

SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K/A

(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, 1998

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.  
(F/K/A T CELL SCIENCES, INC.)

(Exact name of registrant as specified in its charter)

DELAWARE	13-3191702
(State or other jurisdiction of incorporation or organization)	(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: NONE

Securities registered pursuant to Section 12(g) of the Act:  
COMMON STOCK, PAR VALUE \$.001

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

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

The aggregate market value of common stock held by non-affiliates as of March 1, 1999 was \$57,134,276 (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, 1999 was: 42,532,100 shares.

SAFE HARBOR STATEMENT UNDER THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995: STATEMENTS CONTAINED IN THIS REPORT, INCLUDING PART II, ITEM 5: MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS, 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 THE REGISTRANT. THESE FACTORS INCLUDE, BUT ARE NOT LIMITED TO: (I) THE REGISTRANT'S ABILITY TO SUCCESSFULLY COMPLETE PRODUCT RESEARCH AND DEVELOPMENT, INCLUDING PRE-CLINICAL AND CLINICAL STUDIES, AND COMMERCIALIZATION; (II) THE REGISTRANT'S ABILITY TO OBTAIN SUBSTANTIAL ADDITIONAL FUNDING; (III) THE REGISTRANT'S ABILITY TO OBTAIN REQUIRED GOVERNMENTAL APPROVALS; (IV) THE REGISTRANT'S ABILITY TO ATTRACT MANUFACTURING, SALES, DISTRIBUTION AND MARKETING PARTNERS AND OTHER STRATEGIC ALLIANCES; AND (V) THE REGISTRANT'S ABILITY TO DEVELOP AND COMMERCIALIZE ITS PRODUCTS BEFORE ITS COMPETITORS.

PART II

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

The common Stock of AVANT Immunotherapeutics, Inc. (the "Company" or "AVANT") began trading on the Nasdaq National Market (the "Nasdaq") under the symbol "AVAN" on August 24, 1998. Prior to that date, the Company was 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 the Company's common stock as reported by Nasdaq.

FISCAL PERIOD	HIGH	LOW
YEAR ENDED DECEMBER 31, 1997		
1Q (Jan. 1 - March 31, 1997)	\$ 2.38	\$ 1.47
2Q (April 1 - June 30, 1997)	2.09	1.28
3Q (July 1 - Sep. 30, 1997)	2.34	1.38
4Q (Oct. 1 - Dec. 31, 1997)	3.16	1.75
YEAR ENDED DECEMBER 31, 1998		
1Q (Jan. 1- March 31, 1998)	\$ 2.94	\$ 1.81
2Q (April 1 - June 30, 1998)	4.50	2.38
3Q (July 1 - Sept. 30, 1998)	2.81	1.19
4Q (Oct. 1 - Dec. 31, 1998)	1.78	1.06

As of March 1, 1999, there were approximately 716 shareholders of record of the Company's common stock. The price of the common stock was \$1.50 as of the close of the market on March 1, 1999. The Company has not paid any dividends on its common stock since its inception and does not intend to pay any dividends in the foreseeable future. Declaration of dividends will depend, among other things, upon the operating and future earnings of the Company, the capital requirements of the Company and general business conditions.

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data presented below for the years ended December 31, 1998, 1997, 1996, 1995 and 1994 have been derived from the audited consolidated financial statements of the Company. The results of operations for 1998 include the operating results of Virus Research Institute, Inc. ("VRI") from August 21, 1998, the date on which the Company acquired it, through December 31, 1998 (see Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations"). All amounts are in thousands except per share data.

CONSOLIDATED STATEMENTS  
OF OPERATIONS DATA

	YEAR ENDED DECEMBER 31,				
	1998	1997	1996	1995	1994
<b>OPERATING REVENUE:</b>					
Product Sales, Product Development and Distribution Agreements	\$ 2,150	\$ 1,192	\$ 1,115	\$ 3,963	\$ 6,968
<b>OPERATING EXPENSE:</b>					
Research and Development	5,703	5,257	6,036	8,005	8,697
Charge for Purchased In-Process Research & Development	44,630	--	--	--	--
Legal Settlement	(166)	6,109	--	(2,900)	--
Other Operating Expense	4,377	3,494	6,549	7,821	9,365
Total Operating Expense	54,544	14,860	12,585	12,926	18,062
Non-Operating Income (Expense), Net	594	560	680	705	(490)
Net Loss	\$ (51,800)	\$ (13,108)	\$ (10,790)	\$ (8,258)	\$ (11,584)
Basic and Diluted Net Loss Per Common Share	\$ (1.56)	\$ (0.52)	\$ (0.50)	\$ (0.47)	\$ (0.68)
Weighted Average Common Shares Outstanding	33,177	25,140	21,693	17,482	17,053

CONSOLIDATED BALANCE  
SHEET DATA

	DECEMBER 31,				
	1998	1997	1996	1995	1994
Working Capital	\$ 12,298	\$ 4,629	\$ 11,673	\$ 11,208	\$ 15,027
Total Assets	22,650	9,827	17,224	18,532	20,685
Other Long Term Obligations	563	750	--	182	500
Accumulated Deficit	(122,037)	(70,237)	(57,129)	(46,339)	(38,081)
Total Stockholders' Equity	18,770	6,316	15,619	16,000	17,586

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

In January 1997, the Securities and Exchange Commission issued Financial Reporting Release No. 48, which expands the disclosure requirements for certain derivatives and other financial instruments. The Company does not utilize derivative financial instruments. See Notes 1 and 2 to the Consolidated Financials Statements for a description of the Company's use of other financial instruments.

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 THE COMPANY. THESE FACTORS INCLUDE, BUT ARE NOT LIMITED TO: (I) THE COMPANY'S ABILITY TO SUCCESSFULLY COMPLETE PRODUCT RESEARCH AND DEVELOPMENT, INCLUDING PRE-CLINICAL AND CLINICAL STUDIES, AND COMMERCIALIZATION; (II) THE COMPANY'S ABILITY TO OBTAIN SUBSTANTIAL ADDITIONAL FUNDING; (III) THE COMPANY'S ABILITY TO OBTAIN REQUIRED GOVERNMENTAL APPROVALS; (IV) THE COMPANY'S ABILITY TO ATTRACT MANUFACTURING, SALES, DISTRIBUTION AND MARKETING PARTNERS AND OTHER STRATEGIC ALLIANCES; AND (V) THE COMPANY'S ABILITY TO DEVELOP AND COMMERCIALIZE ITS PRODUCTS BEFORE ITS COMPETITORS.

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

The Company's principle activity since its inception has been research and product development conducted on its own behalf, as well as through joint development programs with several pharmaceutical companies. The Company was incorporated in the State of Delaware in December 1983.

A significant portion of the Company's revenue has consisted of payments by others to fund sponsored research, milestone payments under joint development agreements, payments for material produced for preclinical studies, and sales of test kits and antibodies. Certain portions of the collaborative payments are received in advance, recorded as deferred revenue and recognized when earned in later periods.

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

OVERVIEW

The Company is engaged in the discovery, development and commercialization of products that harness the human immune response to prevent and treat disease. The Company's products derive from a broad set of complementary technologies with the ability to inhibit the complement system, regulate T and B cell activity, and enable the creation and delivery of preventative and therapeutic vaccines. The Company is using these technologies to develop vaccines and immunotherapeutics that prevent or treat disease caused by infectious organisms, and drugs and treatment vaccines that modify undesirable activity by the body's own proteins or cells.

ACQUISITION

On August 21, 1998 the Company 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. Pursuant to an Agreement and Plan of Merger dated as of May 12, 1998 VRI became a wholly owned subsidiary of the Company. The Company issued 14,036,400 shares of AVANT's common stock and warrants to purchase 1,811,200 shares of AVANT's common stock in exchange for all of the outstanding common stock of VRI, on the basis of 1.55 shares of AVANT's common stock and .20 of an AVANT warrant for one share of VRI common stock. The acquisition has been accounted for as a purchase. Consequently, the purchase price was allocated to the acquired assets and assumed liabilities based upon their fair value at the date of acquisition. The excess of the purchase price over the tangible assets acquired was assigned to collaborative relationships, work force and goodwill and is being amortized on a straight line basis over 12 to 60 months. An allocation of \$44,630,000 was made to in-process research and development ("IPR&D") which represented purchased in-process technology which had not yet reached technological feasibility and had no alternative future use. The amount was charged as an expense in the Company's financial statements during the third quarter of 1998.

As of the date of acquisition, VRI was engaged in the following six significant research and development projects:

1. Adjumer-TM- -- a vaccine delivery system being developed with a collaborator, Pasteur-Merieux ("PMC"), as an adjuvant to enhance the immune response to injected vaccines.
2. Micromer-TM- -- a vaccine delivery system designed to facilitate the mucosal (intranasal or oral) delivery of antigens and stimulate both the systemic and mucosal branches of the immune system.
3. Vibrio Vec-TM- -- a vaccine and immunotherapeutic system that uses a bacterial vector for the oral delivery of antigens.
4. Rotavirus vaccine -- a vaccine against rotavirus infection being developed with a collaborator, SmithKline Beecham.
5. Herpes vaccine -- a vaccine for the prevention of genital herpes.
6. Therapore-TM- -- a novel technology for the development of immunotherapeutics.

As of the acquisition date, the IPR&D value assigned to each project, the estimated cost to reach technological feasibility and the projected product release date follows:

Project	Adjumer-TM-	Micromer-TM-	Vibrio Vec-TM-	Rotavirus	Herpes	Therapore-TM-
Value Assigned	\$15,450,000	\$ 3,260,000	\$ 2,450,000	\$ 3,120,000	\$ 2,240,000	\$18,110,000
Estimated Project Release Date	2001-2004	2002-2004	2003	2002	2007	2004
Estimated Cost to Complete	\$ 9,500,000	\$ 3,300,000	\$ 900,000	\$ 1,200,000	\$ 1,600,000	\$41,200,000

As of December 31, 1998, technological feasibility had not yet been reached on any of the major projects acquired, and no significant departures from the assumptions included in the valuation analysis had occurred. Substantial additional research and development will be required prior to reaching technological feasibility. In addition, each project will need to successfully complete a series of clinical trials and will need to receive Food & Drug Administration ("FDA") approval prior to commercialization. There can be no assurance these projects will ever reach feasibility or develop into products that can be marketed profitably, nor can there be assurance the Company and its collaborators will be able to develop and commercialize these products before its competitors. If these products are not successfully developed and do not become commercially viable, the Company's financial condition and results of operations could be harmed.

