. For the years ended December 31, 2006, 2005 and 2004, AVANT had no other comprehensive income.

*(O) Foreign Currency Transactions*

Expenses incurred in foreign currencies are translated at exchange rates in effect during each period. Gains and losses from foreign currency translations are included in investment and other income, net in the statements of operations. In 2006, 2005 and 2004, AVANT recorded foreign currency transaction losses of \$49,956, \$2,223 and \$61,728, respectively.

*(P) Stock-Based Compensation Expense*

On January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123 (revised 2004), "Share-Based Payment," ("SFAS 123(R)") which requires the measurement and recognition of compensation expense for all share-based payment awards made to its employees and directors including employee stock options and employee stock purchases related to the 2004 Employee Stock Purchase Plan ("employee stock purchases") based on estimated fair values. The Company adopted SFAS 123(R) using the modified prospective transition method, which requires the application of the accounting standard as of January 1, 2006, the first day of the Company's fiscal year 2006. The Company's Consolidated Financial Statements as of and for the year ended December 31, 2006 reflect the impact of SFAS 123(R). In accordance with the modified prospective transition method, the Company's Consolidated Financial Statements for prior periods have not been restated to reflect, and do not include,

AVANT IMMUNOTHERAPEUTICS, INC.  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)  
YEARS ENDED DECEMBER 31, 2006, 2005 and 2004

**1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)**

the impact of SFAS 123(R). See Note 5 to the Consolidated Financial Statements for additional information.

*(Q) Use of Estimates*

The preparation of the financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect reported amounts and disclosures. Actual results could differ from those estimates.

*(R) Segments*

Management uses consolidated financial information in determining how to allocate resources and assess performance. For this reason, AVANT has determined that it is engaged in one industry segment. Substantially all of AVANT's revenue since inception has been generated in the United States and all of our assets are in the United States.

*(S) Recent Pronouncements*

*SFAS 157:* In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* ("SFAS 157"), which defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles (GAAP), and expands disclosures about fair value measurements. SFAS 157 applies under other accounting pronouncements that require or permit fair value measurements, the Board having previously concluded in those accounting pronouncements that fair value is the relevant measurement attribute. Accordingly, SFAS 157 does not require any new fair value measurements. However, for some entities, the application of SFAS 157 will change current practice. SFAS 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. We have not yet determined the effect if any that adopting SFAS 157 will have on the Company's financial statements.

*SAB 108:* In September 2006, the Securities and Exchange Commission ("SEC") released Staff Accounting Bulletin No. 108, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Financial Statements* ("SAB 108"), which establishes an approach that requires quantification of financial statement errors based on the effects of the error on each of the company's financial statements and the related disclosures. This model is commonly referred to as the "dual approach" because it essentially requires that errors be quantified under both the "iron-curtain" method and the "roll-over" method. The adoption of SAB 108 had no impact on AVANT's financial position and results of operations.

*FIN 48:* In July 2006, the FASB issued Interpretation No. 48, *Accounting for Uncertainty in Income Taxes* ("FIN 48"). FIN 48 addresses the recognition and measurement of uncertain income tax positions using a "more-likely-than-not" threshold and introduces a number of new disclosure requirements. The new guidance is effective for fiscal years beginning after December 15, 2006. Because of the Company's tax loss position, the adoption of FIN 48 will not have a material impact on AVANT's near-term financial position and results of operations.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**2. PROPERTY, EQUIPMENT AND LEASES**

Property and equipment includes the following:

	<u>December 31,</u> <u>2006</u>	<u>December 31,</u> <u>2005</u>
Laboratory Equipment	\$ 3,631,247	\$ 2,966,354
Manufacturing Equipment	1,842,017	1,054,512
Office Furniture and Equipment	992,076	1,893,623
Leasehold Improvements	5,202,366	4,510,075
Construction in Progress	7,668,904	960,624
Total Property and Equipment	19,336,610	11,385,188
Less Accumulated Depreciation	<u>(5,368,810)</u>	<u>(5,641,525)</u>
	<u>\$13,967,800</u>	<u>\$ 5,743,663</u>

During 2006 and 2005, AVANT wrote off approximately \$1,373,222 and \$24,759, respectively, of fully depreciated equipment no longer used in its operations. AVANT recorded a gain on disposal of other fixed assets of \$14,854 in 2006 and \$1,150 in 2005. Depreciation expense related to equipment and leasehold improvements was approximately \$1,100,507, \$596,547 and \$393,087 for the years ended December 31, 2006, 2005 and 2004, respectively.

AVANT currently lease approximately 54,300 square feet of laboratory and office space in Needham, Massachusetts at a current annual base rent of \$1,561,600 through April 30, 2007. In November 2005, we entered into a lease amendment which extended the lease through April, 2017. The lease amendment calls for the complete renovation of the Needham facility by the landlord and AVANT and reduces AVANT's leased space to approximately 35,200 square feet of laboratory and office space. The current projected costs for the tenant improvements portion of the renovations project are approximately \$9.3 million. As an incentive for AVANT to enter into the lease amendment, the landlord has agreed to contribute up to \$3.6 million towards tenant improvement costs (refer to Note 12(A) to the Consolidated Financial Statements). As of December 31, 2006, AVANT had made payments and accrued costs totaling approximately \$3,237,392 towards the tenant improvements portion of the renovations project. Under this lease amendment, we are obligated to pay an escalating base annual rent ranging from \$879,700 to \$1,161,200 during the extension term. Aggregate rental payments including common area maintenance costs for the years ended December 31, 2006 and 2005 for this facility were \$2,274,738 and \$2,069,170, respectively.

AVANT leases approximately 12,400 square feet of laboratory and office space in Overland, Missouri near St. Louis. In February 2004, AVANT extended its lease through September 30, 2007. Under the extended lease agreement, we are obligated to pay an escalating base annual rent ranging from \$158,400 to \$161,500 during the extension term plus common area maintenance costs. Aggregate rental payments including common area maintenance costs for the years ended December 31, 2006 and 2005 for this facility were \$161,460 and \$163,852, respectively.

In 2003, the Company reached agreement with MassDevelopment, an economic development entity for the Commonwealth of Massachusetts, for AVANT to occupy and build-out an 11,800 square foot manufacturing facility in Fall River, Massachusetts. The lease has an initial seven-year term which expires in December 2010 and two renewal options of five years each. Management has determined that it is

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**2. PROPERTY, EQUIPMENT AND LEASES (Continued)**

reasonably assured that AVANT will exercise one five-year renewal option. Therefore, AVANT is amortizing leasehold improvements made to the Fall River facility over the original lease term plus one five-year renewal term. In November 2005, AVANT amended the MassDevelopment lease to increase the rentable space to approximately 14,300 square feet at the Fall River facility. The landlord is providing a tenant incentive allowance of \$49,740 against the cost of alterations and improvements required by AVANT to be made to the expanded space. In December 2006, AVANT further amended the MassDevelopment lease to increase the rentable space to approximately 16,200 square feet at the Fall River facility. Aggregate rental payments including common area maintenance costs for the year ended December 31, 2006 and 2005 for this facility were \$293,670 and \$230,776, respectively.

In 2006 and 2005, AVANT has capitalized interest costs of \$92,240 and \$115,796, respectively, incurred in financing leasehold improvements and laboratory and manufacturing equipment at its Fall River facility. The total amount of interest costs incurred by AVANT in 2006 and 2005 were \$102,720 and \$115,796, respectively.

Obligations for base rent under these and other noncancelable operating leases as of December 31, 2006 are approximately as follows:

Year ending December 31, 2007	\$ 2,197,346
2008	1,771,293
2009	1,821,778
2010	1,857,298
2011	1,890,250
2012 and thereafter	<u>10,173,798</u>
Total minimum lease payments	<u>\$19,711,763</u>

Our total rent for all operating leases was approximately \$2,781,551, \$2,491,274, and \$2,332,192 for the years ended December 31, 2006, 2005 and 2004, respectively.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**3. GOODWILL, INTANGIBLE AND OTHER ASSETS**

*Goodwill:* AVANT adopted SFAS 142 in January 2002. AVANT has concluded that it currently has one reporting unit and has assigned the entire balance of goodwill to this reporting unit for purposes of performing its annual impairment test. The fair value of the reporting unit was determined using AVANT's market capitalization as of July 1, 2006 and 2005, adjusted for a control premium. The fair value on July 1, 2006 and 2005 exceeded the net assets of the reporting unit, including goodwill. Accordingly, AVANT concluded that no impairment existed as of these dates.

*Intangible and Other Assets:* Intangible and other assets include the following:

	December 31, 2006				December 31, 2005			
	Estimated Lives	Gross Intangible Assets	Accumulated Amortization	Net Intangible Assets	Gross Intangible Assets	Accumulated Amortization	Net Intangible Assets	
<i>Intangible Assets:</i>								
Collaborative Relationships	5 years	1,090,000	(1,090,000)	□	1,090,000	(1,090,000)	□	
Core Technology	10 years	3,786,900	(1,887,046)	1,899,854	3,786,900	(1,508,352)	2,278,548	
Developed Technology	7 years	3,263,100	(2,832,400)	430,700	3,263,100	(2,366,800)	896,300	
Strategic Partner Agreement	17 years	2,563,900	(917,472)	1,646,428	2,563,900	(766,656)	1,797,244	
Total Intangible Assets		10,703,900	(6,726,918)	3,976,982	10,703,900	(5,731,808)	4,972,092	
Other Non Current Assets		94,981	□	94,981	94,981	□	94,981	
		<u>\$10,798,881</u>	<u>\$(6,726,918)</u>	<u>\$ 4,071,963</u>	<u>\$10,798,881</u>	<u>\$(5,731,808)</u>	<u>\$5,067,073</u>	

In January 2003, AVANT completed the acquisition of certain technology and intellectual property of UPT and the licensure of certain patent rights from Elan Drug Delivery Limited (EDD). Through this transaction, AVANT gained exclusive rights to UPT's VitriLife® process for use in AVANT's oral vaccines and certain other non-injectable applications. The Company has 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, Core Technology, and is amortizing these assets over their estimated lives of ten years.

