Registration Statement No. 333-

United States SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

AVANT IMMUNOTHERAPEUTICS, INC.

(Exact name of Registrant as Specified in Its Charter)

Delaware (State of Incorporation)

13-3191702

(I.R.S. Employer Identification Number)

119 Fourth Avenue Needham, Massachusetts 02494 (781) 433-0771

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

Una S. Ryan, Ph.D., President and Chief Executive Officer AVANT IMMUNOTHERAPEUTICS, INC. 119 Fourth Avenue Needham, Massachusetts 02494 (781) 433-0771

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

Copies to:

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

Approximate Date of Commencement of Proposed Sale to the Public: From time to time after this Registration Statement becomes effective.

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

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

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

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

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

CALCULATION OF REGISTRATION FEE

Title of Securities Being Registered	Amount to be Registered	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value \$0.001(2)	4,888,888	\$2.67(1)	\$13,053,331(1)	\$1,056

Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(c) based on the average of the high and low prices per share of the Registrant's common stock on the Nasdaq National Market on July 3, 2003.

(2) This registration statement also relates to rights to purchase shares of Series C-1 Junior Participating Cumulative Preferred Stock of the Registrant, which are attached to all shares of common stock issued, pursuant to the terms of the Registrant's Shareholder Rights Agreement dated November 10, 1994.

Until the occurrence of certain prescribed events, the rights are not exercisable, are evidenced by the certificates for the common stock and will be transferred with and only with such stock. Because no separate consideration is paid for the rights, the registration fee therefor is included in the fee for the common stock.

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

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

Subject to Completion, dated

, 2003

Prospectus

AVANT Immunotherapeutics, Inc.

4,888,888 Shares of Common Stock

This prospectus is being delivered in connection with the offer and sale by the selling stockholder identified in this prospectus, and its pledgees, donees, transferees or other successors in interest, of up to an aggregate amount of 4,888,888 shares of our common stock. The number of shares being offered includes 444,444 shares which are issuable upon the exercise of warrants, and the rights to acquire our series C-1 junior participating cumulative preferred stock that are attached to, and trade with, the common stock. We are filing the registration statement of which this prospectus is a part at this time to fulfill a contractual obligation to do so, which we undertook at the time of the original issuance of these shares. We will not receive any proceeds from the sale of the shares of common stock offered by this prospectus. The expenses of registering the shares of common stock to be sold in this offering under the Securities Act of 1933, as amended, and the registration or qualification of the shares of common stock to be sold in this offering under any applicable state securities laws will be paid by us.

Our common stock is listed on the Nasdaq National Market under the symbol "AVAN." The mailing address and telephone number of our principal executive offices are 119 Fourth Avenue, Needham, Massachusetts 02494 and (781) 433-0771.

See "Risk Factors" beginning on page 2 for a discussion of material risks that you should consider before you invest in our securities.

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

The date of this prospectus is

, 2003

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ABOUT AVANT

We are a biopharmaceutical company that uses novel applications of immunology to prevent and treat diseases. We are developing a broad portfolio of vaccines addressing a wide range of applications including bacterial and viral diseases, cardiovascular diseases, biodefense and food safety. These include single-dose, oral vaccines that protect against important disease-causing agents and a novel, proprietary vaccine candidate for cholesterol management. Our strategy is to demonstrate proof-of-concept for our products before leveraging their value through partnerships. Our current collaborations encompass the development of an oral human rotavirus vaccine, vaccines to combat threats of biological warfare, and vaccines addressed to human food safety and animal health. Our products address large market opportunities for which current therapies are inadequate or non-existent.

Our focus is on unlocking the power of the immune system to prevent and treat disease. We have assembled a broad portfolio of technologies and intellectual property that give us a strong competitive position in the vaccines arena and five of our vaccines are in clinical development. Our goal is to become a leading developer of innovative vaccines that address health care needs on a global basis.

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

Our executive offices are located at 119 Fourth Avenue, Needham, Massachusetts 02494-2725 and our telephone number is (781) 433-0771. Additional information regarding our company, including our audited financial statements and descriptions of our business, is contained in the documents incorporated by reference in this prospectus. See "Where You Can Find More Information" on page 2 and "Incorporation of Documents by Reference" on page 2.