The acquisition of VRI represents the only purchase of historical IPR&D by the Company. As of December 31, 1998, the Company has no immediate plans to acquire additional IPR&D, although the Company expects to raise additional capital, as required, through licensing of technology programs with existing or new collaborative partners, possible business combinations, or issuance of common stock via private placement and public offering.

#### NEW DEVELOPMENTS

Preliminary results from a Phase I clinical trial of the humanized monoclonal antibody, ATM027, in patients with multiple sclerosis became available in the first quarter of 1998. ATM027 is one of the products derived from the Company's T cell antigen receptor (TCAR) program, now under development by Astra AB. The results from the Phase I clinical trial show an effect on the target cells with no serious adverse effects in the study to date. Astra initiated a Phase II clinical trial for ATM027 in patients with multiple sclerosis in 1998.

Positive Phase I/II results of the Company's lead drug candidate, TP10, in patients undergoing lung transplantation were presented by the Company in April 1998. Results in these patients showed that TP10 therapy appears safe and well tolerated and demonstrated significant efficacy. TP10 is the Company's product name for sCR1, a therapeutic compound which inhibits the complement system, a key triggering mechanism for the inflammatory response. In

October 1997 the Company entered into an agreement with Novartis Pharma AG, Basel, Switzerland ("Novartis") relating to the development of TP10 for use in xenotransplantation (animal organs into humans) and allotransplantation (human organs into humans). The Company granted Novartis a two-year option to license TP10 with exclusive worldwide marketing rights (except Japan) in the fields of xenotransplantation and allotransplantation. The Company received its second option fee payment in November 1998 which initiates year two of the option agreement. If Novartis exercises its option to license TP10, it will provide licensing fees, an equity investment and the Company will be entitled to milestone payments and royalties on product sales.

The Company announced positive results of its Phase II efficacy study of its vaccine for the prevention of rotavirus disease in infants in August 1998. Rotavirus is a major cause of acute diarrhea and dehydration in infants for which there are currently no approved vaccines, although several are under development. The rotavirus vaccine is being developed and commercialized in collaboration with SmithKline Beecham ("SmithKline"). Following successful completion of the Phase II trial, SmithKline will assume responsibility for and fund all subsequent clinical and other development activities. The Company will be entitled to receive milestone payments and royalties on vaccine sales under the agreement which grants SmithKline exclusive worldwide marketing rights to the rotavirus vaccine.

The Company received a milestone payment of \$600,000 from the Company's collaborator Pasteur Merieux Connaught ("PMC") in the fourth quarter of 1998. The Company is a party to two license agreements with PMC pursuant to which PMC has been granted the exclusive and co-exclusive right (exclusive, except for the right of the Company or one other person licensed by the Company) to make, use and sell certain of the Company's vaccines. The milestone payment relates to a Phase I clinical trial using the Company's Adjuver-TM--formulated RSV vaccine initiated by PMC in 1998.

#### RESULTS OF OPERATIONS

The Company reported a net loss of \$51,799,700, or \$1.56 per share, for the year ended December 31, 1998, compared to a net loss of \$13,108,000, or \$.52 per share, for the year ended December 31, 1997 and a net loss of \$10,790,100, or \$.50 per share, for the year ended December 31, 1996. The net loss for the year ended December 31, 1998, includes a charge of \$44,630,000 for purchased in-process research and development related to the acquisition of VRI in August 1998. The net loss for the year ended December 31, 1997 includes a charge of \$6,108,800 for the settlement of the Company's litigation with its former landlord and the landlord's mortgagee. The net loss for the year ended December 31, 1996 includes a charge to earnings of \$1,751,600 for the write-off of certain capitalized patent costs relating to the Company's TCAR program and a \$425,300 charge resulting from a severance agreement with the Company's former president and chief executive officer. Excluding the charge for purchased in-process research and development in 1998, the charge for the settlement of the Company's litigation in 1997 and the charges for the write-off of certain capitalized patent costs and the severance agreement in 1996, the net loss for 1998 increased 2.4% to \$7,169,700, or \$.22 per share, compared to \$6,999,200, or \$.28 per share, for 1997 and the net loss for 1997 decreased 18.7% from \$8,613,200, or \$.40 per share in 1996. The weighted average common shares outstanding used to calculate the net loss per common share was 33,177,200 in 1998, 25,139,900 in 1997 and 21,693,400 in 1996.

#### OPERATING REVENUE

Total operating revenue increased \$958,300, or 80.4%, to \$2,150,400 in 1998 from \$1,192,100 in 1997 and increased \$77,600, or 6.9%, in 1997 from \$1,114,500 in 1996.

Product development and licensing revenue increased \$946,900 in 1998, or 82.5%, to \$2,094,500 from \$1,147,600 in 1997. Product development and licensing revenue in 1998 consisted primarily of a \$1,000,000 nonrefundable option fee associated with the Company's agreement with Novartis, a milestone payment of \$600,000 from PMC and \$494,500 received in connection with the Company's Small Business Innovation Research grants ("SBIR"). In 1997, the Company recognized \$250,000 of a nonrefundable option fee from Novartis in product development and licensing revenue, milestone payments totaling \$650,000 from Astra and \$247,600 received in connection with the Company's SBIR grants. Product development and licensing revenue increased \$556,400, or 94.1%, in 1997 from \$591,200 in 1996. Product development and licensing revenue in 1996 consisted of \$453,300 of TCAR project funding from Astra and \$37,900 received in connection with the Company's SBIR grants.

Product sales for 1998 and 1997 totaled \$55,900 and \$44,500, respectively, and were derived from sales of the Company's TRAx-Registered Trademark- test kits. Product sales of \$523,300 in 1996 included sales of the Company's TRAx-Registered Trademark- test kits for the full year combined with sales of research products prior to the sale of the research products and operations of the Company's wholly-owned subsidiary, T Cell Diagnostics, Inc. ("TCD"), in March 1996.

#### OPERATING EXPENSE

Operating expense of \$54,544,300 for 1998 included a charge of \$44,630,000 for purchased in-process research and development in connection with the acquisition of VRI in August 1998. In May 1998, the Company used cash as collateral for a \$750,000 note due November 15, 1999 issued in connection with a settlement agreement with its former landlord and the landlord's mortgagee. In accordance with the settlement agreement, 66,250 shares of the Company's common stock issued to secure the note were returned to the Company. The common stock was valued at \$165,600 as of October 31, 1997 and its return is included as a reduction of operating expense in 1998. Operating expense of \$14,859,600 for 1997 included a charge of \$6,108,800 for the settlement of the Company's litigation with its former landlord and the landlord's mortgagee. Excluding the purchased in-process research and development charge in 1998 and the legal settlement in 1997, operating expense increased \$1,163,500, or 13.3%, to \$9,914,300 for 1998 compared to \$8,750,800 for 1997 and decreased \$3,834,000, or 30.5%, in 1997 from \$12,584,800 in 1996. The increase in operating expense for 1998 compared to 1997 is primarily due to four months of operations of VRI combined with goodwill amortization expense of \$546,400 and the write-off of certain capitalized patent costs relating to the Company's TRAx-Registered Trademark- technology. The decrease in operating expense for 1997 compared to 1996 is primarily due to the charges for the write-off of certain capitalized patent costs and severance agreement recognized in 1996, totaling \$2,176,900, and lower legal costs as a result of the settlement of the Company's litigation combined with lower costs associated with Phase I and Phase I/II clinical trials initiated in 1996.

Research and development expense increased \$446,200, or 8.5%, to \$5,703,100 in 1998 from \$5,256,900 in 1997. The increase in 1998 compared to 1997 is primarily due to four months of operations of VRI, partially offset by costs associated with Phase I and Phase I/II clinical trials of TP10 ongoing in 1997. Research and development expense decreased \$779,600, or 12.9%, in 1997 from \$6,036,500 in 1996. The decrease is primarily due to lower staff costs combined with a reduction in costs associated with Phase I and Phase I/II clinical trials of TP10 initiated in 1996. Included in research and development expense for 1996 is two months of TCD operations prior to the sale of the research products and operations of TCD in March 1996.

General and administrative expense increased \$335,200, or 9.7%, to \$3,808,100 in 1998 compared to \$3,472,900 in 1997. Included in general and administrative expense is a charge of \$294,500 for the write-off of certain capitalized patent costs associated with the Company's TRAx-Registered Trademark- technology. Reductions in legal costs in 1998 primarily due to the settlement of the Company's litigation in 1997 and lower consulting costs in 1998 compared to 1997 were offset by certain general and administrative costs associated with four months of operations of VRI. General and administrative expense decreased \$2,999,700, or 46.3%, in 1997 compared to \$6,472,600 in 1996. The decrease is primarily due to a \$425,300 charge resulting from a severance agreement and a \$1,751,600 write-off of certain capitalized patent costs relating to the Company's TCAR technology in 1996. Lower legal costs in 1997 and reduced license fees resulting from the transfer to Astra of certain of the Company's rights and responsibilities to the TCAR technology in 1997 compared to 1996 also contributed to the decrease in general and administrative expense in 1997 compared to 1996. In addition, included in general and administrative expense for 1996 is two months of TCD operations prior to the sale of the research products and operations of TCD in March 1996.

#### NON-OPERATING INCOME AND EXPENSE

Non-operating income increased \$34,700, or 6.2%, to \$594,200 for 1998 compared to non-operating income for 1997 of \$559,500 and decreased \$120,700, or 17.7%, in 1997 from \$680,200 in 1996. Interest income decreased \$5,400, or 0.9%, to \$571,900 for 1998 compared to \$577,300 for 1997, and decreased \$102,900, or 15.1%, in 1997 compared to \$680,200 in 1996. These reductions in interest income are primarily due to lower cash balances combined with lower interest rates in 1998 and 1997.

## LIQUIDITY AND CAPITAL RESOURCES

The Company's cash, cash equivalents and marketable securities at December 31, 1998 was \$13,840,300 compared to \$6,436,300 at December 31, 1997. Cash used in operations was \$8,852,000 in 1998 compared to \$7,695,400 in 1997 and \$9,675,800 in 1996.

In March 1998, the Company completed a private placement of approximately 2,043,500 shares of common stock to institutional investors at a price of \$1.90 per share. Net proceeds from the common stock issuance totaled approximately \$3,699,800.