All of AVANT's intangible assets are amortized over their useful lives. Total amortization expense for intangible assets for the years ended December 31, 2006 was \$995,110 and \$995,112 for the years ended December 31, 2005 and 2004.

The estimated future amortization expense of intangible assets as of December 31, 2006 and for the five succeeding years is as follows:

<u>Year ending December 31,</u>	<u>Estimated Amortization Expense</u>
2007	\$ 960,212
2008	529,512
2009	529,512
2010	514,622
2011	350,822

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**4. ACCRUED EXPENSES**

Accrued expenses are comprised of amounts owed to employees, vendors, and suppliers for work performed on behalf of the Company. At each period end the Company evaluates the accrued expense balance related to these activities based upon information received from the supplier and estimated progress toward completion of objectives to ensure that the balance is appropriately stated. Such estimates are subject to changes as additional information becomes available. Accrued expenses include the following:

	<b>December 31, 2006</b>	<b>December 31, 2005</b>
Accrued License Fees	\$ 416,122	\$ 253,566
Accrued Payroll and Employee Benefits	678,459	621,611
Accrued Clinical Trials	263,220	825,084
Accrued Manufacturing Expenses	281,035	215,644
Accrued Professional Fees	131,413	181,833
Accrued Facility Renovation Expenses	667,124	□
Other Accrued Expenses	237,171	205,986
	<u>\$2,674,544</u>	<u>\$2,303,724</u>

**5. STOCK-BASED COMPENSATION**

On January 1, 2006, the Company adopted Statement of Financial Accounting Standards No. 123 (revised 2004), "Share-Based Payment," ("SFAS 123(R)") which requires the measurement and recognition of compensation expense for all share-based payment awards made to employees and directors including employee stock options and employee stock purchases related to the Employee Stock Purchase Plan ("employee stock purchases") based on estimated fair values. In March 2005, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 107 ("SAB 107") relating to SFAS 123(R). The Company has also applied the provisions of SAB 107 in its adoption of SFAS 123(R).

The Company adopted SFAS 123(R) using the modified prospective transition method, which requires the application of the accounting standard as of January 1, 2006, the first day of the Company's fiscal year 2006. The Company's Consolidated Financial Statements as of and for the year ended December 31, 2006 reflect the impact of SFAS 123(R). In accordance with the modified prospective transition method, the Company's Consolidated Financial Statements for prior periods have not been restated to reflect, and do not include, the impact of SFAS 123(R). Stock-based compensation expense recognized under SFAS 123(R) for the year ended December 31, 2006 was \$1,626,756, which consisted of stock-based compensation expense related to employee and non-employee director stock options and restricted stock units of \$401,756 and \$1,225,000, respectively. There was no stock-based compensation expense related to employee and non-employee director stock options and employee stock purchases recognized during the years ended December 31, 2005 and 2004. Stock-based compensation expense of \$538,000 and \$328,000 related to restricted stock unit awards was recognized during the year ended December 31, 2005 and 2004, respectively. No significant stock-based compensation expenses were recorded for employee stock purchases.

SFAS 123(R) requires companies to estimate the fair value of share-based payment awards on the date of grant using an option-pricing model. The value of the portion of the award that is ultimately expected to vest is recognized as expense over the requisite service periods in the Company's Consolidated

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**5. STOCK-BASED COMPENSATION (Continued)**

Statement of Operations. Prior to the adoption of SFAS 123(R), the Company accounted for stock-based awards to employees and directors using the intrinsic value method in accordance with APB 25 as allowed under Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation" ("SFAS 123"). Under the intrinsic value method, no stock-based compensation expense had been recognized in the Company's Consolidated Statement of Operations related to stock options because the exercise price of the Company's stock options granted to employees and directors equaled the fair market value of the underlying stock at the date of grant.

Stock-based compensation expense recognized in the Company's Consolidated Statement of Operations for the year ended December 31, 2006 included compensation expense for share-based payment awards granted prior to, but not yet vested as of January 1, 2006 based on the grant date fair value estimated in accordance with the provisions of SFAS 123 and compensation expense for the share-based payment awards granted subsequent to January 1, 2006 based on the grant date fair value estimated in accordance with the provisions of SFAS 123(R). In conjunction with the adoption of SFAS 123(R), compensation expense for all share-based payment awards granted prior to January 1, 2006 will continue to be recognized using the straight-line method and compensation expense for all share-based payment awards granted subsequent to January 1, 2006 will also be recognized using the straight-line method. As stock-based compensation expense recognized in the Consolidated Statement of Operations for fiscal 2006 is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. SFAS 123(R) requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. In the Company's pro forma information required under SFAS 123 for the periods prior to fiscal 2006, the Company accounted for forfeitures as they occurred.

Upon adoption of SFAS 123(R), the Company retained its method of valuation for share-based awards granted beginning in fiscal 2006 using the Black-Scholes option-pricing model ("Black-Scholes model") which was previously used for the Company's pro forma information required under SFAS 123. The Company's determination of fair value of share-based payment awards on the date of grant using an option-pricing model is affected by the Company's stock price as well as assumptions regarding a number of highly complex and subjective variables. These variables include, but are not limited to, the Company's expected stock price volatility over the term of the awards, and actual and projected employee stock option exercise behaviors.

The Company has not recognized any tax benefits or deductions related to the tax effects of employee stock-based compensation as the Company carries a full deferred tax asset valuation allowance and has significant net operating loss carryforwards available.

**Employee Stock Benefit Plans**

***Restricted Stock Unit Awards***

On September 21, 2005, AVANT awarded Dr. Una Ryan, its President and CEO, 200,000 Restricted Stock Units. The Restricted Stock Units vest over four years but will vest in their entirety upon the earlier of the sale of the Company or Dr. Ryan's retirement at or after age 65. The Company determined the value of the Restricted Stock Units to be \$270,000, based on a valuation of \$1.35 per share, the closing

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**5. STOCK-BASED COMPENSATION (Continued)**

price of AVANT's common stock on the award date. The value of the Restricted Stock Units was amortized over the remaining months until Dr. Ryan attained age 65 in December 2006, and was recorded as compensation expense. In connection with the award, the Company has recognized \$216,000 and \$54,000 as stock-based compensation expense in the Consolidated Statements of Operations for the year ended December 31, 2006 and 2005, respectively.

In November 2004 and September 2003, the Company also awarded Restricted Stock Units to Dr. Ryan and recorded non-cash deferred compensation amounting to \$832,000 and \$1,104,000, respectively. On September 21, 2006, the Company's Board of Directors modified these Restricted Stock Units to provide that they vest in their entirety upon the earlier of the sale of the Company or Dr. Ryan's retirement at or after age 65. The value of the Restricted Stock Units was amortized over the remaining months until Dr. Ryan attained age 65 in December 2006 and was recorded as compensation expense. In connection with the awards, the Company has recognized \$1,009,000, \$484,000 and \$328,000 as stock-based compensation expense in the Consolidated Statements of Operations during the years ended December 31, 2006, 2005 and 2004, respectively.

AVANT has applied an estimated forfeiture rate of zero to the restricted stock unit awards.

***Employee Stock Purchase Plan***

The 2004 Employee Stock Purchase Plan (the "2004 Plan") was adopted on May 13, 2004. All full time employees of AVANT are eligible to participate in the 2004 Plan. A total of 150,000 shares of common stock are reserved for issuance under the 2004 Plan. Under the 2004 Plan, each participating employee may contribute up to 15% of his or her compensation to purchase up to 500 shares of common stock per year in any six-month offering period and may withdraw from the offering at any time before stock is purchased. Participation terminates automatically upon termination of employment. The purchase price per share of common stock in an offering is 85% of the lower of its fair market value at either the beginning of the offering period or the applicable exercise date. During the years ended December 31, 2006 and 2005, the Company issued 11,592 and 4,605 shares, respectively, under the 2004 Plan. Shares purchased under the plan are issued in the month following the end of each offering period. At December 31, 2006, 125,257 shares were available for issuance under the 2004 Plan.

The 2004 Plan is a compensatory plan under SFAS 123R. The requisite service period for compensation cost resulting from the 2004 Plan is the period over which the employee participates in the plan and pays for the shares. AVANT has historically established two purchase periods during each year—January 1 to June 30 and July 1 to December 31. The requisite service period begins on the enrollment date (the start of the offering period) and ends on the purchase date and is determined to be six months.