ABOUT THIS PROSPECTUS

We have filed with the Securities and Exchange Commission, or the SEC, a registration statement on Form S-3 under the Securities Act of 1933, as amended, with respect to the shares of common stock and shares of common stock to be issued upon the exercise of the warrants (which we sometimes refer to as the "warrant shares") offered under this prospectus. We originally issued these shares to the selling stockholder in a private placement on July 1, 2003. In connection with this private placement, we entered into a registration rights agreement with the selling stockholder. We are registering the shares of common stock and the warrant shares covered by this prospectus in order to fulfill our contractual obligations to do so under the registration rights agreement. This prospectus is part of the registration statement, but does not contain all of the information contained in the registration statement because we have omitted parts of the registration statement in accordance with the rules and regulations of the SEC.

This prospectus relates to an aggregate amount of up to 4,888,888 shares of our common stock, which includes an aggregate amount of up to 444,444 shares of our common stock issuable upon the exercise of warrants, that may be offered for sale by the selling stockholder. The selling stockholder may sell these shares directly to purchasers or it may sell these shares to purchasers through agents or dealers pursuant to this prospectus. The selling stockholder will receive all of the proceeds from the sale of its shares of common stock and warrant shares and will pay all selling commissions and transfer taxes applicable to any sale. Registration of these shares of common stock and warrant shares does not necessarily mean that the selling stockholder will actually sell its shares of common stock or warrant shares. You should read both this prospectus and any prospectus supplement together with additional information described under the heading "Where You Can Find More Information."

RISK FACTORS

Before you decide whether to purchase any of our shares, in addition to the other information in this prospectus, you should carefully consider the risk factors set forth under the heading "Risk Factors" in the section entitled "Business" in our most recent Annual Report on Form 10-K, which is incorporated by reference into this prospectus, as the same may be updated from time to time by our future filings under the Securities Exchange Act of 1934, as amended. Additional risks and uncertainties that are not yet identified or that we think are immaterial may also materially harm our business, operating results and financial condition and could result in a complete loss of your investment. For more information, see the section entitled "Incorporation of Documents by Reference."

WHERE YOU CAN FIND MORE INFORMATION

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

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

INCORPORATION OF DOCUMENTS BY REFERENCE

The Securities and Exchange Commission allows us to incorporate by reference in this prospectus the information that we file with them. Incorporation by reference means that we can disclose important information to you by referring you to other documents that are legally considered to be part of this prospectus, and later information that we file with the Securities and Exchange Commission will automatically update and supersede the information in this prospectus, any supplement and the documents listed below. We incorporate by reference the specific documents listed below and any future filings made with the Securities and Exchange Commission under Section 13(a), 13(c), 14, or 15(d) of the Securities Exchange Act of 1934, as amended, until all of the shares of common stock and warrant shares covered by this prospectus are sold:

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

- our Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on May 13, 2003;
- the definitive Proxy Statement for our annual meeting of stockholders filed on April 2, 2003;
- our Current Report on Form 8-K filed with the Securities and Exchange Commission on March 13, 2003;

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- our Current Report on Form 8-K filed with the Securities and Exchange Commission on July 2, 2003;
- the description of the rights to purchase shares of our Series C-1 Junior Participating Cumulative Preferred Stock contained in our Registration Statement on Form 8-A, filed on November 14, 1994, including all amendments and reports updating that description; and
- the description of our common stock contained in our Registration Statement on Form 8-A, filed on September 22, 1986, including all
 amendments and reports updating that description.

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

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

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

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

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

- the integration of the recently acquired UPT technology and programs with our already existing technology and programs;
- the ability to adapt AVANT's vectoring systems to develop new, safe and effective orally administered vaccines against anthrax and plague or any other microbes used as bioweapons;
- the ability to successfully complete development and commercialization of CholeraGarde™ (Peru-15), Ty800, CETi-1 and of other products;
- the cost, timing, scope and results of ongoing safety and efficacy trials of CholeraGarde™ (Peru-15), Ty800, CETi-1 and other preclinical and clinical testing;
- the ability to successfully complete product research and further development, including animal, pre-clinical and clinical studies of CholeraGarde™ (Peru-15), Ty800, CETi-1 and other products;
- the ability to manage multiple late stage clinical trials for a variety of product candidates;
- the volume and profitability of product sales of Megan® Vac 1 and other future products;
- changes in existing and potential relationships with corporate collaborators;
- the cost, delivery and quality of clinical and commercial grade materials supplied by contract manufacturers;
- the timing, cost and uncertainty of obtaining regulatory approvals to use CholeraGarde™ (Peru-15) and Ty800, among other purposes, to protect travelers and people in endemic regions from diarrhea causing diseases, to use CETi-1, among other purposes, to raise serum HDL cholesterol levels and for other products;
- the ability to obtain substantial additional funding;
- the ability to develop and commercialize products before competitors;
- the integration of Megan Health's business and programs;
- the ability to retain certain members of management; and

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

In addition, the factors described under "Risk Factors" in the section entitled "Business" in our most recent Annual Report on Form 10-K, as may be updated from time to time by our future filings under the Securities Exchange Act, and elsewhere in the documents incorporated by reference in this prospectus, may result in these differences. You should carefully review all of these factors, and you should be aware that there may be other factors that could cause these differences. These forward-looking statements were based on information, plans and estimates at the date of this prospectus, and we do not promise to update any forward-looking statements to reflect changes in underlying assumptions or factors, new information, future events or other changes.