In November 1997, the Company reached a settlement of the litigation with its former landlord and the landlord's mortgagee. As part of the settlement, the Company agreed to pay \$858,800 in cash on November 17, 1997 and issue a total of 1,500,000 shares of its common stock. In addition, the Company signed a note for \$750,000, due on November 16, 1998 secured by \$750,000 cash and a note for \$750,000 due November 15, 1999 secured by 132,500 shares of common stock. The total settlement, valued at \$6,108,800, is comprised of the cash and notes totaling \$2,358,800 and common stock valued at \$3,750,000 as of October 31, 1997. The common stock is subject to restrictions on transfer in accordance with the settlement agreement. The settlement agreement also provides for certain registration rights for the shares of common stock to become effective no later than September 30, 1998. Upon such registration, however, the settlement agreement limits the number of shares that may be sold over a given period of time. In May 1998, in accordance with the settlement agreement, the Company elected to secure the note for \$750,000 due November 15, 1999 by \$750,000 cash in exchange for the return of 66,250 shares or one half of the common stock originally used to secure the note. The cash collateral is recorded as short-term restricted cash at December 31, 1998.

In March 1996, the Company received from Endogen, Inc. a convertible subordinated note in the principal amount of \$2,003,000 in connection with the sale of the research products and operations of TCD to Endogen. Pursuant to the terms of the note, on February 10, 1997 the Company converted the \$1,802,700 outstanding principal balance of the note into shares of common stock of Endogen which the Company subsequently sold. The realized gain on the stock sale was not significant.

During 1994, the Company entered into an agreement providing the Company with the right to lease up to \$2,000,000 of equipment for up to a five-year term. The lease arrangement contains certain restrictive covenants, determined at the end of each fiscal quarter which, for the quarter ended September 30, 1995 included a minimum cash, cash equivalents and short-term investments balance of \$10,000,000. At September 30, 1995 the Company's cash, cash equivalents and short-term investment balance was below \$10,000,000. As a result, in accordance with the lease agreement, the Company pledged as collateral cash equal to the amount outstanding on the lease which is to remain in a certificate of deposit until the end of the lease, or as otherwise agreed by the lessor and the Company. At December 31, 1998, the Company had \$365,000 pledged as collateral recorded as long-term restricted cash. In March 1996, the Company repaid approximately \$980,000 of the outstanding obligation under the lease in conjunction with the sale of the research products and operations of its subsidiary.

The Company believes that cash inflows from existing SBIR grants and collaborations, interest income on invested funds and its current cash, cash equivalents and marketable securities, net of restricted amounts, will be sufficient to meet estimated working capital requirements and fund operations beyond December 31, 1999 and into the first half of 2000. The working capital requirements of the Company 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. During 1999, the Company expects to take steps to raise additional capital including, but not limited to, licensing of technology programs with existing or new collaborative partners, possible business combinations, or issuance of common stock via private placement and public offering.



THE STATEMENTS IN THE FOLLOWING SECTION INCLUDE THE "YEAR 2000 READINESS DISCLOSURE" WITHIN THE MEANING OF THE YEAR 2000 INFORMATION AND READINESS DISCLOSURE ACT.

#### YEAR 2000

THIS SECTION CONTAINS CERTAIN STATEMENTS THAT ARE FORWARD-LOOKING STATEMENTS WITHIN THE MEANING OF SECTION 27A OF THE SECURITIES ACT OF 1933, AS AMENDED, AND SECTION 21E OF THE SECURITIES EXCHANGE ACT OF 1934, AS AMENDED. THE COMPANY'S YEAR 2000 COMPLIANCE, AND THE EVENTUAL EFFECTS OF THE YEAR 2000 ON THE COMPANY MAY BE MATERIALLY DIFFERENT THAN CURRENTLY PROJECTED. THIS MAY BE DUE TO, AMONG OTHER THINGS, DELAYS IN THE IMPLEMENTATION OF THE COMPANY'S YEAR 2000 PLAN AND THE FAILURE OF KEY THIRD PARTIES WITH WHOM THE COMPANY HAS A SIGNIFICANT BUSINESS RELATIONSHIP TO ACHIEVE YEAR 2000 COMPLIANCE.

The "Year 2000" issue affects computer systems that have date sensitive programs that may not properly recognize the year 2000. Systems that do not properly recognize such information could generate data or cause a system to fail, resulting in business interruption. The Company is currently developing a plan to provide assurances that its computer systems are Year 2000 compliant, and expects full compliance by the end of 1999. Given the relatively small size of the Company's internal systems and the relatively new hardware, software and operating systems, management does not anticipate any significant delays in becoming Year 2000 compliant. Further, management believes at present that the costs associated with modifications to become Year 2000 compliant will be immaterial to the Company's continued internal operations.

The Year 2000 issue is expected to affect the systems of various entities with which the Company interacts, including the Company's research and development partners, suppliers and vendors. The Company's assessment of third party anticipated risks and responses to those risks is not complete. There can be no assurance that the systems of other companies on which the Company's system rely will be timely converted, or that a failure by another company's system to be Year 2000 compliant would not have a material adverse affect on the Company's business, operating results and financial condition.

The Company does not have a contingency plan in the event Year 2000 compliance cannot be achieved in a timely manner. A contingency plan will be developed upon completion of the Company's Year 2000 compliance assessment.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

	PAGE
Index to Consolidated Financial Statements and Supplementary Schedules	10
Report of Independent Accountants	11
Consolidated Balance Sheet at December 31, 1998 and December 31, 1997	12
Consolidated Statement of Operations for the Years Ended December 31, 1998, December 31, 1997 and December 31, 1996	13
Consolidated Statement of Stockholders' Equity for the Years Ended December 31, 1998, December 31, 1997 and December 31, 1996	14
Consolidated Statement of Cash Flows for the Years Ended December 31, 1998, December 31, 1997, and December 31, 1996	15
Notes to Consolidated Financial Statements	16

REPORT OF INDEPENDENT ACCOUNTANTS

To The Board of Directors and Shareholders of  
AVANT Immunotherapeutics, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income and retained earnings and of cash flows present fairly, in all material respects, the financial position of AVANT Immunotherapeutics, Inc. and its subsidiaries at December 31, 1998 and 1997, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1998, in conformity with generally accepted accounting principles. 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 generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, 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 the opinion expressed above.

PricewaterhouseCoopers LLP  
Boston, Massachusetts  
March 1, 1999

CONSOLIDATED BALANCE SHEET

	DECEMBER 31, 1998	DECEMBER 31, 1997
	-----	-----
ASSETS		
Current Assets:		
Cash and Cash Equivalents	\$ 8,937,200	\$ 6,436,300
Marketable Securities	4,903,100	--
Current Portion Restricted Cash	750,000	750,000
Current Portion Lease Receivable	395,700	--
Prepaid and Other Current Assets, Net	629,700	203,300
	-----	-----
Total Current Assets	15,615,700	7,389,600
Property and Equipment, Net	1,111,400	364,500
Restricted Cash	365,000	525,000
Long-Term Lease Receivable	827,300	--
Other Assets	4,730,700	1,547,500
	-----	-----
Total Assets	\$ 22,650,100	\$ 9,826,600
	=====	=====
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current Liabilities:		
Accounts Payable	\$ 363,700	\$ 201,200
Accrued Expenses	1,184,700	1,059,900
Deferred Revenue	750,000	750,000
Short-Term Note Payable	750,000	750,000
Current Portion Lease Payable	269,200	--
	-----	-----
Total Current Liabilities	3,317,600	2,761,100
	-----	-----
Long-Term Note Payable	--	750,000
Long-Term Lease Payable	562,900	--
	-----	-----
Commitments and Contingent Liabilities (Notes 3 and 13)		
Stockholders' Equity:		
Common Stock, \$.001 Par Value 75,000,000 Shares Authorized; 42,512,400 Issued and 42,508,600 Outstanding at December 31, 1998;		
26,487,400 Issued and 26,477,700 Outstanding at December 31, 1997	42,500	26,500
Additional Paid-In Capital	140,777,200	76,561,400
Less: 3,800 and 9,700 Common Treasury Shares at Cost at December 31, 1998 and 1997, respectively	(13,800)	(35,800)
Accumulated Deficit	(122,036,300)	(70,236,600)
	-----	-----
Total Stockholders' Equity	18,769,600	6,315,500
	-----	-----
Total Liabilities and Stockholders' Equity	\$ 22,650,100	\$ 9,826,600
	=====	=====

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

CONSOLIDATED STATEMENT OF OPERATIONS

	YEAR ENDED DECEMBER 31, 1998	YEAR ENDED DECEMBER 31, 1997	YEAR ENDED DECEMBER 31, 1996
	-----	-----	-----
<b>OPERATING REVENUE:</b>			
Product Development and Licensing Agreements	\$ 2,094,500	\$ 1,147,600	\$ 591,200
Product Sales	55,900	44,500	523,300
	-----	-----	-----
Total Operating Revenue	2,150,400	1,192,100	1,114,500
	-----	-----	-----
<b>OPERATING EXPENSE:</b>			
Cost of Product Sales	22,300	21,000	358,700
Research and Development	5,703,100	5,256,900	6,036,500
Charge for Purchased In-Process Research & Development	44,630,000	--	--
General and Administrative	3,808,100	3,472,900	6,472,600
Legal Settlement	(165,600)	6,108,800	--
Gain on Sale of Portion of Diagnostic Business	--	--	(283,000)
Amortization of Goodwill	546,400	--	--
	-----	-----	-----
Total Operating Expense	54,544,300	14,859,600	12,584,800
	-----	-----	-----
Operating Loss	(52,393,900)	(13,667,500)	(11,470,300)
Non-Operating Income (Expense), Net	594,200	559,500	680,200
	-----	-----	-----
Net Loss	\$ (51,799,700)	\$ (13,108,000)	\$ (10,790,100)
	=====	=====	=====
Basic and Diluted Net Loss Per Common Share	\$ (1.56)	\$ (0.52)	\$ (0.50)
	=====	=====	=====
Weighted Average Common Shares Outstanding	33,177,200	25,139,900	21,693,400
	=====	=====	=====

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

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY  
FOR THE YEARS ENDED DECEMBER 31, 1998, 1997 AND 1996