The current purchase period began on July 1, 2006. The Company has established the risk-free interest rate assumption to be 5.09% using the 6-month rate on a traded zero-coupon U.S. Treasury bond. The Company used its historical volatility rate of 39% for the 6-month period preceding the grant date for the current stock purchase period. The Company has concluded that volatility during the current purchase period is expected to be consistent with the calculated historical volatility rate. Finally, the Company established the expected term for the current stock purchase period as six months. Based on these

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**5. STOCK-BASED COMPENSATION (Continued)**

assumptions, the stock-based compensation expense recorded for the employee stock purchases was not significant.

***Employee Stock Option Plans***

*Stock Option Plan Description*

On May 6, 1999, AVANT's 1999 Stock Option and Incentive Plan (the "1999 Plan") was adopted. The 1999 Plan replaced the Amended and Restated 1991 Stock Compensation Plan, which was an amendment and restatement of AVANT's 1985 Incentive Option Plan. The 1999 Plan permits the granting of incentive stock options (intended to qualify as such under Section 422A of the Internal Revenue Code of 1986, as amended), non-qualified stock options, stock appreciation rights, performance share units, restricted stock and other awards of restricted stock in lieu of cash bonuses to employees, consultants and outside directors.

The 1999 Plan, as amended in 2002, allows for a maximum of 3,500,000 shares of common stock to be issued prior to May 6, 2009. The Board of Directors determines the term of each option, option price, and number of shares for which each option is granted and the rate at which each option vests. The Board of Directors has granted employee stock option awards with four-year vesting periods. The term of each option cannot exceed ten years (five years for options granted to holders of more than 10% of the voting stock of AVANT) and the exercise price of stock options cannot be less than the fair market value of the common stock at the date of grant (10% of fair market value for incentive stock options granted to holders of more than 10% of the voting stock of AVANT). Vesting of all employee stock option awards is accelerated upon a change in control as defined in the 1999 Plan.

The 1999 Plan provides for the automatic grant of non-qualified stock options to non-employee directors. Each non-employee director who is serving as a director of the Company on the fifth business day after each annual meeting of stockholders will automatically be granted on such day a non-qualified stock option to acquire 10,000 shares of common stock. The exercise price of each such non-qualified stock option is the fair market value of common stock on the date of grant. Each such non-qualified stock option is exercisable on the first anniversary of the grant date. Such non-qualified stock options will expire ten years from the date of grant. The 1999 Plan also provides for discretionary grants of non-qualified stock options to non-employee directors. Vesting of all non-employee director stock option awards is accelerated upon a change in control as defined in the 1999 Plan.

On November 17, 2005, pursuant to and in accordance with the recommendation of the Compensation Committee, the Board of Directors of AVANT approved full acceleration of the vesting of otherwise unvested stock options that had an exercise price of \$2.00 or greater granted under the 1999 Plan that were held by employees, officers and non-employee directors. As a result of the Board of Directors' action, a total of 265,935 of such "out-of-the-money" unvested stock options, having a weighted average exercise price of \$2.37 per share, became exercisable effective November 17, 2005, rather than the later dates when such options would have vested in the normal course. The Company determined the value of the "out-of-the-money" unvested stock options to be \$360,100. This action was taken in accordance with the applicable provisions of the 1999 Plan. The Board's decision to accelerate the vesting of these "out-of-

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**5. STOCK-BASED COMPENSATION (Continued)**

the-money” stock options was made primarily to reduce compensation expense that otherwise would be recorded in future periods following AVANT’s adoption in the first quarter of 2006 of SFAS 123R.

*General Option Information*

A summary of stock option activity for the year ended December 31, 2006 is as follows:

	<u>Shares</u>	<u>Weighted Average Exercise Price Per Share</u>	
Outstanding at January 1,	2,974,950	\$ 2.55	
Granted	674,950	1.96	
Exercised	(4,188)	1.23	
Canceled/Forfeited	(41,211)	1.92	
Expired	(323,347)	2.93	
Outstanding at December 31,	<u>3,281,154</u>	\$ 2.40	
	<u>2006</u>	<u>2005</u>	<u>2004</u>
At December 31,			
Options exercisable	2,458,772	2,584,971	2,256,252
Available for grant	1,425,453	1,861,215	1,844,204
Weighted average fair value of options granted during year	\$ 1.45	\$ 1.22	\$ 1.74

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**5. STOCK-BASED COMPENSATION (Continued)**

The following tables summarize information about the stock options outstanding at December 31, 2006:

<u>Range of Exercise Prices</u>	<u>Options Outstanding</u>		
	<u>Number Outstanding</u>	<u>Weighted Average Remaining Contractual Life</u>	<u>Weighted Average Exercise Price per Share</u>
\$1.08 – 1.31	479,513	4.11	\$ 1.24
1.33 – 1.71	329,725	3.68	1.57
1.76 – 1.93	490,850	6.50	1.86
1.93 – 1.97	372,875	4.67	1.95
1.97 – 2.00	2,687	7.61	1.99
2.04	334,400	9.02	2.04
2.06 – 2.28	353,450	5.12	2.20
2.29 – 2.68	353,100	4.47	2.47
2.71 – 3.94	328,700	5.55	2.93
4.90 – 14.69	235,854	3.80	7.79
\$1.08 – 14.69	<u>3,281,154</u>	5.26	\$ 2.40

<u>Range of Exercise Prices</u>	<u>Options Exercisable</u>	
	<u>Number Exercisable</u>	<u>Weighted Average Exercise Price per Share</u>
\$1.08 – 1.31	423,778	\$ 1.25
1.33 – 1.71	295,327	1.58
1.76 – 1.93	207,251	1.83
1.93 – 1.97	269,375	1.95
1.97 – 2.00	2,687	1.99
2.04	0	0.00
2.06 – 2.28	353,450	2.20
2.29 – 2.68	342,350	2.48
2.71 – 3.94	328,700	2.93
4.90 – 14.69	235,854	7.79
\$1.08 – 14.69	<u>2,458,772</u>	\$ 2.58

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**5. STOCK-BASED COMPENSATION (Continued)**

The aggregate intrinsic value of options outstanding at December 31, 2006 was \$39,752, of which \$30,532 related to exercisable options.

*Valuation and Expense Information under SFAS 123(R)*

The following table summarizes stock-based compensation expense related to employee and non-employee director stock options, employee stock purchases and restricted stock unit awards under SFAS 123(R) for the year ended December 31, 2006 which was allocated as follows:

	<b>Year Ended December 31, 2006</b>
Research and development	\$ 154,088
General and administrative	1,472,668
<b>Total stock-based compensation expense</b>	<b><u>\$1,626,756</u></b>

Stock-based compensation expense recognized for the years ended December 31, 2006, 2005 and 2004 included \$1,225,000, \$538,000 and \$328,000, respectively, related to restricted stock unit awards, all of which were allocated to general and administrative expenses.

Based on basic and diluted weighted average common shares outstanding of 74,216,450, the effect of stock-based compensation expense recorded under SFAS 123R for fiscal 2006 had a \$0.01 impact on earning's per share.

The table below reflects the pro forma information for the years ended December 31, 2005 and 2004 as follows:

	<b>2005</b>	<b>2004</b>
<b>Net Loss:</b>		
As reported	\$(18,096,569)	\$(13,203,700)
Less: Stock-based employee compensation expense as reported	538,000	328,000
Add: Total stock-based employee compensation expense determined under fair value based method for all awards	(1,329,300)	(1,000,400)
<b>Pro forma</b>	<b><u>\$(18,887,869)</u></b>	<b><u>\$(13,876,100)</u></b>
<b>Basic and Diluted Net Loss Per Share:</b>		
As reported	\$ 0.24	\$ 0.18
Pro forma	0.25	0.19

As of December 31, 2006, total compensation cost related to non-vested stock options not yet recognized was \$699,354, net of estimated forfeitures, which is expected to be recognized as expense over a weighted average period of 2.22 years. As of December 31, 2006, total compensation cost related to non-vested restricted stock unit awards not yet recognized was \$0.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**5. STOCK-BASED COMPENSATION (Continued)**

The fair values of employee stock options granted were valued using the Black-Scholes model with the following assumptions:

	<u>Year Ended</u> <u>December 31, 2006</u>	<u>Year Ended</u> <u>December 31, 2005</u>	<u>Year Ended</u> <u>December 31, 2004</u>
Expected stock price volatility (employees)	76 – 85%	80 – 85%	81 – 109%
Expected stock price volatility (non-employee directors)	76 – 80%	80 – 85%	81 – 109%
Expected option term (employees)	6.25 Years	4.5 – 5 Years	5 Years
Expected option term (non-employee directors)	5.5 Years	4.5 – 5 Years	5 Years
Risk-free interest rate	4.3 – 5.2%	3.6 – 4.6%	2.7 – 4.2%
Expected dividend yield	None	None	None

The Company used its daily historical stock price volatility consistent with the expected term of grant as the basis for its expected volatility assumption in accordance with SFAS 123(R) and SAB 107 for its employee and non-employee director stock options and employee stock purchases. Prior to fiscal 2006, the Company had also used its daily historical stock price volatility in accordance with SFAS 123 for purposes of its pro forma information. The Company has concluded that its historical volatility is representative of expected future stock price trends.

The risk-free interest rate assumption is based upon observed interest rates appropriate for the expected term of the Company's employee and non-employee director stock options and employee stock purchases. The dividend yield assumption is based on the Company's history of zero dividend payouts and expectation that no dividends will be paid in the foreseeable future.