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REGISTRATION RIGHTS AGREEMENT

The following is a summary of material terms and provisions of the registration rights agreement, which we entered into with the selling stockholder. It may not contain all the information that is important to you. You can access complete information by referring to the registration rights agreement, which we filed with the SEC as an exhibit to a current report on Form 8-K, dated July 2, 2003, and which is incorporated by reference to the registration statement of which this prospectus is a part.

Under the registration rights agreement, we are obligated to file a registration statement covering the sale by the selling stockholder of the shares of common stock that it purchased from us and the warrant shares. Under the registration rights agreement, we must use our commercially reasonable efforts to cause the registration statement to be declared effective by the Securities and Exchange Commission as promptly as possible and, subject to certain contingencies, to keep the registration statement continuously effective until the earliest to occur of:

- July 1, 2005, two years after the date of the securities purchase agreement that we entered into with the selling stockholder; or
- the date on which the selling stockholder no longer holds any of the purchased common stock or warrant shares.

Any common stock or warrant shares sold by the selling stockholder pursuant to this prospectus will no longer be entitled to the benefits of the registration rights provisions of the registration rights agreement.

The registration rights agreement requires that we bear all expenses of registering the common stock and warrant shares, which includes, without limitation, all registration and filing fees, printing expenses, delivery expenses, fees and expenses of our legal counsel and other related fees and expenses.

In addition, subject to the limitations contained in the registration rights agreement, we also agreed to indemnify the selling stockholder and certain related persons against all losses, claims, damages, liabilities or costs arising out of or relating to any untrue or alleged untrue statement of a material fact contained in this registration statement and prospectus or relating to the omission of any material fact in the registration statement or prospectus necessary to make the statements not misleading. In addition, subject to the limitations contained in the registration rights agreement, the selling stockholder agreed to indemnify us and our directors, officers, agents and employees and any person who controls our company against all losses, claims, damages or liabilities arising out of or relating to a selling stockholder's failure to comply with the prospectus delivery requirements of the Securities Act of 1933, as amended, or related to any untrue or alleged untrue statement of a material fact in the registration statement or prospectus or omitted material fact required to be stated in the registration statement or prospectus to make the statements not misleading, but only to the extent that such violations occur in reliance upon and in conformity with written information furnished to us by the selling stockholder for use in the registration statement or this prospectus or any amendment to the registration statement or any prospectus supplements.

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SELLING STOCKHOLDER

The following table sets forth the number of shares of common stock beneficially owned by the selling stockholder as of July 9, 2003, the number of shares of common stock and warrant shares covered by this prospectus and the percentage of total shares of common stock that the selling stockholder will beneficially own upon completion of this offering. This table assumes that the selling stockholder will offer for sale all of the shares of common stock and warrant shares covered by this prospectus.

The common stock and warrant shares offered by this prospectus may be offered from time to time by the selling stockholder named below, or by any of its pledgees, donees, transferees or other successors in interest. The selling stockholder will receive all of the proceeds from the sale of shares of common stock or warrant shares under this prospectus. The amounts and information set forth below are based upon information provided to us by the selling stockholder or its representative, or on our records, as of July 9, 2003, and are accurate to the best of our knowledge. It is possible, however, that the selling stockholder may acquire or dispose of additional shares of common stock from time to time after the date of this prospectus. To our knowledge, the selling stockholder has not had within the past three years any material relationship with us.

	Shares of Common Stock Beneficially	Shares of Common	Shares of Common Stock Owned After the Offering	
Selling Stockholder	Owned as of July 9, 2003(1)	Stock Offered Hereby(2)	Number(2)	Percent
The Riverview Group, LLC(3)	4,888,888	4,888,888	0	0

(1) Pursuant to Rule 13d-3 of the Securities Exchange Act of 1934, a person is deemed to be the beneficial owner of a security if that person has the right to acquire beneficial ownership of such security within 60 days, including the right to acquire through the exercise of an option or warrant or through the conversion of a security. Because the warrants are presently exercisable, pursuant to Rule 13d-3 of the Securities Exchange Act of 1934, the shares of our

- common stock underlying the warrants are deemed to be beneficially owned by the holder of the warrants.
- (2) The share amounts listed in this column assumes that the selling stockholder will sell all of the shares of our common stock, including warrant shares.
- (3) The selling stockholder's address is c/o Millennium Partners, L.P., 666 Fifth Avenue, 8th Floor, New York, New York 10103.