	Shares	Common Stock Par Value	Additional Paid-In Capital	Treasury Stock Cost	Accumulated Deficit	Total Stockholders' Equity
	-----	-----	-----	-----	-----	-----
BALANCE AT DECEMBER 31, 1995	19,904,700	\$ 19,900	\$ 62,399,200	\$ (80,500)	\$ (46,338,500)	\$ 16,000,100
Issuance at \$.60 to \$3.56 per Share upon Exercise of Stock Options	60,700	100	161,600	--	--	161,700
Employee Stock Purchase Plan Issuance at \$2.71 per Share	--	--	(3,000)	11,500	--	8,500
Net Proceeds from Stock Issuance	5,000,000	5,000	10,063,700	--	--	10,068,700
Compensation Expense Associated with Stock Options	--	--	170,300	--	--	170,300
Net Loss for the Year Ended December 31, 1996	--	--	--	--	(10,790,100)	(10,790,100)
	-----	-----	-----	-----	-----	-----
BALANCE AT DECEMBER 31, 1996	24,965,400	\$ 25,000	\$ 72,791,800	\$ (69,000)	\$ (57,128,600)	\$ 15,619,200
Issuance at \$1.81 to \$2.13 per Share upon Exercise of Stock Options	12,000	--	22,400	--	--	22,400
Employee Stock Purchase Plan Issuance at \$1.38 and \$1.39 per Share	--	--	(20,700)	33,200	--	12,500
Issuance at \$2.50 per Share for Settlement of Litigation	1,500,000	1,500	3,748,500	--	--	3,750,000
Compensation Expense Associated with Issuance at \$1.94 per Share	10,000	--	19,400	--	--	19,400
Net Loss for the Year Ended December 31, 1997	--	--	--	--	(13,108,000)	(13,108,000)
	-----	-----	-----	-----	-----	-----
BALANCE AT DECEMBER 31, 1997	26,487,400	\$ 26,500	\$ 76,561,400	\$ (35,800)	\$ (70,236,600)	\$ 6,315,500
Issuance at \$0.60 to \$1.81 per Share upon Exercise of Stock Options	11,400	--	15,300	--	--	15,300
Employee Stock Purchase Plan Issuance at \$1.65 and \$1.94 per Share	--	--	(10,700)	22,000	--	11,300
Returned Shares from Settlement of Litigation at \$2.50 per Share	(66,300)	--	(165,600)	--	--	(165,600)
Net Proceeds from Stock Issuance	2,043,500	2,000	3,697,800	--	--	3,699,800
Share Issued for Acquisition of Virus Research Institute, Inc.	14,036,400	14,000	60,679,000	--	--	60,693,000
Net Loss for the Year Ended December 31, 1998	--	--	--	--	(51,799,700)	(51,799,700)
	-----	-----	-----	-----	-----	-----
BALANCE AT DECEMBER 31, 1998	42,512,400	\$ 42,500	\$ 140,777,200	\$ (13,800)	\$ (122,036,300)	\$ 18,769,600
	=====	=====	=====	=====	=====	=====

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

CONSOLIDATED STATEMENT OF CASH FLOWS

	YEAR ENDED DECEMBER 31, 1998	YEAR ENDED DECEMBER 31, 1997	YEAR ENDED DECEMBER 31, 1996
Increase in Cash and Cash Equivalents	-----	-----	-----
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net Loss	\$ (51,799,700)	\$ (13,108,000)	\$ (10,790,100)
Adjustments to Reconcile Net Loss to Cash Used by Operating Activities:			
Depreciation and Amortization	989,800	353,800	464,800
Write-off of Capitalized Patent Costs	337,000	51,100	1,751,600
Decrease in Collaborator Advance	--	--	(181,500)
Non-Cash Portion of Litigation Settlement	(165,600)	5,250,000	--
Compensation Expense Associated with Stock Issuance	--	19,400	--
Compensation Expense Associated with Stock Options	--	--	170,300
Gain on Sale of Research Products and Operations of T Cell Diagnostics, Inc.	--	--	(283,000)
Gain on Sale of Equipment	(22,300)	--	--
Charge for Purchased In-Process Research and Development	44,630,000	--	--
Changes in Assets and Liabilities, Net of Acquisition:			
Increase in Current Portion Restricted Cash	--	(750,000)	--
Prepaid and Other Current Assets	(1,529,900)	81,700	109,400
Accounts Payable and Accrued Expenses	(1,291,300)	(343,400)	(796,200)
Deferred Revenue	--	750,000	(121,100)
Net Cash Used by Operating Activities	----- (8,852,000)	----- (7,695,400)	----- (9,675,800)
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Acquisition of Property and Equipment	(294,800)	(76,900)	(135,200)
Proceeds from the Sale of Equipment	25,200	--	--
Redemption of Marketable Securities	4,463,000	--	--
Increase in Patents and Licenses	(426,000)	(381,200)	(507,400)
Decrease in Long-Term Restricted Cash, Net	160,000	160,000	165,000
Cash Received from Acquisition of Virus Research Institute, Inc.	4,391,500	--	--
Payment of Note Payable	(750,000)	--	--
Payment Received on Convertible Note Receivable	--	1,802,700	200,300
Other	57,600	400	30,800
Net Cash Provided (Used) by Investing Activities	----- 7,626,500	----- 1,505,000	----- (246,500)
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Net Proceeds from Stock Issuance	3,711,100	12,500	10,077,200
Proceeds from Exercise of Stock Options	15,300	22,400	161,700
Net Cash Provided by Financing Activities	----- 3,726,400	----- 34,900	----- 10,238,900
Increase (Decrease) in Cash and Cash Equivalents	----- 2,500,900	----- (6,155,500)	----- 316,600
Cash and Cash Equivalents at Beginning of Period	----- 6,436,300	----- 12,591,800	----- 12,275,200
Cash and Cash Equivalents at End of Period	----- \$ 8,937,200	----- \$ 6,436,300	----- \$ 12,591,800

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

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(A) NATURE OF BUSINESS

AVANT Immunotherapeutics, Inc. (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. The Company develops and commercializes products on a proprietary basis and in collaboration with established pharmaceutical partners, including Novartis Pharma AG, Astra AB, Yamanouchi Pharmaceutical Co., Ltd., Pasteur Merieux Connaught, and SmithKline Beecham.

In March 1998, the Company completed a private placement of 2,043,500 shares of common stock to institutional investors at a price of \$1.90 per share. Net proceeds from the common stock issuance totaled approximately \$3,699,800. On August 21, 1998, the Company acquired all of the outstanding capital stock of Virus Research Institute, Inc. ("VRI"), a company engaged in the discovery and development of (i) systems for the delivery of vaccines and immunotherapeutics and (ii) novel vaccines (see Note 15).

The Company's cash, cash equivalents and marketable securities at December 31, 1998 was \$13,840,300. The Company's working capital at December 31, 1998 was \$12,298,100. The Company incurred a loss of \$51,799,700 for the year ended December 31, 1998, which includes a charge of \$44,630,000 for purchased in-process research and development related to the acquisition of VRI (see Note 15). The Company believes that cash inflows from existing grants and collaborations, interest income on invested funds and its current cash, cash equivalents, and marketable securities will be sufficient to meet estimated working capital requirements and fund operations beyond December 31, 1999. The working capital requirements of the Company 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. During 1999, the Company expects to take steps to raise additional capital including, but not limited to, licensing of technology programs with existing or new collaborative partners, possible business combinations, or issuance of common stock via private placement and public offering. There can be no assurances that such efforts will be successful.

In March 1996, the Company sold substantially all of the assets of its wholly-owned subsidiary, T Cell Diagnostics, Inc. ("TCD") while retaining all rights to the TRAx-Registered Trademark- product franchise. The Company continued to commercialize the TRAx-Registered Trademark- line of diagnostic products which are used in the detection and monitoring of immune-related disorders through 1998. The Company is currently focusing its efforts on establishing a partnership for the TRAx-Registered Trademark- technology.

(B) BASIS OF PRESENTATION

The consolidated financial statements include the accounts of AVANT Immunotherapeutics, Inc. and its wholly owned subsidiaries, Virus Research Institute, Inc., from the date of purchase, and T Cell Diagnostics, Inc. All intercompany transactions have been eliminated.

(C) CASH EQUIVALENTS AND INVESTMENTS

The Company considers all highly liquid investments purchased with a maturity of three months or less to be cash equivalents. Short-term investments are those with maturities in excess of three months but less than one year. All cash equivalents and short-term investments have been classified as available for sale and are reported at fair market value with unrealized gains and losses included in stockholders' equity.

In addition to cash equivalents, the Company has investments in corporate and municipal debt securities that are classified in the balance sheet as held-to-maturity in accordance with the provisions of Statement of Financial Accounting Standards No. 115 ("SFAS 115"), "Accounting for Certain Instruments in Debt and Equity Securities."



Held-to-maturity investments are securities the Company has the positive intent and ability to hold to maturity. These securities are accounted for at amortized cost, which approximates fair value.

The Company invests its nonoperating 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 that maintain safety and liquidity.

(D) FAIR VALUE OF FINANCIAL INSTRUMENTS

The Company enters into various types of financial instruments in the normal course of business. Fair values for cash, cash equivalents, short-term investments, accounts and notes receivable, accounts and notes payable and accrued expenses approximate carrying value at December 31, 1998 and 1997, due to the nature and the relatively short maturity of these instruments.

(E) REVENUE RECOGNITION

The Company has entered into various license and development agreements with pharmaceutical and biotechnology companies. Nonrefundable revenue derived from such agreements is recognized over the specified development period as research and development or discovery activities are performed. Cash received in advance of activities being performed is recorded as deferred revenue. Signing fees, received by the Company for entering into license and development agreements are recognized when received if the fees are nonrefundable and the Company has no obligations to perform under the applicable agreement. Nonrefundable milestone fees are recognized when they are earned in accordance with the performance requirements and contractual terms. Revenues from product sales are recorded when the product is shipped.

(F) RESEARCH AND DEVELOPMENT COSTS

Research and development costs are expensed as incurred.

(G) INVENTORIES

Inventories are stated at the lower of cost or market. Cost is determined using the first-in, first-out (FIFO) method.

(H) PROPERTY AND EQUIPMENT

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. Leasehold improvements are amortized over the shorter of the estimated useful life or the noncancelable term of the related lease.

(I) LICENSES, PATENTS AND TRADEMARKS

Included in other assets are the costs of purchased licenses and certain costs associated with patents and trademarks which are capitalized and amortized over the shorter of the estimated useful lives or ten years using the straight-line method. The Company periodically evaluates the recoverability of these assets in accordance with Statement of Financial Accounting Standards No. 121 ("SFAS 121"), "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of".