The expected term of employee and non-employee director stock options represents the weighted-average period the stock options are expected to remain outstanding. SAB 107 provides for a simplified method for estimating expected term for "plain-vanilla" options. The simplified method is based on the vesting period and the contractual term for each grant or for each vesting tranche for awards with graded vesting. The mid-point between the vesting date and the expiration date is used as the expected term under this method. The Company has elected to follow the guidance of SAB 107 and adopt this simplified method in determining expected term for its stock option awards. There were 70,000 stock option grants to non-employee directors during the year ended December 31, 2006.

Forfeitures were estimated based on historical experience by applying a nine and zero percent forfeiture rate to employee and non-employee director stock option awards granted during the year ended December 31, 2006.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**6. INCOME TAXES**

	Year Ended December 31,		
	2006	2005	2004
Income tax benefit (provision):			
Federal	\$ 7,923,800	\$ 6,907,000	\$ 5,273,800
State	1,761,000	1,436,200	1,155,100
	9,684,800	8,343,200	6,428,900
Deferred tax valuation allowance	(9,684,800)	(8,343,200)	(6,428,900)
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

Deferred tax assets and liabilities are comprised of the following:

	December 31, 2006	December 31, 2005
Gross Deferred Tax Assets		
Net Operating Loss Carryforwards	\$ 40,983,000	\$ 62,738,000
Tax Credit Carryforwards	11,007,000	9,472,000
Deferred Expenses	21,701,000	11,593,000
Deferred Compensation—Restricted Stock	888,000	395,000
Stock-based Compensation	45,000	—
Fixed Assets	716,000	658,000
Accrued Expenses and Other	4,000	—
Deferred Revenue	20,299,000	4,027,000
	95,643,000	88,883,000
Gross Deferred Tax Liabilities		
Acquired Intangibles	(1,011,000)	(1,358,000)
Deferred Tax Assets Valuation Allowance	(94,632,000)	(87,525,000)
Net Deferred Tax Asset (Liability)	<u>\$ —</u>	<u>\$ —</u>

Reconciliation between the amount of reported income tax and the amount computed using the U.S. Statutory rate of 34% follows:

	2006	2005	2004
Pre-tax book income (loss)	\$(20,253,939)	\$(18,096,575)	\$(13,203,700)
Loss at Statutory Rates	(6,886,300)	(6,152,800)	(4,489,300)
Research and Development Credits	(1,074,100)	(812,000)	(788,100)
Alternative minimum Tax Credits	(120,000)	—	—
State Taxes	(1,761,000)	(1,436,200)	(1,155,100)
Other	156,600	57,800	3,600
Expiration of Net Operating Losses and Research & Development Tax Credits	2,575,000	2,441,000	1,310,000
Increase in Valuation Allowance	7,109,800	5,902,200	5,118,900
	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**6. INCOME TAXES (Continued)**

As of December 31, 2006, AVANT had federal net operating loss and tax credit carryforwards of approximately \$119,076,000 and \$7,953,000, respectively, and state net operating loss and credit carryforwards of approximately \$12,044,000 and \$4,628,000, respectively, which may be available to offset future federal and state income tax liabilities and that expire at various dates from 2007 through 2026. During 2006, federal net operating losses and credits of approximately \$5,323,000 and \$213,000, respectively, and state net operating losses of approximately \$9,487,000 expired unused.

The \$40 million milestone payment received from PRF during the first quarter of 2006 will result in taxable income for the Company. The regular taxable income generated by this transaction will be fully offset against available federal and state net operating loss carryforwards. The Company recorded a provision of \$120,000 in 2006 for the alternative minimum tax that will result from receipt of this milestone.

As required by Statement of Financial Accounting Standards No. 109, management has evaluated the positive and negative evidence bearing upon the realizability of its net deferred tax assets, which are comprised principally of net operating loss and tax credit carryforwards. Management has determined that it is more likely than not that AVANT will not recognize the benefits of federal and state deferred tax assets and, as a result, a valuation allowance of approximately \$94,632,000 has been established at December 31, 2006. The future realization, if any, of the deferred tax assets attributable to disqualifying dispositions of incentive stock options and the exercise of nonqualified stock options will not be recognized as a tax benefit in the statement of operations, but rather as a component of stockholders' equity.

Ownership changes, as defined in the Internal Revenue Code, may have limited the amount of net operating loss and tax credit carryforwards that can be utilized annually to offset future taxable income. Subsequent ownership changes could further affect the limitation in future years.

The Tax Relief and Health Care Act of 2006 (the "Act") was signed into law on December 20, 2006. The Act contains numerous amendments and additions to the U.S. corporate income tax rules. AVANT has evaluated the impact of the Act and has determined that it will not have a material impact on the Company's financial position and results of operations.

**7. STOCKHOLDERS' EQUITY**

*(A) Public and Private Stock Offerings*

In February 2004, AVANT completed a direct equity placement of 8,965,000 shares of common stock to institutional investors at a price of \$2.75 per share which generated gross proceeds totaling approximately \$24.7 million. Expenses associated with the transaction totaled \$1,602,773.

AVANT filed a shelf registration statement in November 2003 with the Securities and Exchange Commission to register 15 million shares of common stock and warrants to purchase 2.25 million shares of common stock. At December 31, 2005, 6,035,000 shares and all of the warrants were still available for issuance.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**7. STOCKHOLDERS' EQUITY (Continued)**

*(B) Preferred Stock*

At December 31, 2006 and 2005, AVANT had authorized preferred stock comprised of 1,163,102 shares of convertible Class B and 3,000,000 shares of convertible Class C and 350,000 shares designated as Class C-1 Junior Participating Cumulative, the terms of which are to be determined by our Board of Directors. There was no preferred stock outstanding at December 31, 2006 and 2005.

*(C) Warrants*

AVANT has issued warrants to purchase common stock in connection with the private placement of approximately 4.4 million shares in July 2003. The warrants are exercisable at \$3.00 per share and expire July 1, 2008. In connection with the acquisition of VRI in August 1998, AVANT assumed the obligations of VRI with respect to each outstanding warrant to purchase VRI common stock (a "VRI Warrant"). The last of the VRI Warrants expired on December 14, 2005.

Warrants outstanding at December 31, 2006 are as follows:

<u>Security</u>	<u>Exercise Number of Shares</u>	<u>Price Per Share</u>	<u>Expiration Date</u>
Common stock	444,444	\$ 3.00	July 1, 2008

In 2005, 1,861 warrants were exercised as cashless exercises resulting in the issuance of 536 shares. In 2004, 87,568 warrants were exercised as cashless exercises resulting in the issuance of 57,912 shares.

*(D) Shareholder Rights Plan*

On November 5, 2004, AVANT's Board adopted a new Shareholder Rights Plan, as set forth in the Shareholder Rights Agreement, dated November 5, 2004, between the Company and Computer Investor Services, LLC (formerly EquiServe Trust Company, N.A.), as Rights Agent (the "Rights Agreement"). The Rights Agreement replaces the Company's existing Shareholder Rights Agreement which expired on November 10, 2004.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**7. STOCKHOLDERS' EQUITY (Continued)**

Pursuant to the terms of the Rights Agreement, the Board declared a dividend distribution of one Preferred Stock Purchase Right for each outstanding share of AVANT's common stock. These rights, which expire in November 2014, entitle their holders to purchase from AVANT one ten-thousandth of a share (a "Unit") of Series C-1 Junior Participating Cumulative Preferred Stock, par value \$0.01 per share, ("C-1 Preferred Stock") at a cash exercise price of \$35.00 per Unit, subject to adjustment. The rights will trade separately from the common stock and will become exercisable only when a person or group has acquired 15% or more of the outstanding common stock or upon the commencement by a person or group of a tender offer that would result in such person or group acquiring 15% or more of the outstanding common stock other than as a result of repurchases of stock by AVANT or certain inadvertent actions by a shareholder. In the event a person or group acquires 15% or more of the outstanding common stock each holder of a right (except for any such person or group) would be entitled to receive upon exercise sufficient Units of C-1 Preferred Stock to equal a value of two times the exercise price of the purchase right. In the event AVANT is acquired in a merger or other business combination transaction or if 50% or more of AVANT's assets or earning power is sold, each holder of a right (except for any such person or group described above) would receive upon exercise common stock of the acquiring company with a value equal to two times the exercise price of the right.

As of December 31, 2006 and 2005, the Company has authorized the issuance of 350,000 shares of C-1 Preferred Stock for use in connection with the shareholder rights plan.

*(E) Share Repurchase Plan*

On August 16, 2002, AVANT announced that its Board of Directors had authorized the repurchase of up to 2 million shares of its common stock. The repurchased stock provides AVANT with treasury shares for general corporate purposes, such as stock to be issued under employee stock option and stock purchase plans. The share repurchase plan expired as of August 31, 2003. AVANT purchased 220,300 shares through December 31, 2003 at a cost of \$227,600. No shares were purchased in 2006 or 2005.