USE OF PROCEEDS

We will not receive any proceeds from the sale of the shares of common stock or warrant shares offered by this prospectus, but we are bearing the fees and expenses associated with registering the shares of common stock and warrant shares.

PLAN OF DISTRIBUTION

We are registering 4,888,888 shares of common stock, including 444,444 shares of common stock issuable upon exercise of warrants, for resale by the selling stockholder to satisfy our commitment to do so under a contract with the selling stockholder, but the registration of these shares does not necessarily mean the selling stockholder will sell any or all of the shares registered. The selling stockholder and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of its shares of common stock or warrant shares on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or

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negotiated prices. The selling stockholder may use any one or more of the following methods when selling shares:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- broker-dealers may agree with the selling stockholder to sell a specified number of such shares at a stipulated price per share;
- · a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholder may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholder may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholder (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholder does not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholder may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act, amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholder under this prospectus.

The selling stockholder and any broker-dealers or agents that are involved in selling the shares may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholder has informed us that it does not have any agreement or understanding, directly or indirectly, with any person to distribute the common stock.

LEGAL MATTERS

Certain legal matters with respect to the common stock and warrant shares offered pursuant to this registration statement will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts.

EXPERTS

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

You should rely only on the information contained in this prospectus, incorporated herein by reference or contained in a prospectus supplement; neither we nor the selling stockholder have authorized anyone else to provide you with different or additional information. The selling stockholder is not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information in the prospectus, or incorporated herein by reference, or in any prospectus supplement is accurate as of any date other than the date on the front of those documents.

4,888,888 SHARES

AVANT IMMUNOTHERAPEUTICS, INC.

COMMON STOCK

PROSPECTUS

July , 2003

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

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

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

Registration Fee—Securities and Exchange Commission	\$ 1,056
Accountants Fees and Expenses	\$ 10,000
Legal Fees and Expenses	\$ 50,000
Printing Expenses	\$ 3,500
Miscellaneous	\$ 1,500
Total	\$ 66,056

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

Item 15. Indemnification of Directors and Officers.

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

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

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

Item 16. Exhibits. Exhibit Description 3.1 Third Restated Certificate of Incorporation of the Company (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998. 3.2 Certificate of Amendment of Third Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998. 3.3 Certificate of Designation for series C-1 Junior Participating Cumulative Preferred Stock (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998. Second Certificate of Amendment of Third Restated Certificate of Incorporation of the Company (incorporated herein by reference to 3.4 Exhibit 3.2 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998. 3.5 Amended and Restated By-Laws of the Company as of November 10, 1994 (incorporated herein by reference to Exhibit 3.3 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998. 3.6 Third Certificate of Amendment of Third Restated Certificate of Incorporation of the Company (incorporated herein by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q, filed May 10, 2002). 5.1* Opinion of Goodwin Procter LLP. Securities Purchase Agreement, dated as of July 1, 2003, by and between the Company and the purchasers signatory thereto (incorporated 10.1 herein by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed on July 2, 2003). 10.2 Registration Rights Agreement, dated as of July 1, 2003, by and between the Company and the purchasers signatory thereto (incorporated herein by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K filed on July 2, 2003). 10.3 Warrant issued by the Company to the Holder listed therein (incorporated herein by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K filed on July 2, 2003). 23.1* Consent of PricewaterhouseCoopers LLP. 23.2* Consent of Goodwin Procter LLP (included in Exhibit 5.1).

Filed herewith.

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Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

Powers of Attorney (included on the signature page hereto).

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

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- (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent posteffective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3, Form S-8, or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to

- be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b) The registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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SIGNATURES

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

AVANT IMMUNOTHERAPEUTICS, INC.

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

Una S. Ryan, Ph.D.