(J) LOSS PER SHARE

In February 1997, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 128 ("SFAS 128"), "Earnings per Share", which changed the method of calculating earnings per share. SFAS 128, which the Company adopted in the fourth quarter of 1997, requires the presentation of "basic" earnings per share and "diluted" earnings per share. As a result of the Company's net loss, both basic and diluted earnings per share are computed by dividing the net loss available to common shareholders by the weighted average number of shares of common stock outstanding.

(K) STOCK COMPENSATION

The Company's employee stock compensation plans are accounted for in accordance with Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees." The Company adopted the disclosure requirements of Statement of Financial Accounting Standards No. 123 ("SFAS 123"), "Accounting for Stock-Based Compensation" (see Note 7).

(L) 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 certain reported amounts and disclosures. Actual results could differ from those estimates.

2. SHORT-TERM INVESTMENTS AND RESTRICTED CASH

The Company invests in high quality, short-term investments which are considered highly liquid and are available to support current operations. The Company also invests in high quality, debt securities which are classified as held-to-maturity. At December 31, 1998 and 1997, the Company's investments that met the definition of cash equivalents were recorded at cost, which approximated fair value.

At December 31, 1998 and 1997, the Company had pledged as collateral \$750,000 which is recorded as current portion restricted cash and \$365,000 and \$525,000, respectively, which is recorded as long-term restricted cash. Pursuant to the terms of the settlement agreement between the Company and its former landlord, the Company pledged as collateral \$750,000 at December 31, 1998 and 1997 (see Note 13). The Company also has \$365,000 and \$525,000 pledged as collateral at December 31, 1998 and 1997, respectively, in accordance with the terms of the operating lease (see Note 3).

3. PROPERTY, EQUIPMENT AND LEASES

Property and equipment includes the following:

	DECEMBER 31, 1998	DECEMBER 31, 1997
	-----	-----
Laboratory Equipment	\$ 2,480,000	\$ 1,834,200
Office Furniture and Equipment	1,148,200	1,013,700
Leasehold Improvements	393,600	255,000
	-----	-----
Property and Equipment, Total	4,021,800	3,102,900
Less Accumulated Depreciation and Amortization	(2,910,400)	(2,738,400)
	-----	-----
	\$ 1,111,400	\$ 364,500
	-----	-----

Depreciation expense related to equipment and leasehold improvements was approximately \$267,600, \$224,000 and \$290,800 for the years ended December 31, 1998, 1997 and 1996, respectively.

In May 1996, the Company entered into a six-year lease for laboratory and office space in Needham, Massachusetts. The lease replaced two-year lease and sublease agreements entered into in March 1995 for the same location and increased the amount of office and laboratory space available. In March 1996, the Company sold certain property and equipment to Endogen as part of the sale of the research products and operations of TCD. In addition, certain lease obligations of the Company were assigned to Endogen in conjunction with the sale (see Note 14).

In August 1994, the Company entered into a lease agreement providing the Company with the right to lease up to \$2,000,000 of equipment for up to a five-year term. The lease agreement contains certain restrictive covenants determined at the end of each fiscal quarter which, for the quarter ended September 30, 1995, included a minimum cash, cash equivalents and short-term investments balance of \$10,000,000. At September 30, 1995 the Company's cash and cash equivalents balance was below \$10,000,000. As a result, in accordance with the lease agreement, the

Company pledged cash as collateral to the lessor equal to the amount outstanding on the lease which is to remain in a certificate of deposit until the end of the lease or as otherwise agreed by the lessor and the Company. The Company has recorded \$365,000 and \$525,000 as long-term restricted cash at December 31, 1998 and 1997, respectively.

Obligations for base rent, net of sublease income, under these and other noncancelable operating leases as of December 31, 1998 are approximately as follows:

Year ending December 31, 1999	\$ 760,000
2000	689,600
2001	668,200
2002	252,100
2003	--
Thereafter	--
	-----
Total minimum lease payments	\$2,369,900
	-----

The Company's total rent expense was approximately \$909,500, \$851,400 and \$903,100 for the years ended December 31, 1998, 1997 and 1996, respectively.

#### 4. OTHER ASSETS

Other assets include the following:

	DECEMBER 31, 1998	DECEMBER 31, 1997
	-----	-----
Capitalized Patent Costs	\$ 1,890,300	\$ 1,900,700
Accumulated Amortization	(595,500)	(519,100)
	-----	-----
Capitalized Patent Costs, Net	1,294,800	1,381,600
Goodwill and Other Intangible Assets, Net	3,289,300	--
Other Non Current Assets	146,600	165,900
	-----	-----
	\$ 4,730,700	\$ 1,547,500
	=====	=====

In December 1998, in accordance with SFAS 121, the Company evaluated and subsequently wrote off approximately \$294,500 of capitalized patent costs relating to its TRAX-Registered Trademark- test kit program which is included in operating expense as general and administrative expense for the year ended December 31, 1998.

During the second quarter of 1996, as part of the Company's realignment of certain of its operations, the Company suspended internal funding of the research and development of its T cell antigen receptor program pending completion of negotiations to transfer certain of its patent and license rights related to such technology to Astra AB. In June 1996, in accordance with SFAS 121, the Company evaluated and subsequently wrote off approximately \$1,751,600 of capitalized patent costs relating to its T cell antigen receptor program which is included in operating expense as general and administrative expense for the year ended December 31, 1996.

Amortization expense for the years ended December 31, 1998, 1997 and 1996 relating to the capitalized costs of purchased licenses, patents and trademarks was approximately \$175,800, \$129,800 and \$174,000, respectively. Goodwill amortization expense for the year ended December 31, 1998 was approximately \$546,400.

5. ACCRUED EXPENSES

Accrued expenses include the following:

	DECEMBER 31, 1998	DECEMBER 31, 1997
	-----	-----
Accrued License Fees	\$ 60,000	\$ 60,000
Accrued Payroll and Employee Benefits	258,700	222,600
Accrued Clinical Trials	195,500	448,100
Accrued Legal	263,800	20,600
Other Accrued Expenses	406,700	308,600
	-----	-----
	\$1,184,700	\$1,059,900
	=====	=====

6. INCOME TAXES

	YEAR ENDED DECEMBER 31,		
	1998	1997	1996
	-----	-----	-----
Income tax benefit:			
Federal	\$ 2,444,900	\$ 4,539,100	\$ 3,696,100
State	198,900	529,000	388,000
	-----	-----	-----
Deferred tax assets valuation allowance	2,643,800 (2,643,800)	5,068,100 (5,068,100)	4,084,100 (4,084,100)
	-----	-----	-----
	\$ --	\$ --	\$ --
	=====	=====	=====

Deferred tax assets are comprised of the following:

	DECEMBER 31, 1998	DECEMBER 31, 1997
	-----	-----
Net Operating Loss Carryforwards	\$ 42,591,900	\$ 25,775,200
Tax Credit Carryforwards	4,139,300	3,143,800
Other	1,626,500	1,521,500
	-----	-----
Gross Deferred Tax Assets	48,357,700	30,440,500
Deferred Tax Assets Valuation Allowance	(48,357,700)	(30,440,500)
	-----	-----
	\$ --	\$ --
	=====	=====

Reconciliation between the amount of reported income tax expenses and the amount computed using the U.S. Statutory rate of 35% follows:

	1998 -----	1997 -----	1996 -----
Loss at Statutory Rates	\$(2,313,200)	\$(4,587,800)	\$(3,776,500)
Research and Development Credits	(298,100)	(172,100)	(189,400)
State tax benefit, net of federal tax liabilities	(269,700)	(591,500)	(337,400)
Other	237,200	283,300	219,200
Benefit of losses and credits not recognized, increase in valuation allowance	2,643,800	5,068,100	4,084,100
	-----	-----	-----
	\$ --	\$ --	\$ --
	=====	=====	=====

The Company has provided a full valuation allowance for deferred tax assets as management has concluded that it is more likely than not that the Company will not recognize any benefits from its net deferred tax asset. The timing and amount of future earnings will depend on numerous factors, including the Company's future profitability. The Company will assess the need for a valuation allowance as of each balance sheet date based on all available evidence.

At December 31, 1998, the Company has U.S. net operating loss carryforwards of \$73,405,802, U.S. capital loss carryforwards of \$1,852,300, and U.S. tax credits of \$2,848,400 which expire at various dates from 1999 through 2010. Under the Tax Reform Act of 1986, certain substantial changes in the Company's ownership could result in an annual limitation on the amount of net operating loss carryforwards, research and development tax credits, and capital loss carryforwards which could be utilized.

#### 7. STOCKHOLDERS' EQUITY

##### (A) PUBLIC AND PRIVATE STOCK OFFERINGS

On March 24, 1998, the Company completed a private placement of 2,043,500 newly issued shares of common stock. Net proceeds were approximately \$3,699,800 after deducting all associated expenses.

On August 26, 1996, the Company completed a public offering of 5,000,000 newly issued shares of common stock. Net proceeds were approximately \$10,068,700 after deducting all associated expenses.

##### (B) PREFERRED STOCK

At December 31, 1998 and 1997, the Company had authorized preferred stock comprised of 1,163,102 shares of convertible Class B and 3,000,000 shares of convertible Class C of which 350,000 shares has been designated as Class C-1 Junior Participating Cumulative, the terms of which are to be determined by the Company's Board of Directors. There was no preferred stock outstanding at December 31, 1998 and 1997.

##### (C) WARRANTS

The Company has issued warrants to purchase common stock in connection with the acquisition of VRI on August 21, 1998. The warrants are exercisable at \$6.00 per share and expire August 22, 2003. In connection with the acquisition of VRI, the Company also assumed the obligations of VRI with respect to each outstanding warrant to purchase VRI common stock (a "VRI Warrant"). Each VRI Warrant assumed by the Company, which will continue to have, and be subject to, the terms and conditions of the applicable warrant agreements and warrant certificates, has been adjusted

consistent with the ratio at which the Company's common stock was issued in exchange for VRI common stock in the acquisition.