**8. RESEARCH AND LICENSING AGREEMENTS**

AVANT has entered into licensing agreements with several universities and research organizations. Under the terms of these agreements, we have received licenses or options to license technology, specified patents or patent applications. AVANT has expensed nonrefundable license fees and royalties of approximately \$85,000, \$85,000 and \$285,000 in the years ended December 31, 2006, 2005 and 2004, respectively.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**9. PRODUCT DEVELOPMENT AND LICENSING AGREEMENTS**

Our revenue from product development and licensing agreements was received pursuant to contracts with different organizations. Total revenue recognized by us in connection with these contracts for the years ended December 31, 2006, 2005 and 2004 were \$2,855,266, \$242,092 and \$4,565,666, respectively. A summary of these contracts follows:

*(A) GlaxoSmithKline plc ("Glaxo")*

In 1997, AVANT entered into an agreement with Glaxo to collaborate on the development and commercialization of the Company's oral rotavirus vaccine and Glaxo assumed responsibility for all subsequent clinical trials and all other development activities. AVANT licensed-in the Rotarix® technology in 1995 and owes a license fee of 30% to Cincinnati Children's Hospital Medical Center ("CCH") on net royalties received from Glaxo. AVANT is obligated to maintain a license with CCH with respect to the Glaxo agreement. All licensing fees are included in research and development expense. The term of the Glaxo agreement is through the expiration of the last of the relevant patents covered by the agreement, although Glaxo may terminate the agreement upon 90 days prior written notice.

In May 2005, AVANT entered into an agreement whereby an affiliate of Paul Royalty Fund II, L.P. ("PRF") purchased an interest in the net royalties AVANT will receive on worldwide sales of Rotarix® (see Note 10). Under the PRF agreement, AVANT will retain 50% of future Glaxo milestone payments beginning on the effective date of the agreement with PRF, with 70% of the remaining balance payable to PRF and 30% of the remaining balance payable to CCH, respectively.

In February 2006, the European Commission granted approval of Rotarix® in the European Union, which triggered a \$4 million milestone payment from Glaxo, 50% of which is creditable against future royalties. Revenue of \$2.6 million was recorded in the first quarter of 2006 as AVANT has no continuing obligations to incur any research and development costs in connection with the Glaxo agreement and the remaining \$1.4 million was remitted to PRF in accordance with the PRF agreement. In addition, the Company recorded \$600,000 of research and development expense in the first quarter of 2006 for amounts which will be payable to CCH in connection with the aforementioned 2006 milestone payment. Glaxo has agreed to make further payments, which could total up to \$1.5 million, upon achievement of a specific milestone.

In September 2006, AVANT received notice from Glaxo that Glaxo would begin paying royalties on sales of Rotarix® vaccine at the lower of two royalty rates under their 1997 license agreement. Glaxo's decision to pay the lower royalty rate (which is 70% of the full rate) is based upon Glaxo's assertion that Rotarix® is not covered by the patents Glaxo licensed from AVANT in Australia and certain European countries.

*(B) Pfizer Inc ("Pfizer")*

In connection with the Company's acquisition of Megan in 2000, it entered into a licensing agreement with Pfizer's Animal Health Division whereby Pfizer has licensed Megan's technology for the development of animal health and food safety vaccines. Under the agreement, AVANT may receive additional milestone payments of up to \$3 million based upon attainment of specified milestones. AVANT may receive royalty payments on eventual product sales. The term of this agreement is through the expiration

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
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**9. PRODUCT DEVELOPMENT AND LICENSING AGREEMENTS (Continued)**

of the last of the patents covered by the agreement. AVANT has no obligation to incur any research and development costs in connection with this agreement.

As of June 1, 2006, AVANT entered into a Collaborative Research and Development Agreement with Pfizer aimed at the discovery and development of vaccines to protect animals. The collaboration will employ vaccine technologies owned by AVANT. Under the agreement, Pfizer and AVANT will conduct a joint research program funded by Pfizer to develop prophylactic and therapeutic vaccines. AVANT considers its June 2006 arrangement with Pfizer to be a revenue arrangement with multiple deliverables. AVANT expects to recognize revenue as the research and development service deliverables are completed and delivered to Pfizer. AVANT recognized \$137,500 in product development revenue from Pfizer, Inc for year ended December 31, 2006.

*(C) DVC LLC ("DVC", formerly DynPort Vaccine Company LLC)*

In October 2001, the Company granted DVC a license for exclusive rights to use certain components of its anthrax vaccine technology. Under the agreement, AVANT is entitled to annual \$50,000 license maintenance payments, with respect to which AVANT has received \$200,000 in the aggregate, including \$50,000 received in the first quarter of 2005, and milestone payments of up to \$700,000 in the aggregate, \$100,000 of which AVANT recognized as revenue in 2002. The annual license fee is recognized as revenue on a straight line basis over the year. On August 5, 2005, AVANT received notice from DVC of termination of the license agreement, effective November 5, 2005.

In January 2003, AVANT was awarded a subcontract by DVC in the amount of \$2.5 million to develop for the U.S. Department of Defense an oral combination vaccine against anthrax and plague using AVANT's proprietary vaccine technologies. As of December 31, 2006, AVANT had received a number of additional subcontract modifications from DVC to support further development and pre-clinical animal testing of vaccine constructs of anthrax and plague vaccine candidates being developed by AVANT for use in the oral combination vaccine. Total contract funding awarded by DVC now totals approximately \$12 million. 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. For the years ended December 31, 2006, 2005 and 2004, AVANT recognized \$1,157,381, \$2,408,936 and \$1,974,998, respectively, in government contract revenue from DVC. Through December 31, 2006, AVANT had received approximately \$9.3 million in payments under the various subcontract agreements, all of which relate to approved subcontract awards. These agreements expire in 2007, although they may be terminated by DVC at any time upon 30 days notice.

*(D) Inflazyme Pharmaceuticals Ltd. ("Inflazyme", formerly AdProTech, Ltd ("AdProTech"))*

In March 2004, AVANT granted a license to AdProTech for non-exclusive rights to use certain components of its intellectual property surrounding complement inhibition. In April 2004, AVANT received an initial license payment of \$1 million from AdProTech and AdProTech was acquired by Inflazyme, which assumed the license. AVANT has no continuing involvement or obligation under this license agreement, thus it recognized the \$1 million as revenue during the first quarter of 2004. Under the agreement, AVANT is entitled to annual license fees, milestone payments of up to \$13.5 million in the

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
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**9. PRODUCT DEVELOPMENT AND LICENSING AGREEMENTS (Continued)**

aggregate and royalties on eventual product sales. AVANT has no obligations to incur any research and development costs in connection with this agreement.

**10. PAUL ROYALTY FUND**

In May 2005, AVANT entered into an agreement whereby an affiliate of Paul Royalty Fund II, L.P. ("PRF") purchased an interest in the net royalties AVANT will receive on worldwide sales of Rotarix®. Rotarix® is licensed to Glaxo. The terms of the agreement with PRF include an upfront unconditional payment from PRF totaling \$10 million (\$5 million paid at closing and \$5 million received on December 1, 2005) and the following milestone payments: (i) \$40 million on product launch in the European Union, and (ii) between \$9 million and \$11 million on product launch in the United States, depending on date of the launch.

In addition, AVANT retains some participation in the worldwide net royalty stream from Rotarix®. If worldwide net royalties on sales of Rotarix® from Glaxo exceed \$27.5 million in any year, AVANT will receive 92.5% of royalties in excess of \$27.5 million. Also, once PRF receives cumulative royalties equal to 2.45 times PRF's aggregate cash payments to AVANT, then AVANT will receive 92.5% of all additional royalties. If Rotarix® is not launched in the U.S. by the end of 2009, either PRF or AVANT can opt out of the U.S. portion of the agreement, and AVANT will retain all U.S.-derived royalties and PRF would not be obligated to make payments to AVANT upon U.S. approval.

On March 14, 2006, AVANT amended its agreement with PRF to accelerate a \$40 million milestone payment, which was received on March 17, 2006. The payment had previously been due upon the first sale of Rotarix® in the European Union. Other financial terms of the PRF agreement were not changed.

As noted in Note 9, Glaxo has asserted that Rotarix® is not covered by the patents Glaxo licensed from AVANT in Australia and certain European countries. If Glaxo's position stands, the royalties to which PRF is entitled will no longer be limited by a \$27.5 million annual threshold, which AVANT projected may have been reached in later years as sales of Rotarix® increase. Irrespective of Glaxo's position, AVANT will still retain the royalties on worldwide sales of Rotarix® once PRF receives 2.45 times the aggregate cash payments it makes to AVANT, though the potential amount of such residual royalties will be lower if Glaxo's position stands.

In February 2006, the European Commission granted approval of Rotarix® in the European Union, which triggered a \$4 million milestone payment from Glaxo, 50% of which is creditable against future royalties. AVANT remitted \$1.4 million of the Glaxo milestone payment to PRF in accordance with the PRF agreement. As a result, in the first quarter of 2006, AVANT recognized \$550,803 in product royalty revenue related to PRF's purchased interests in the net royalties that AVANT receives from Rotarix® worldwide net sales. Based on management's best estimates of the amount and timing of Glaxo royalties, the Company has classified \$4,380,074 and \$45,069,123 of the deferred revenue balance at December 31, 2006 as short-term and long-term, respectively.

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
**YEARS ENDED DECEMBER 31, 2006, 2005 and 2004**

**11. OTHER LONG-TERM LIABILITIES**

In December 2003, AVANT entered into a Lease Agreement, a Secured Promissory Note: Equipment Loan and a Security Agreement with the Massachusetts Development Finance Agency ("MassDevelopment"), an economic development entity for the Commonwealth of Massachusetts, for AVANT to occupy and build-out a manufacturing facility in Fall River, Massachusetts.