President and Chief Executive Officer

POWER OF ATTORNEY

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

Signature	Title	Date	
/s/ UNA S. RYAN, PH.D.	President, Chief Executive Officer and Director (Principal Executive Officer)	July 9, 2003	
Una S. Ryan, Ph.D.	Executive Officer)		
/s/ J. BARRIE WARD, PH.D.			
J. Barrie Ward, Ph.D.	Chairman	July 9, 2003	
/s/ AVERY W. CATLIN	Senior Vice President, Chief Financial Officer and Treasurer	July 9, 2003	
Avery W. Catlin	(Principal Financial Officer and Principal Accounting Officer)		
/s/ FREDERICK W. KYLE			
Frederick W. Kyle	Director	July 9, 2003	
/s/ THOMAS R. OSTERMUELLER			
Thomas R. Ostermueller	Director	July 9, 2003	

/s/ HARRY H. PENNER, JR.		
Harry H. Penner, Jr.	Director	July 9, 2003
/s/ PETER A. SEARS		
Peter A. Sears	Director	July 9, 2003
/s/ KAREN S. LIPTON		
Karen S. Lipton	Director	July 9, 2003
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xhibit No.	Description
3.1	Third Restated Certificate of Incorporation of the Company (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.2	Certificate of Amendment of Third Restated Certificate of Incorporation (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.3	Certificate of Designation for series C-1 Junior Participating Cumulative Preferred Stock (incorporated herein by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.4	Second Certificate of Amendment of Third Restated Certificate of Incorporation of the Company (incorporated herein by reference to Exhibit 3.2 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.5	Amended and Restated By-Laws of the Company as of November 10, 1994 (incorporated herein by reference to Exhibit 3.3 of the Company's Registration Statement on Form S-4 (Reg. No. 333-59215)), filed July 16, 1998.
3.6	Third Certificate of Amendment of Third Restated Certificate of Incorporation of the Company (incorporated herein by reference to Exhibit 3.1 of the Company's Quarterly Report on Form 10-Q, filed May 10, 2002).
5.1*	Opinion of Goodwin Procter LLP.
10.1	Securities Purchase Agreement, dated as of July 1, 2003, by and between the Company and the purchasers signatory thereto (incorporated herein by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K filed on July 2, 2003).
10.2	Registration Rights Agreement, dated as of July 1, 2003, by and between the Company and the purchasers signatory thereto (incorporated herein by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K filed on July 2, 2003).
10.3	Warrant issued by the Company to the Holder listed therein (incorporated herein by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K filed on July 2, 2003).
23.1*	Consent of PricewaterhouseCoopers LLP.
23.2*	Consent of Goodwin Procter LLP (included in Exhibit 5.1).
24.1*	Powers of Attorney (included on the signature page hereto).
Filed	d herewith.

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Goodwin Procter LLP Exchange Place Boston, MA 02109 July 9, 2003

AVANT Immunotherapeutics, Inc. 119 Fourth Avenue Needham, Massachusetts 02494 Attn: Dr. Una S. Ryan

Re: Legality of Securities to be Registered under Registration Statement on Form S-3

Ladies and Gentlemen:

This opinion is delivered in our capacity as counsel to AVANT Immunotherapeutics, Inc., a Delaware corporation (the "Company"), in connection with the registration, pursuant to the Securities Act of 1933 (the "Securities Act"), of 4,888,888 shares of common stock, par value \$.001 per share, of the Company, which includes 444,444 shares of common stock issuable upon the exercise of warrants (the "Warrant Shares").

In connection with rendering this opinion, we have examined the Certificate of Incorporation and the Bylaws of the Company, each as amended to date; such records of the corporate proceedings of the Company as we have deemed material; a registration statement on Form S-3 under the Securities Act relating to the shares of common stock and the Warrant Shares and the prospectus contained therein; and such other certificates, receipts, records and documents as we considered necessary for the purposes of this opinion.

We are attorneys admitted to practice in The Commonwealth of Massachusetts. We express no opinion concerning the laws of any jurisdiction other than the laws of the United States of America and The Commonwealth of Massachusetts and the Delaware General Corporation Law.

Based upon the foregoing, we are of the opinion that the shares of common stock which have been issued are duly authorized, legally issued, fully paid and nonassessable by the Company under the Delaware General Corporation Law and that when the Warrant Shares have been issued upon exercise of the warrants as contemplated by the common stock purchase warrant, such Warrant Shares will be duly authorized, legally issued, fully paid and nonassessable by the Company under the Delaware General Corporation Law.

The foregoing assumes that all requisite steps will be taken to comply with the requirements of the Securities Act and applicable requirements of state laws regulating the offer and sale of securities.

We hereby consent to being named as counsel to the Company in the Registration Statement, to the references therein to our firm under the caption "Legal Matters" and to the inclusion of this opinion as an exhibit to the Registration Statement.

Very truly yours,

/s/ Goodwin Procter LLP

GOODWIN PROCTER LLP

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of our report dated February 19, 2003 relating to the financial statements, which appears in Avant Immunotherapeutics, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2002. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

Boston, Massachusetts July 7, 2003

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CONSENT OF INDEPENDENT ACCOUNTANTS