Warrants outstanding at December 31, 1998 are as follows:

Security	Number of Shares	Exercise Price Per Share	Expiration Date
Common stock	35,657	\$ .62	February 9, 2004
Common stock	76,842	1.26	December 14, 2005
Common stock	17,050	7.10	April 12, 2001
Common stock	1,811,843	6.00	August 22, 2003

(D) STOCK COMPENSATION AND EMPLOYEE STOCK PURCHASE PLANS

STOCK COMPENSATION

The Company's 1991 Stock Compensation Plan (the "1991 Plan"), which is an amendment and restatement of the Company's 1985 Incentive Option 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 Plan allows for a maximum of 3,700,000 shares of common stock to be issued prior to December 1, 2001. The Board of Directors determines the term of each option, option price, number of shares for which each option is granted and the rate at which each option vests. 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 the Company). The exercise price of stock options shall not be less than the fair market value of the common stock at the date of grant (110% of fair market value for options granted to holders of more than 10% of the voting stock of the Company).

In connection with the acquisition of VRI, the Company assumed the obligations of VRI under VRI's 1992 Equity Incentive Plan (the "VRI Plan") and each outstanding option to purchase VRI common stock (a "VRI Stock Option") granted under the VRI Plan. Each VRI Stock Option assumed by the Company is deemed to constitute an option to acquire, on the same terms and conditions as were applicable under the VRI Plan, shares of the Company's common stock which has been adjusted consistent with the ratio at which the Company's common stock was issued in exchange for VRI's common stock in the acquisition. As of the date the acquisition was completed the Company assumed options to acquire 1,532,055 shares of the Company's common stock at a weighted average exercise price of \$2.34.

EMPLOYEE STOCK PURCHASE PLAN

The 1994 Employee Stock Purchase Plan (the "1994 Plan") was adopted on June 30, 1994. All full time employees of the Company are eligible to participate in the 1994 Plan. A total of 150,000 shares of common stock are reserved for issuance under this plan. Under the 1994 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 public offering 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 the beginning of the offering period or the applicable exercise date.

A summary of stock option activity for the years ended December 31, 1998, 1997 and 1996 is as follows:

	1998		1997		1996	
	Shares	Weighted Average Exercise Price Per Share	Shares	Weighted Average Exercise Price Per Share	Shares	Weighted Average Exercise Price Per Share
Outstanding at January 1,	1,773,242	\$ 3.20	2,303,196	\$ 5.94	2,516,313	\$ 5.82
Granted	638,250	1.99	492,750	1.77	472,600	2.82
Assumed in acquisition	1,532,055	2.34	--	--	--	--
Exercised	(11,355)	1.34	(12,000)	1.86	(60,710)	2.66
Canceled	(577,484)	2.82	(1,010,704)	8.78	(625,007)	3.39
Outstanding at December 31,	3,354,708	\$ 2.65	1,773,242	\$ 3.20	2,303,196	\$ 5.94
At December 31,						
Options exercisable	2,542,950		1,039,437		1,740,310	
Available for grant	1,095,206		1,296,716		678,762	
Weighted average fair value of options granted during year		\$ 1.10		\$ 0.92		\$ 1.26

The following table summarizes information about the stock options outstanding at December 31, 1998:

Range of Exercise Prices	Options Outstanding		
	Number Outstanding at December 31, 1998	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price per Share
\$ 0.10 - 0.64	698,631	5.46	\$0.63
0.95 - 1.97	797,515	8.97	1.78
2.03 - 2.75	575,190	7.99	2.55
2.93 - 4.04	758,091	6.77	3.57
4.06 - 7.81	525,281	5.50	5.45
\$ 0.10 - 7.81	3,354,708		

Range of Exercise Prices	Options Exercisable	
	Number Exercisable at December 31, 1998	Weighted Average Exercise Price per Share
\$ 0.10 - 0.64	698,631	\$0.63
0.95 - 1.97	194,642	1.76
2.03 - 2.75	414,942	2.56
2.93 - 4.04	710,204	3.59
4.06 - 7.81	524,531	5.45
\$ 0.10 - 7.81	2,542,950	

FAIR VALUE DISCLOSURES

Had compensation costs for the Company's stock compensation plans been determined based on the fair value at the grant dates, consistent with SFAS 123, the Company's net loss, and net loss per share for the years ending December 31, 1998, 1997 and 1996 would be as follows:

	1998 ----	1997 ----	1996 ----
Net Loss:			
As reported	\$51,799,700	\$13,108,000	\$10,790,100
Pro forma	52,150,800	13,514,100	11,269,900
Basic and Diluted Net Loss			
Per Share:			
As reported	\$1.56	\$0.52	\$0.50
Pro forma	1.57	0.54	0.52

The fair value of the option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

	1998 ----	1997 ----	1996 ----
Expected dividend yield	0%	0%	0%
Expected stock price volatility	63%	57%	51%
Risk-free interest rate	4.5% - 5.6%	5.5% - 6.4%	4.9% - 6.7%
Expected option term	2.5 Years	2.7 Years	2.6 Years

Because the determination of the fair value of all options granted includes an expected volatility factor in addition to the factors detailed in the table above, and because additional option grants are expected to be made each year, the above pro forma disclosures are not representative of pro forma effects of reported net income for future years.

(E) SHAREHOLDER RIGHTS PLAN

On November 10, 1994, the Company's Board of Directors declared a dividend of one preferred share purchase right for each share of common stock outstanding. Each right entitles the holder to purchase from the Company one-one thousandth of a share of Series C-1 Junior Participating Cumulative Preferred Stock (a "Unit"), par value \$.01 at a price of \$16.00 per one-one thousandth of a share, subject to certain adjustments. The Units are exercisable only if a person or a group acquires 15% or more of the outstanding common stock of the Company or commences a tender offer which would result in the ownership of 15% or more of the Company's outstanding common stock. Once a Unit becomes exercisable, the plan allows the Company's shareholders to purchase common stock at a substantial discount. Unless earlier redeemed, the Units expire on November 10, 2004. The Company is entitled to redeem the Units at \$.01 per Unit subject to adjustment for any stock split, stock dividend or similar transaction.

As of December 31, 1998 and 1997, the Company has authorized the issuance of 350,000 shares of Series C-1 Junior Participating Cumulative Preferred Stock for use in connection with the shareholder rights plan.

(F) SEVERANCE AGREEMENT CHARGE

On May 29, 1996, the Company announced changes in its senior management. As part of the reorganization, the Company recorded a \$425,300 charge to earnings resulting from a severance agreement with the Company's former President and Chief Executive Officer. The charge included a \$255,000 severance payment and a non-cash charge of approximately \$170,300 relating to the acceleration of certain stock option vesting rights.



(G) ACQUISITION OF VIRUS RESEARCH INSTITUTE, INC.

The Company issued 14,036,400 shares of the Company's common stock and warrants to purchase approximately 1,811,200 shares of the Company's common stock on August 21, 1998, in exchange for all of the outstanding common stock of VRI (see Note 15).

8. RESEARCH AND LICENSING AGREEMENTS

The Company has entered into licensing agreements with several universities and research organizations. Under the terms of these agreements, the Company has received licenses or options to license technology, certain patents or patent applications. The Company made required payments of nonrefundable license fees and royalties which amounted to approximately \$100,000, \$65,000 and \$205,000 for the years ended December 31, 1998, 1997 and 1996, respectively.

9. PRODUCT DEVELOPMENT AND DISTRIBUTION AGREEMENTS

The Company's product development revenues were received from contracts with different organizations. Total revenue received by the Company in connection with these contracts for the years ended December 31, 1998, 1997 and 1996 were approximately \$2,094,500, \$1,147,600 and \$591,200, respectively. A summary of these contracts follows:

(A) NOVARTIS PHARMA AG

In October 1997, the Company entered into an option agreement with Novartis Pharma AG ("Novartis"), a worldwide pharmaceutical company headquartered in Basel, Switzerland, relating to the development of TP10 for use in xenotransplantation (animal organs into humans) and allotransplantation (human to human). The agreement granted Novartis a two-year option to license TP10 with exclusive worldwide marketing rights (except Japan) in the fields of xenotransplantation and allotransplantation. In exchange for granting the two-year option, the Company will receive annual option fees and supplies of clinical grade TP10 with a combined value of up to \$5 million. Should Novartis exercise its option to license TP10 and continue development within the fields of xenotransplantation and allotransplantation, it will provide equity to the Company in the form of investment, licensing fees and milestone payments based upon attainment of certain development and regulatory goals. The Company may also receive from Novartis funding for research as well as royalty payments on eventual products sales.

Under the terms of the agreement Novartis paid the Company a non-refundable option fee related to the first option period which commenced in October 1997. In November 1998, the Company received an option fee payment from Novartis which initiates year two of the option agreement. During the option period, Novartis is granted sole access to the technology for use in xenotransplantation and allotransplantation. The Company is recording the option fee as revenue over the one year option period.

(B) ASTRA AB

In January 1992, the Company entered into a product development and distribution agreement with Astra AB ("Astra"), a worldwide pharmaceutical company headquartered in Sodertalje, Sweden, for the joint development and marketing of therapeutic products using the Company's proprietary T cell antigen receptor ("TCAR") technology. The products developed exclusively and jointly with Astra were monoclonal antibodies and protein-derived immunomodulators that may have efficacy in treating autoimmune diseases such as multiple sclerosis, Crohn's disease, and rheumatoid arthritis.

In June 1996, the Company suspended further internal funding of the research and development of the TCAR program. In December 1996, the Company further amended its agreement with Astra to transfer certain of its rights to the TCAR technology to Astra in addition to sole responsibility for further development and commercialization of the TCAR technology. Under the amended agreement, the Company received an initial signing fee of \$100,000 and could receive future milestone and royalty payments upon Astra's successful development and commercialization of the TCAR technology.

The Company recognized revenue from milestone payments in 1997 of \$650,000 and TCAR funding revenue of \$453,400 in 1996 which included \$181,600 from the reduction of the collaborator advance liability. The funds were advanced from Astra for the expansion of additional space dedicated to joint TCAR product research.

(C) CYTOTHERAPEUTICS

In April 1996, the Company licensed portions of its patent and technology rights regarding Complement Receptor 1 ("CR1") to CytoTherapeutics, Inc. for use in CytoTherapeutics' cell-based products for the delivery of therapeutic substances to the central nervous system. Under the agreement, the Company granted non-exclusive rights for the use of CR1 in any encapsulated-cell product. The license does not include rights to use CR1 for therapeutic effects. In 1996, the Company received a non-refundable \$100,000 signing fee and may receive additional milestone payments and royalty payments from commercialized products resulting from the license.