*(A) Loan Payable*

Under the Lease Agreement, AVANT received a Specialized Tenant Improvement Allowance of \$1,227,800 to finance the build-out of the Fall River facility. Principal and interest payments of the aggregate disbursement increments are due monthly using an amortization period of 15 years and an interest rate of 5.5% per annum.

At December 31, 2005, AVANT has recorded leasehold improvement assets of \$1,227,800 and currently has a loan payable of \$1,070,914 to MassDevelopment, of which \$81,853 is classified as current and \$989,061 as long-term. AVANT began amortizing the leasehold improvement assets in the third quarter of 2005 when the Fall River facility became operational. Based on current market interest rates available to AVANT for long-term liabilities with similar terms and maturities, the fair value of the loan payable is approximately \$774,600 at December 31, 2006.

*(B) Note Payable*

Under the Secured Promissory Note: Equipment Loan, AVANT received \$903,657 from MassDevelopment to finance the purchases of equipment to be placed in the Fall River facility (the "Loan"). The Loan has a term of 84 months at an interest rate of 5.5% per annum. The Loan is collateralized by all of the equipment purchased with the principal amount. The net book value of these collateralized assets at December 31, 2006 and 2005 was \$769,855 and \$880,690, respectively.

At December 31, 2006, AVANT has recorded manufacturing and laboratory equipment assets of \$903,657 and currently has a note payable of \$671,029 to MassDevelopment, of which \$143,362 is classified as current and \$527,667 as long-term. AVANT began depreciating the manufacturing and laboratory equipment assets over the estimated economic lives of the assets when the Fall River facility became operational. Based on current market interest rates available to AVANT for long-term liabilities with similar terms and maturities, the fair value of the note payable is approximately \$592,900 at December 31, 2006.

**12. COMMITMENTS AND CONTINGENCIES**

*(A) Commitments for the Renovations of the Needham Facility*

In November 2005, AVANT entered into a Lease Amendment with the landlord which specified terms for the complete renovation of the Company's Needham facility. The current projected costs for the tenant improvements portion of the renovations project are approximately \$9.3 million. As an incentive for AVANT to enter into the Lease Amendment, the landlord has agreed to contribute up to \$3.6 million towards tenant improvement costs. The Company will record the full cost of the Needham renovation project as an asset and the amounts of landlord incentive will be recorded as deferred rent (included under "Other Long Term Liabilities" account in the consolidated balance sheets) in accordance with FASB Technical Bulletin 88-1 "Issues Related to Accounting for Leases." Amortization of the deferred rent will

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
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**12. COMMITMENTS AND CONTINGENCIES (Continued)**

be recorded as a reduction of rent expense over the remaining lease term when the renovation project is complete and will be classified as an operating activity in the Consolidated Statement of Cash Flows.

In November 2005, AVANT amended the MassDevelopment lease to increase the rentable space by approximately 2,500 square feet to approximately 14,300 square feet at the Fall River facility. The landlord is providing a tenant incentive allowance of \$49,740 against the cost of alterations and improvements required by AVANT to be made to the expanded space. As of December 31, 2006, the full amount of the tenant incentive allowance had been received. In April 2006, AVANT entered into a Design/Build Contract with a design/builder for the build-out of the expanded space. The contract amount totals \$345,000 and the construction project was completed in the third quarter of 2006.

*(B) Purchase Commitments for Contract Manufacturing*

In April 2000, AVANT entered into a Services Agreement (the "Lonza Agreement") with Lonza Biologics plc ("Lonza") for process development and manufacture of its product candidate TP10. AVANT has entered into a number of amendments to the Lonza Agreement for specific process development and scale-up work and remaining aggregate commitments as of December 31, 2006 total approximately \$930,879. The Company has incurred \$1,730,589 and \$8,511,310, respectively, of expense related to the Lonza Agreement in the twelve-month period ended December 31, 2006 and from inception through December 31, 2006, of which \$281,035 remained accrued at December 31, 2006.

**13. DEFERRED SAVINGS PLAN**

Under section 401(k) of the Internal Revenue Code of 1986, as amended, the Board of Directors adopted, effective May 1990, a tax-qualified deferred compensation plan for employees of AVANT. AVANT may, at its discretion, make contributions to the plan each year matching up to 1% of the participant's total annual salary. AVANT contributions amounted to \$47,300, \$38,700 and \$37,300 for the years ended December 31, 2006, 2005 and 2004, respectively.

**14. SELECTED QUARTERLY FINANCIAL DATA (Unaudited)**

<u>2006</u>	<u>Q1 2006</u>	<u>Q2 2006</u>	<u>Q3 2006</u>	<u>Q4 2006</u>
Total revenue	\$ 3,706,487	\$ 505,479	\$ 338,999	\$ 380,132
Net loss	(2,970,991)	(5,670,299)	(5,520,567)	(6,212,075)
Basic and diluted net loss per common share	(0.04)	(0.08)	(0.07)	(0.08)

<u>2005</u>	<u>Q1 2005</u>	<u>Q2 2005</u>	<u>Q3 2005</u>	<u>Q4 2005</u>
Total revenue	\$ 970,552	\$ 637,161	\$ 846,322	\$ 634,306
Net loss	(4,868,499)	(4,733,940)	(4,514,434)	(3,979,697)
Basic and diluted net loss per common share	(0.07)	(0.06)	(0.06)	(0.05)

**AVANT IMMUNOTHERAPEUTICS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**  
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**15. SUBSEQUENT EVENT**

In February 2007, AVANT entered into a research and development partnership with Select Vaccines Limited (“Select Vaccines”), a public Australian biotechnology company, focused on the use of Select Vaccines’ virus-like particles (“VLPs”) as a platform technology for the development of viral vaccines. Research and development efforts will initially target the development of vaccines against influenza including both epidemic and pandemic forms of vaccine, with the opportunity to expand the collaboration to other disease targets. Under the terms of the agreement, AVANT will make an upfront equity investment in Select Vaccines and fund influenza vaccine research and development for two years, as well as provide payments to Select Vaccines for the achievement of specific preclinical and clinical development milestones. Completion of the partnership agreement is subject to the approval of Select’s shareholders. AVANT also gains the exclusive right to apply Select Vaccines’ technology to a second target within the next two years, and a third target within the next three years. Select Vaccines would also be eligible to receive royalties based on net sales of any approved products arising out of this collaboration that are successfully marketed.

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

None.

**Item 9A. CONTROLS AND PROCEDURES**

*Evaluation of Disclosure Controls and Procedures.*

AVANT maintains disclosure controls and procedures designed to ensure that information required to be disclosed in AVANT's filings under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported accurately within the time periods specified in the Securities and Exchange Commission's rules and forms. As of the end of the period covered by this report, an evaluation was performed under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of AVANT's disclosure controls and procedures (pursuant to Exchange Act Rule 13a-15(b)). Based upon this evaluation, AVANT's Chief Executive Officer and Chief Financial Officer concluded that AVANT's disclosure controls and procedures were effective.

*Management's Annual Report on Internal Control Over Financial Reporting.*

AVANT's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of AVANT's management, including AVANT's Chief Executive Officer and Chief Financial Officer, AVANT has conducted an evaluation of the effectiveness of its internal control over financial reporting based upon the framework in *Internal Control-Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, AVANT's Chief Executive Officer and Chief Financial Officer have concluded that AVANT's internal control over financial reporting was effective at December 31, 2006.

Management's assessment of the effectiveness of the Company's internal control over financial reporting as of December 31, 2006 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their attestation report included in Item 8 of this Form 10-K.

*Changes in Internal Control Over Financial Reporting.*

Management determined that AVANT did not maintain effective controls over the completeness and accuracy of the recognition of revenue deferred pursuant to an agreement with Paul Royalty Fund ("PRF") with respect to the sale of an interest in future net royalties from GlaxoSmithKline ("GSK"), certain of which should have been recognized upon receipt of a milestone payment from GSK in the first quarter of 2006. Notwithstanding that management had correctly determined the accounting treatment for the PRF transaction, an operational failure in internal control occurred in that revenue recognition was not triggered upon receipt of the milestone payment. Therefore, recognition of previously deferred royalty revenue was not completely and accurately recorded in the proper period in accordance with accounting principles generally accepted in the United States. This was identified as a deficiency in internal control in the first quarter of 2006 which constitutes a "material weakness." A material weakness is a control deficiency, or combination of control deficiencies that results in more than a remote likelihood that a material misstatement of the annual or interim financial statements will not be prevented or detected. This control deficiency resulted in an adjustment to the unaudited interim consolidated financial statements for the quarter ended March 31, 2006 affecting deferred revenue and product royalties.

Management has reviewed and, as necessary, revised its policies and procedures with respect to its controls over the accounting for deferred royalty revenue to ensure that all reasonable steps have been

taken to correct this material weakness. As part of this process, management has provided additional training for AVANT's accounting personnel and added additional revenue recognition review and approval controls to facilitate a more timely completion of such internal controls. The new internal controls have been operational since the second quarter of 2006 and have been tested, and management has concluded that the controls are operating effectively. Management has further concluded that the identified control deficiency has been successfully remediated.

During the second quarter of 2006, AVANT implemented changes in its internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) to address the material weakness noted in the prior quarter. Other than the item disclosed above, there were no significant changes in AVANT's controls and procedures over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the period covered by this Annual Report on Form 10-K that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Item 9B. OTHER INFORMATION**

In December, 2006, we entered into a lease amendment which increased AVANT's leased space at the Fall River facility by an additional 1,900 square feet of space.

**PART III**

**Item 10. DIRECTORS AND EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

Information in response to this Item appears in the Registrant’s definitive Proxy Statement for its Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the close of the fiscal year, and is incorporated by reference.

**Item 11. EXECUTIVE COMPENSATION**

Information in response to this Item appears in the Registrant’s definitive Proxy Statement for its Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the close of the fiscal year, and is incorporated by reference.

**Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT, AND RELATED STOCKHOLDER MATTERS**

**Equity Compensation Plan Information**

The following table provides information as of December 31, 2006 regarding shares of common stock of AVANT that may be issued under our existing equity compensation plans, including AVANT’s 1999 Stock Option and Incentive Plan (the “1999 Plan”) and AVANT’s 1994 Employee Stock Purchase Plan (the “1994 Plan”). Footnote (4) to the table sets forth the total number of shares of common stock of AVANT issuable upon the exercise of assumed options as of December 31, 2006, and the weighted average exercise price of these options and warrants.

	<b>Equity Compensation Plan Information</b>		
	<b>Number of securities to be issued upon exercise of outstanding options, warrants and rights<sup>1</sup></b>	<b>Weighted Average exercise price of outstanding options, warrants and rights</b>	<b>Number of securities remaining available for future issuance under equity compensation plan (excluding securities referenced in column (a))</b>
	<b>(a)</b>	<b>(b)</b>	<b>(c)</b>
Equity compensation plans approved by security holders <sup>2</sup>	<u>3,268,950<sup>3,4</sup></u>	<u>\$2.39</u>	<u>1,425,453<sup>5</sup></u>

- 1 Does not include any Restricted Stock as such shares are already reflected in AVANT’s outstanding shares.
- 2 Consists of the 1999 Plan and the 1994 Plan.
- 3 Does not include purchase rights accruing under the 1994 Plan because the purchase price (and therefore the number of shares to be purchased) will not be determined until the end of the purchase period.
- 4 Does not include: (i) outstanding options to acquire 9,306 shares, at a weighted-average exercise price of \$8.10 per share, that were assumed in connection with the 2000 merger of Megan with and into AVANT, under Megan’s Stock Option Plan—no future options may be granted under Megan’s Stock Option Plan; and (ii) outstanding options to acquire 128,268 shares, at a weighted-average exercise price of \$3.53 per share, that were assumed in connection with the 1998 merger of VRI with and into AVANT, under the VRI Stock Option Plan—no future options may be granted under the VRI Stock Option Plan.
- 5 Includes shares available for future issuance under the 1994 Plan.

Additional information in response to this Item appears in the Registrant's definitive Proxy Statement for its Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the close of the fiscal year, and is incorporated by reference.

**Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE**

Information in response to this Item appears in the Registrant's definitive Proxy Statement for its Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the close of the fiscal year, and is incorporated by reference.

**Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

Information in response to this Item appears in the Registrant's definitive Proxy Statement for its Annual Meeting of Stockholders to be filed with the SEC pursuant to Regulation 14A, not later than 120 days after the close of the fiscal year, and is incorporated by reference.

**PART IV**

**Item 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K**

(A) The following documents are filed as part of this Form 10-K:

(1) *Financial Statements:*

See “Index to Consolidated Financial Statements” at Item 8.

(2) *Financial Statement Schedules:*

Schedules are omitted since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the Consolidated Financial Statements or Notes thereto.

(3) *Exhibits:*

<u>No.</u>	<u>Description</u>	<u>Page No.</u>
2.1	Agreement and Plan of Merger, dated as of November 20, 2000, by and among AVANT, AVANT Acquisition Corp., and Megan Health, Inc.	Incorporated by reference to Exhibit 2.1 of AVANT’s Current Report on Form 8-K filed December 12, 2000
2.2	First Amendment to Agreement and Plan of Merger, dated as of November 20, 2000, by and among AVANT, AVANT Acquisition Corp., and Megan Health, Inc.	Incorporated by reference to Exhibit 2.2 of AVANT’s Current Report on Form 8-K filed December 12, 2000
3.1	Third Restated Certificate of Incorporation of AVANT	Incorporated by reference to Exhibit 3.1 of AVANT’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 of AVANT	Incorporated by reference to Exhibit 3.1 of AVANT’s Registration Statement on Form S-4 (Reg. No. 333-59215), filed July 16, 1998
3.3	Second Certificate of Amendment of Third Restated Certificate of Incorporation of AVANT	Incorporated by reference to Exhibit 3.2 of AVANT’s Registration Statement on Form S-4 (Reg. No. 333-59215), filed July 16, 1998
3.4	Amended and Restated By-Laws of AVANT as of November 10, 1994	Incorporated by reference to Exhibit 3.3 of AVANT’s Registration Statement on Form S-4 (Reg. No. 333-59215), filed July 16, 1998
3.5	Third Certificate of Amendment of Third Restated Certificate of Incorporation of AVANT	Incorporated by reference to Exhibit 3.1 of AVANT’s Quarterly Report on Form 10-Q, filed May 10, 2002
3.6	Certificate of Elimination of Series C-1 Junior Participating Cumulative Preferred Stock	Incorporated by reference to Exhibit 3.6 of AVANT’s Annual Report on Form 10-K, filed March 16, 2005

3.7	Certificate of Designations, Preferences and Rights of a Series of Preferred Stock of AVANT Immunotherapeutics, Inc. classifying and designating the Series C-1 Junior Participating Cumulative Preferred Stock	Incorporated by reference to Exhibit 3.1 of AVANT's Registration Statement on Form 8-A filed November 8, 2004
4.1	Shareholder Rights Agreement dated November 5, 2004 between AVANT and EquiServe Trust Company, N.A. as Rights Agent	Incorporated by reference to Exhibit 4.1 of AVANT's Registration Statement on Form 8-A filed November 8, 2004
10.1	AVANT Immunotherapeutics, Inc. 2004 Employee Stock Purchase Plan	Incorporated by reference to Appendix A to AVANT's Proxy Statement filed on April 19, 2004 pursuant to Section 14 (a) of the Exchange Act
10.2	Megan Health, Inc. Stock Option Plan	Incorporated by reference to Exhibit 4.6 of AVANT's Registration Statement on Form S-8 (Reg. No. 333-52796), filed December 27, 2000
10.3	AVANT Immunotherapeutics, Inc. 1999 Stock Option and Incentive Plan	Incorporated by reference to Exhibit A to AVANT's Proxy Statement on Schedule 14A filed on April 1, 1999
10.4	Virus Research Institute, Inc. 1992 Equity Incentive Plan as amended and restated	Incorporated by reference to Exhibit 10.4 of AVANT's Annual Report on Form 10-K filed March 28, 2000
10.5	Performance Plan of AVANT Immunotherapeutics, Inc.	Incorporated by reference to Exhibit 10.5 of AVANT's Annual Report on Form 10-K filed March 28, 2000
10.6	Form of Agreement relating to Change of Control	Incorporated by reference to Exhibit 10.6 of AVANT's Annual Report on Form 10-K filed March 28, 2000
10.7	Amended and Restated Employment Agreement between AVANT and Una S. Ryan, Ph.D. dated August 20, 1998	Incorporated by reference to Exhibit 10.8 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 1998
10.8	Commercial Lease Agreement of May 1, 1996 between AVANT and Fourth Avenue Ventures Limited Partnership	Incorporated by reference to Exhibit 10.11 of AVANT's quarterly report on Form 10-Q/A for the quarterly period ended June 30, 1996 (File No. 0-15006)
10.9	Extension of Lease Agreement of May 1, 1997 between AVANT and DIV Needham 53 LLC (successor in interest to Fourth Avenue Ventures Limited Partnership) dated as of August 23, 2001	Incorporated by reference to AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2001

10.10	Option Agreement by and between AVANT and Novartis Pharma AG dated as of October 31, 1997, portions of which are subject to a request for confidential treatment	Incorporated by reference to Exhibit 10.16 of AVANT's Quarterly Report on Form 10-Q/A for the quarterly period ended September 30, 1997
10.11	Settlement Agreement between AVANT and Forest City 38 Sidney Street, Inc.; Forest City Management, Inc.; and Forest City Enterprises, Inc.	Incorporated by reference to Exhibit 10.15 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 1997
10.12	Agreement between Lonza Biologics plc and AVANT dated as of April 19, 2000, portions of which are subject to confidential treatment	Incorporated by reference to Exhibit 10.11 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2000
10.13	Stock Purchase Agreement dated December 1, 2000 by and between AVANT and Pfizer Inc	Incorporated by reference to Exhibit 10.12 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2000
10.14	License and Royalty Agreement by and between Pfizer Inc, AVANT and Megan Health, Inc. dated as of December 1, 2000, portions of which are subject to confidential treatment	Incorporated by reference to Exhibit 10.13 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2000
10.15	Amendment to License and Royalty Agreement by and between Pfizer Inc, AVANT and Megan Health, Inc. dated as of December 1, 2000, portions of which are subject to confidential treatment	Incorporated by reference to Exhibit 10.14 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2000
10.16	Collaborative Research and Development Agreement by and between Pfizer Inc. and Megan Health, Inc. dated as of December 1, 2000, portions of which are subject to confidential treatment	Incorporated by reference to Exhibit 10.15 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2000
10.17	Exclusive License Agreement between AVANT Immunotherapeutics, Inc. and DynPort Vaccine Company, LLC dated as of October 10, 2001, portions of which are subject to a request for confidential treatment	Incorporated by reference to Exhibit 10.17 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2001
10.18	First Amendment to AVANT Immunotherapeutics, Inc. 1999 Stock Option and Incentive Plan	Incorporated by reference to Exhibit 10.18 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2001
10.19	First Amendment to Amended and Restated Employment Agreement between AVANT and Una S. Ryan, Ph.D. dated as of December 23, 2002	Incorporated by reference to Exhibit 10.19 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2002