(D) PASTEUR MERIEUX CONNAUGHT

In December 1994, AVANT entered into a license agreement with Pasteur Merieux Connaught ("PMC") which granted PMC the exclusive right to make, use and sell Adjumer-TM--formulated vaccines for prevention of influenza, Lyme disease and diseases caused by meningococcus and the co-exclusive right (exclusive, except for the right of AVANT or one other person licensed by AVANT) to make, use and sell Adjumer-TM--formulated vaccines directed against five other pathogens, including pneumococcus and RSV. VRI has retained rights to make, use, sell and license Adjumer-TM--formulated vaccines against the subject infections in most of the Far East, including China and Japan, subject to certain geographical extension rights available to PMC. In December 1998, the Company received a milestone payment of \$600,000 from PMC upon commencement of the first Phase I clinical trial of the Adjumer-TM--formulated vaccine for RSV.

10. NON-OPERATING INCOME (EXPENSE)

Non-operating income (expense) includes the following:

	YEAR ENDED DECEMBER 31,		
	1998	1997	1996
	-----	-----	-----
Interest and Dividend Income	\$ 571,900	\$ 577,300	\$ 680,200
Gain on Sale of Equipment	22,300	--	--
Gain on Sale of Investments	--	(17,800)	--
	-----	-----	-----
	\$ 594,200	\$ 559,500	\$ 680,200
	=====	=====	=====

11. 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 the Company. Participants may make tax deferred contributions up to 15%, or \$10,000, of their total salary in 1998. The Company may, at its discretion, make contributions to the plan each year matching up to 1% of the participant's total annual salary. Company contributions amounted to \$20,100, \$20,600 and \$33,000 for the years ended December 31, 1998, 1997 and 1996, respectively.

12. FOREIGN SALES

Foreign Sales:

Product sales were generated geographically as follows:

NET PRODUCT SALES FOR THE TWELVE MONTHS ENDED					
	EUROPE	USA	ASIA	OTHER	TOTAL
December 31, 1998	\$ 5,000	\$ 31,000	\$ --	\$ 20,000	\$ 56,000
December 31, 1997	5,000	29,000	--	11,000	45,000
December 31, 1996	145,000	240,000	130,000	8,000	523,000

13. LITIGATION

In December 1994, the Company filed a lawsuit in the Superior Court of Massachusetts against the landlord of its former Cambridge, Massachusetts headquarters to recover the damages incurred by the Company resulting from the evacuation of the building due to air quality problems, which caused skin and respiratory irritation to a significant number of employees. The landlord defendant filed counterclaims, alleging the Company breached its lease obligations. The court ordered a limited trial between the Company and the landlord on certain factual issues which began on November 20, 1996. Closing arguments for the limited trial were heard on January 13, 1997. In a separate lawsuit, the landlord's mortgagee filed claims against the Company for payment of the same rent alleged to be owed. A motion for summary judgment filed by the bank was denied by the court. In August 1997, the Superior Court of Massachusetts entered findings of fact and conclusions of law on the limited trial of the Company's lawsuit against the landlord. In its findings, the Court concluded that the Company had not proved, as alleged by the Company, that any fireproofing fibers contaminated the Company's space, the Company's space was not uninhabitable because of contamination from fireproofing fibers and the Company was not justified in terminating its lease on the grounds that its office and laboratories were uninhabitable. In November 1997, the Company reached a settlement of the litigation with its former landlord and the landlord's mortgagee. The Company agreed to pay \$858,800 in cash on November 17, 1997 and issue a total of 1,500,000 shares of its common stock. In addition, the Company signed a note for \$750,000 payable on November 16, 1998 secured by \$750,000 cash collateral and a note for \$750,000 due November 15, 1999, secured by 132,500 shares of common stock. The total settlement, valued at \$6,108,800, is comprised of the cash and notes totaling \$2,358,800 and common stock valued at \$3,750,000 as of October 31, 1997 and is included in operating expense for the year ended December 31, 1997. The common stock issued is subject to restrictions on transfer per the settlement agreement. The settlement agreement also provides for certain registration rights for the shares of common stock to become effective no later than September 30, 1998. Upon such registration, however, the settlement agreement limits the number of shares that may be sold over a given period of time.

In May 1998, the Company used cash as collateral for a \$750,000 note due November 15, 1999 issued in connection with a settlement agreement with its former landlord and the landlord's mortgagee. In accordance with the settlement agreement, 66,250 shares of the Company's common stock issued to secure the note were returned to the Company. The common stock was valued at \$165,600 as of October 31, 1997 and its return is included as a reduction of operating expense in 1998.

14. SALE OF PORTION OF DIAGNOSTIC BUSINESS

On March 5, 1996 the Company sold to Endogen, Inc. the research products and operations of TCD for a purchase price of approximately \$2,880,000, while retaining the TRAX-Registered Trademark- diagnostic product franchise. The consideration for this sale to Endogen was paid in the form of a convertible subordinated note receivable (the "Convertible Note") in the principal amount of \$2,003,000 and a combination of cash and a short-term note used to repay approximately \$980,000 of obligations under the Company's operating lease. On February 10, 1997, the Company converted the outstanding

principal balance, or \$1,803,000, of the Convertible Note into shares of Endogen commons stock which it subsequently sold. Additionally, the Company may receive a royalty on certain of Endogen's sales of research products.

The Company is currently focusing its efforts on establishing a partnership for the TRAx-Registered Trademark- technology.

15. ACQUISITION OF VIRUS RESEARCH INSTITUTE, INC.

On August 21, 1998, the Company acquired all of the outstanding capital stock of VRI, a company engaged in the discovery and development of (i) systems for the delivery of vaccines and immunotherapeutics and (ii) novel vaccines. The Company issued approximately 14,036,400 shares of AVANT's common stock and warrants to purchase approximately 1,811,200 shares of AVANT's common stock in exchange for all of the outstanding common stock of VRI, on the basis of 1.55 shares of AVANT's common stock and .20 of an AVANT warrant for one share of VRI common stock. The purchase price of \$63,004,700 consisted of (i) the issuance of 14,036,400 shares of AVANT common stock valued at \$51,686,800 and 1,811,200 AVANT warrants valued at \$4,980,700 for all outstanding VRI capital stock, (ii) the issuance of AVANT warrants valued at \$387,600 in exchange for all of the outstanding VRI warrants, (iii) the issuance of options to purchase AVANT common stock valued at \$3,637,900 for all of the outstanding options to purchase VRI common stock assumed by the Company, and (iv) severance and transaction costs totaling \$2,311,700. As of the date of the acquisition of VRI, the Company had already begun to formulate a plan to assess which activities of VRI to continue and to identify all significant actions to be taken to terminate a number of VRI employees and to relocate the remaining employees from the VRI facility in Cambridge, MA (which was to be closed) to the Company's facility in Needham, MA. The costs associated with this plan, including severance costs of approximately \$243,000, were recognized upon consummation of the merger and are included in the \$2,311,700 referenced above. The plan was finalized and implemented during 1998 and the first quarter of 1999. Actual costs were not materially different from those accrued at the acquisition date and were paid in 1998 and early 1999.

The acquisition has been accounted for as a purchase. Consequently, the operating results of VRI from August 22, 1998 to December 31, 1998 have been included in the Company's consolidated results of operations. The purchase price was allocated to the acquired assets and assumed liabilities, based upon their fair value at the date of acquisition, as follows:

Net tangible assets acquired	\$14,539,000
Intangible assets acquired:	
Work force	470,000
Collaborative relationships	1,090,000
Goodwill	2,275,700
In-process technology	44,630,000
	-----
Total	\$63,004,700
	=====

The values assigned to the intangible assets acquired, including the IPR&D, were determined based on fair market value using a risk adjusted discounted cash flow approach. VRI was a development stage biotechnology enterprise and its resources were substantially devoted to research and development at the date of acquisition. Management is responsible for determining the fair value of the acquired IPR&D.

Each of VRI's six research and development projects in-process was valued through detailed analysis of product development data concerning the stage of development, time and resources needed to complete the project, expected income-generating ability and associated risks. The significant assumptions underlying the valuations included potential revenues, costs of completion, the timing of product releases and the selection of an appropriate discount rate. None of VRI's projects have reached technological feasibility nor do they have any alternative future use. Consequently, in accordance with generally accepted accounting principles, the amount allocated to IPR&D was charged as an expense in the AVANT consolidated financial statements for the year ended December 31, 1998. The remaining intangible assets arising from the acquisition are being amortized on a straight line basis over 12 months and 60 months.

A discussion of the in-process research and development projects identified at the time of acquisition follows. The projected costs to complete the projects represent costs to be incurred by the Company and do not include any costs to be expended by the Company's collaborators. (i) Adjumer-TM- vaccine delivery system. Adjumer-TM- is being developed as an adjuvant to enhance the immune response to injected vaccines. The Company and its collaborator, Pasteur Merieux Connaught ("PMC"), are conducting research on the development of Adjumer-TM--formulated vaccines utilizing a variety of PMC's antigens, including influenza, lyme disease, pneumococcus, meningococcus, Respiratory Syncytial Virus ("RSV") and Hepatitis B. As of the acquisition date, with projected release dates ranging from 2001 to 2004, the estimated cost to complete the project for all antigens exceeded \$9,500,000. In addition, substantial additional work is required by PMC prior to commercialization. Discount rates ranging from 42.5% to 47.5% were used in determining the IPR&D value of \$15,450,000 which was assigned to the Adjumer-TM- vaccine delivery system. (ii) Micromer-TM- vaccine delivery system. Micromer-TM- is a proprietary vaccine delivery system designed to facilitate the mucosal (intranasal or oral) delivery of antigens and stimulate both the systemic and mucosal branches of the immune system. The Company is conducting research on a number of Micromer-TM--formulated vaccines, including influenza and RSV. As of the acquisition date, the estimated cost to complete the development of Micromer-TM--formulated vaccines for influenza and RSV exceeded \$3,300,000 with projected release dates of 2002 and 2004, respectively. A discount rate of 45% was utilized in determining the IPR&D value of \$3,260,000 which was assigned to Micromer-TM-. (iii) Vibrio Vec-TM- vaccine delivery system. Vibrio Vec-TM- is a proprietary vaccine and immunotherapeutic system that uses a bacterial vector for the oral delivery of antigens. The Company is conducting research on a number of antigens proposed to be delivered by Vibrio Vec-TM-, including, in conjunction with its collaborators, Pasteur Merieux-Oravax and CSL, Ltd., a vaccine targeting H. pylori. At the acquisition date, the projected product release date was 2003 and the approximate research and development cost required to complete the Vibrio Vec-TM- project totaled approximately \$900,000. A discount rate of 45% was used in determining the IPR&D value of \$2,450,000 which was assigned to Vibrio Vec-TM- at the time of acquisition. (iv) Rotavirus vaccine. A collaboration with SmithKline Beecham, ("SKB") was established by the Company to develop and commercialize its novel, proprietary vaccine against rotavirus infection, a major cause of diarrhea and vomiting in infants. At the acquisition date, a project release date was projected of 2002, with \$1,200,000 in additional research and development expenditures anticipated. In addition, substantial work is required to be completed by SKB prior to commercialization of the rotavirus vaccine. An IPR&D value of \$3,120,000 was assigned to the rotavirus vaccine utilizing a discount rate of 45%. (v) Herpes vaccine. The herpes vaccine is a proprietary vaccine for the prevention of genital herpes ("HSV2"). At the time of acquisition, the vaccine was in a preclinical development stage with a projected product release date of 2007 and an estimated cost to complete of \$1,600,000. A discount rate of 45% was utilized in determining the IPR&D value of \$2,240,000 which was assigned to the herpes vaccine. (vi) Therapore-TM-. The Company was granted an exclusive worldwide license from Harvard for Therapore-TM-, a novel technology for the development of immunotherapeutics. The Company is conducting preclinical research to evaluate this system for the treatment of persistent viral infections, such as Hepatitis B, Hepatitis C and HIV, and certain cancers including melanoma. The first release date for a Therapore-TM- product is estimated to be in 2004 and the projected research and development cost to complete all indications of Therapore-TM- approximated \$41,200,000 at the acquisition date. A discount rate of 50% was utilized in determining the IPR&D value of \$18,110,000 which was assigned to Therapore-TM-.