10.20	License Agreement between Virus Research Institute, Inc. and SmithKline Beecham PLC dated as of December 1, 1997, portions of which are subject to confidential treatment	Incorporated by reference to Exhibit 10.20 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 1999
10.21	Amendment Agreement, dated January 9, 2003, between AVANT and SmithKline Beecham PLC	Incorporated by reference to Exhibit 10.21 of AVANT's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002
10.22	License Agreement, dated as of January 31, 2003, by and between AVANT and Elan Drug Delivery Limited	Incorporated by reference to Exhibit 10.22 of AVANT's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002
10.23	License and Clinical Trials Agreement, effective as of February 27, 1995, between Virus Research Institute, Inc. and the James N. Gamble Institute of Medical Research	Incorporated by reference to Exhibit 10.23 of AVANT's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002
10.24	License Agreement, dated as of May 1, 1992, by and between the President and Fellows of Harvard College and Virus Research Institute, Inc.	Incorporated by reference to Exhibit 10.24 of AVANT's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002
10.25	Amendment to License Agreement, dated July 23, 1993, by and between the President and Fellows of Harvard College and Virus Research Institute, Inc.	Incorporated by reference to Exhibit 10.25 of AVANT's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002
10.26	Amendment to License Agreement, dated as of August 2, 2000, by and between the President and Fellows of Harvard College and AVANT	Incorporated by reference to Exhibit 10.26 of AVANT's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002
10.27	PHS Patent License Agreement, dated March 25, 1998, by and between the National Institutes of Health and Virus Research Institute, Inc.	Incorporated by reference to Exhibit 10.27 of AVANT's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002
10.28	License Agreement, dated as of November 25, 1988, by and among The Johns Hopkins University, Brigham and Women's Hospital and AVANT f/k/a T Cell Sciences, Inc.	Incorporated by reference to Exhibit 10.28 of AVANT's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002
10.29	Subcontractor Service Agreement by and between DynPort Vaccine Company LLC and AVANT, dated January 15, 2003	Incorporated by reference to Exhibit 10.1 of AVANT's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003
10.30	Subcontract modification by and between DynPort Vaccine Company LLC and AVANT, dated May 27, 2003	Incorporated by reference to Exhibit 10.2 of AVANT's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003
10.31	Subcontract by and between DynPort Vaccine Company LLC and AVANT, dated May 27, 2003	Incorporated by reference to Exhibit 10.3 of AVANT's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003

10.32	Second Amendment to Amended and Restated Employment Agreement between AVANT and Una S. Ryan, Ph.D., dated as of September 18, 2003	Incorporated by reference to Exhibit 10.4 of AVANT's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003
10.33	Restricted Stock Unit Agreement between AVANT and Una S. Ryan, dated September 18, 2003	Incorporated by reference to Exhibit 10.5 of AVANT's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003
10.34	Amendment to AVANT Immunotherapeutics, Inc. 1999 Stock Option and Incentive Plan	Incorporated by reference to Exhibit 10.34 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2003
10.35	Lease Agreement, by and between AVANT and the Massachusetts Development Finance Agency, dated as of December 22, 2003, portions of which are subject to a request for confidential treatment	Incorporated by reference to Exhibit 10.1 of AVANT's Quarterly Report on Form 10-Q for the quarter ended March 31, 2004
10.36	Security Agreement, by and between AVANT and the Massachusetts Development Finance Agency, dated as of December 22, 2003, portions of which are subject to a request for confidential treatment	Incorporated by reference to Exhibit 10.2 of AVANT's Quarterly Report on Form 10-Q for the quarter ended March 31, 2004
10.37	Secured Promissory Note: Equipment Loan, by and between AVANT and the Massachusetts Development Finance Agency, dated as of December 22, 2003, portions of which are subject to a request for confidential treatment	Incorporated by reference to Exhibit 10.3 of AVANT's Quarterly Report on Form 10-Q for the quarter ended March 31, 2004
10.38	Non-Exclusive License Agreement, by and between AVANT and AdProTech Ltd., dated as of March 10, 2004, portions of which are subject to a request for confidential treatment	Incorporated by reference to Exhibit 10.4 of AVANT's Quarterly Report on Form 10-Q for the quarter ended March 31, 2004
10.39	Design/Builder Agreement, dated August 20, 2004 by and between AVANT Immunotherapeutics, Inc. and SPEC Process Engineering & Construction, Inc.	Incorporated by reference to Exhibit 10.1 of AVANT's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004
10.40	First Amendment to Lease by and between AVANT and DIV Needham 53 LLC dated November 29, 2005	Incorporated by reference to Exhibit 10.40 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2005
10.41	Second Amendment to Lease by and between AVANT and the Massachusetts Development Finance Agency dated as of November 4, 2005	Incorporated by reference to Exhibit 10.41 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2005
10.42	Amendment Agreement to Purchase Agreement between AVANT and PRF Vaccine Holdings LLC, dated as of March 14, 2006	Incorporated by reference to Exhibit 10.1 of AVANT's Quarterly Report on Form 10-Q for the quarter ended March 31, 2006

18.0	Letter regarding Change in Accounting Principle	Incorporated by reference to Exhibit 18.0 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2003
21.0	List of Subsidiaries	Incorporated by reference to Exhibit 21.0 of AVANT's Annual Report on Form 10-K for the fiscal year ended December 31, 2001
23.1	Consent of Independent Registered Public Accounting Firm	Filed herewith
31.1	Certification of President and Chief Executive Officer	Filed herewith
31.2	Certification of Senior Vice President and Chief Financial Officer	Filed herewith
32	Section 1350 Certifications	Furnished herewith

## SIGNATURES

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

**Date**

March 14, 2007

**AVANT IMMUNOTHERAPEUTICS, INC.**

by: /s/ UNA S. RYAN  
Una S. Ryan  
President and Chief Executive Officer

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ J. BARRIE WARD</u> (J. Barrie Ward)	Chairman	March 14, 2007
<u>/s/ UNA S. RYAN</u> (Una S. Ryan)	President, Chief Executive Officer, and Director	March 14, 2007
<u>/s/ AVERY W. CATLIN</u> (Avery W. Catlin)	Senior Vice President, Chief Financial Officer and Treasurer	March 14, 2007
<u>/s/ HARRY H. PENNER, JR.</u> (Harry H. Penner, Jr.)	Director	March 14, 2007
<u>/s/ PETER A. SEARS</u> (Peter A. Sears)	Director	March 14, 2007
<u>/s/ KAREN S. LIPTON</u> (Karen S. Lipton)	Director	March 14, 2007
<u>/s/ LARRY ELLBERGER</u> (Larry Ellberger)	Director	March 14, 2007
<u>/s/ ALF A. LINDBERG</u> (Alf A. Lindberg)	Director	March 14, 2007
<u>/s/ FRANCIS R. CANO</u> (Francis R. Cano)	Director	March 14, 2007

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (File Nos. 333-52796, 333-34780, 33-80036, 33-80050, 333-62017, 333-117601 and 333-117602) and the Registration Statements on Form S-3 (File Nos. 333-64704, 333-43204, 333-52736, 33-64021, 333-08607, 333-56755, 333-64761, 333-89341, 333-109583 and 333-106918) of AVANT Immunotherapeutics, Inc. of our report dated March 16, 2007 relating to the financial statements, management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts  
March 16, 2007

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**Exhibit 31.1**

**CERTIFICATION**

I, Una S. Ryan, certify that:

1. I have reviewed this annual report on Form 10-K of AVANT Immunotherapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in the Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2007

By: /s/ UNA S. RYAN  
Name: Una S. Ryan, Ph.D.  
Title: President and Chief Executive Officer

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**Exhibit 31.2**

**CERTIFICATION**

I, Avery W. Catlin, certify that:

1. I have reviewed this annual report on Form 10-K of AVANT Immunotherapeutics, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in the Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2007

By: /s/ AVERY W. CATLIN  
Name: Avery W. Catlin  
Title: Senior Vice President and Chief Financial Officer

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**Exhibit 32**

The undersigned officers of AVANT Immunotherapeutics, Inc. (the "Company") hereby certify to our knowledge that the Company's annual report on Form 10-K to which this certification is attached (the "Report"), as filed with the Securities and Exchange Commission on the date hereof, fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 16, 2007

By: /s/ UNA S. RYAN

Name: Una S. Ryan, Ph.D.

Title: President and Chief Executive Officer

Date: March 16, 2007

By: /s/ AVERY W. CATLIN

Name: Avery W. Catlin

Title: Senior Vice President and Chief Financial Officer

This certification shall not be deemed "filed" for any purpose, nor shall it be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Exchange Act.

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