As of December 31, 1998, the technological feasibility of the projects had not yet been reached and no significant departures from the assumptions included in the valuation analysis had occurred. Substantial additional research and development will be required prior to reaching technological feasibility. In addition, each product needs to successfully complete a series of clinical trials and to receive Food & Drug Administration ("FDA") approval prior to commercialization. The Company is also dependent upon the activities of its collaborators in developing and marketing its products. There can be no assurance these projects will ever reach feasibility or develop into products that can be marketed profitably, nor can there be assurance the Company and its collaborators will be able to develop and commercialize these products before its competitors. If these products are not successfully developed and do not become commercially viable, the Company's financial condition and results of operations could be materially affected.

The following unaudited pro forma financial summary is presented as if the operations of the Company and VRI were combined as of January 1, 1998 and 1997, respectively. The unaudited pro forma combined results are not necessarily indicative of the actual results that would have occurred had the acquisition been consummated at that date, or of the future operations of the combined entities. Nonrecurring charges, such as the acquired in-process research and development charge of \$44,630,000, are not reflected in the following pro forma financial summary.

Year Ended December 31, -----	1998 ----	1997 ----	1996 ----
Operating Revenue	\$ 2,206,500	\$ 3,697,600	\$ 7,110,900
Net Loss	(13,389,800)	(21,311,500)	(14,011,100)
Basic and diluted net loss per share	(0.32)	(0.54)	(0.39)

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

None.

PART IV

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

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

(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:

No. ---	Description -----	Page No. -----
2.1	Agreement of Merger among the Company, T Cell Acquisition Corp. and T Cell Diagnostics, Inc. dated August 20, 1993 relating to reconsolidation of the Company's subsidiary	Incorporated by reference to the Company's report on form 8-K filed September 22, 1993
2.2	Asset Purchase Agreement among Endogen, Inc., T Cell Diagnostics, Inc., with the Company dated March 4, 1996	Incorporated by reference to the Company's report on form 8-K filed March 20, 1996
2.3	Agreement and Plan of Merger, dated as of May 12, 1998, by and among the Company, TC Merger Corp., Virus Research Institute, Inc.	Incorporated by reference to the Registration Statement on Form S-4 (Reg. No. 333-59215)
3.1	Third Restated Certificate of Incorporation of the Company	Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended April 30, 1991
3.2	Certificate of Amendment of Third Restated Certificate of Incorporation of the Company	Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1992
3.3	Certificate of Designation for series C-1 Junior Participating Cumulative Preferred Stock	Incorporated by reference to the Company's Annual Report on Form 10-K for the year ended December 31, 1994
3.4	Second Certificate of Amendment of Third Restated Certificate of Incorporation of the Company	Incorporated by reference to the Registration Statement on Form S-4 (Reg. No. 333-59215)
3.5	Amended and Restated By-Laws of the Company as of November 10, 1994	Incorporated by reference to the Company's report on Form 8-K dated November 10, 1994
4.1	Form of Purchase Agreement dated November 23, 1993 relating to the Company's private placement of Common Stock	Incorporated by reference to Exhibit 10.1 of the Company's Registration Statement on Form S-3 (Reg. No. 33-72172)
4.2	Shareholder Rights Agreement dated November 10, 1994 between the Company and State Street Bank and Trust Company as Rights Agent	Incorporated by reference to the Company's report on Form 8-K dated November 10, 1994
4.3	Form of Stock Purchase Agreement dated October 27, 1995 relating to the Company's private placement of Common Stock	Incorporated by reference to Exhibit 10.1 of the Company's Registration Statement on Form S-3 (Reg. No. 33-64021)
4.4	Form of Stock Purchase Agreement dated November 3, 1995 relating to the Company's private placement of Common Stock	Incorporated by reference to Exhibit 10.1 of the Company's Registration Statement on Form S-3 (Reg. No. 33-64021)
4.5	Form of Stock Purchase Agreement dated March 20, 1998 relating to	Incorporated by reference to Exhibit 4.1 of the Company's

the Company's private placement of Common Stock Registration Statement on Form S-3 (Reg. No. 333-56755)

- 10.1 Amended and Restated 1991 Stock Compensation Plan dated as of April 1, 1995 Incorporate by reference to the Company's Annual Report on Form 10K for the fiscal year ended December 31, 1995
- 10.2 1994 Employee Stock Purchase Plan Incorporated by reference to the Company's Registration Statement on Form S-8 filed June 8, 1994



No. ---	Description -----	Page No. -----
10.3	Product Development and Distribution Agreement between Astra AB and the Company dated January 30, 1992, portions of which are subject to confidential treatment	Incorporated by reference to the Company's report on Form 8-K filed on February 13, 1992
10.4	Performance Plan of the Company	Incorporated by reference to the Company's Annual Report on Form 10-K for the transition period ended December 31, 1992
10.5	Form of Agreement relating to Change of Control	Incorporated by reference to the Company's Annual Report on Form 10-K for the transition period ended December 31, 1992
10.6	Termination Agreement between the Company and SmithKline Beecham p.l.c. relating to sCR1 dated April 7, 1995, portions of which are subject to confidential treatment	Incorporated by reference to the Company's report on Form 8-K filed April 27, 1995
10.7	Pledge Agreement between the Company and Fleet Credit Corporation dated October 24, 1995	Incorporated by reference to the Company's Quarterly Report on Form 10-Q for September dated September 30, 1995
10.8	Amended and Restated Employment Agreement between the Company and Una S. Ryan, Ph.D. dated August 20, 1998.	*
10.9	Severance Agreement between the Company and Norman W. Gorin dated June 1, 1996	Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1996
10.10	Consulting Agreement between the Company and James D. Grant dated May 28, 1996	Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1996
10.11	Second Amended and Restated Product Development and Distribution Agreement between Astra AB and the Company dated May 1, 1996, portions of which are subject to confidential treatment	Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1996
10.12	Commercial Lease Agreement of May 1, 1997 between the Company and Fourth Avenue Ventures Limited	Incorporated by reference to the Company's report on Form 10-Q for the quarterly period ended September 30, 1996
10.13	Option Agreement by and between the Company 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 the Company's report on Form 10-Q for the quarterly period ended September 30, 1997
10.14	Settlement Agreement between the Company and Forest City 38 Sidney Street, Inc.; Forest City Management, Inc.; and Forest City Enterprises, Inc.	Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1997
21.0	List of Subsidiaries	Incorporated by reference to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1993
23.0	Consent of Independent Accountants	Page 35
27.0	Financial Data Schedule	Page 36

\* -- Filed previously in the Company's Annual Report on Form 10-K filed on March 25, 1999.

(B) Reports on Form 8-K.

During 1998, the following reports on Form 8-K were filed: Form 8-K dated August 21, 1998, Form 8-K dated August 29, 1998 and Form 8-K/A dated September 29, 1998.

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.

AVANT IMMUNOTHERAPEUTICS, INC.

DATE

by:

s/UNA S. RYAN

November 8, 1999

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Una S. Ryan  
President and Chief Executive Officer

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.

AVANT IMMUNOTHERAPEUTICS, INC.

Date

by:

\_\_\_\_\_  
Una S. Ryan  
President and Chief Executive Officer

November 8, 1999

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8, (Nos. 333-43640, 333-54372, 333-80036, 333-80048, 333-62017), in the Prospectus constituting part of the Registration Statement on Form S-3 (Nos. 333-72172, 333-69950, 333-64021, 333-08607, 333-56755, 333-64761 and 333-89341) and in the Prospectus constituting part of the Registration Statement on Form S-4 (No. 333-59215) of AVANT Immunotherapeutics, Inc. (f/k/a T Cell Sciences, Inc.) of our report dated March 1, 1999 appearing on page 11 of this Annual Report on Form 10-K/A for the year ended December 31, 1998.

PricewaterhouseCoopers LLP  
Boston, Massachusetts  
November 5, 1999



THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE CONDENSED FINANCIAL STATEMENTS OF AVANT IMMUNOTHERAPEUTICS, INC. FOR THE TWELVE MONTHS ENDED DECEMBER 31, 1998 AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

12-MOS		
	DEC-31-1998	
	JAN-01-1998	
	DEC-31-1998	
		8,937,200
		4,903,100
		11,200
		0
		6,100
	15,615,700	
		4,021,800
	(2,910,400)	
	22,650,100	
3,317,600		
		0
0		
		0
		42,500
	18,727,100	
22,650,100		
		55,900
	2,150,400	
		22,300
	54,522,000	
	(22,300)	
	0	
	(571,900)	
	(51,799,700)	
		0
(51,799,700)		
		0
		0
		0
	(51,799,700)	
	(1.56)	
	(1.56)	