AVI BIOPHARMA INC
Form 424B3
February 10, 2005

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PROSPECTUS SUPPLEMENT No. 2
To Prospectus Dated October 9, 2003

Registration No. 333-109015
Rule 424(b)(3) Prospectus

8,000,000 Shares

Warrants for 2,160,000 Shares

AVI BioPharma, Inc.

Common Stock

This is an offering of 8,000,000 shares of our common stock plus warrants for 2,160,000 shares of our common stock. We are offering all of the shares of and warrants for shares of our common stock pursuant to this prospectus supplement. Our common stock is quoted on the Nasdaq National Market under the symbol "AVII". The last reported sale price of the common stock on February 8, 2005 was $2.35 per share.

Investing in our common stock and warrants involves risks. See "Risk Factors" beginning on page 2 of the accompanying prospectus and "Forward-Looking Information" on page S-1 of this prospectus supplement.

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

	Per Share(1)	Total(1)
Public Offering Price	$ 3.00	$ 24,000,000
Sales Fees (7%)	$ 0.21	$ 1,680,000
Proceeds, before expenses, to AVI BioPharma	$ 2.79	$ 22,320,000

(1) This table is based on the sale of 8,000,000 shares of our Common Stock and does not reflect the proceeds from the exercise of warrants covering 2,160,000 additional shares in this offering, which have an exercise price of $5.00 per share. See "Description of Warrants" in this prospectus supplement.

February 10, 2005

You should only rely on the information contained in, or incorporated by reference in, this prospectus supplement and the accompanying prospectus. We have not, and the underwriters have not, authorized anyone to provide you with different information and if anyone provides you with different or additional information, you should not rely on it. We are not making an offer of these securities in any state where the offer of these securities is not permitted. You should not assume that the information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference is accurate as of any date other than the dates of the specific information.

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Unless we have indicated, or the context otherwise requires, references in this prospectus supplement to "AVI BioPharma," "we," "us," or similar terms, are to AVI BioPharma, Inc.

ABOUT THIS PROSPECTUS SUPPLEMENT

We are providing this information to you about this offering of common stock in two parts. The first part is this prospectus supplement, which provides the specific details regarding the offering. The second part is the accompanying base prospectus, which provides general information. Generally, when we refer to this "prospectus," we are referring to both documents combined. Some of the information in the base prospectus may not apply to this offering.

You should also read and consider the information in the documents that we have referred you to in "Where You Can Find More Information" on page S-12 of this prospectus supplement. The information incorporated by reference is considered to be part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede this information, except for any information updated or superseded by information contained directly in the prospectus or this prospectus supplement.

If information in this prospectus supplement is inconsistent with the accompanying prospectus, you should rely on this prospectus supplement.

FORWARD-LOOKING INFORMATION

This prospectus supplement and the accompanying prospectus and the information incorporated by reference herein and therein contain forward-looking statements regarding our plans, expectations, estimates and beliefs. Such statements are "forward-looking statements" for purposes of Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934 and the Private Securities Litigation Reform Act of 1995. Our actual results could differ materially from those discussed in, or implied by, these forward-looking statements. Forward-looking statements are identified by words such as "believe," "anticipate," "expect," "intend," "plan," "will," "may," and other similar expressions. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. These forward-looking statements are based on current expectations and are not guarantees of future performance. We caution you not to place undue reliance on these statements, which speak only as of the date on which the statement was made. Forward-looking statements in this prospectus supplement and the accompanying prospectus include, but are not necessarily limited to, those relating to:

- our plans for future clinical developments;
- receipt of any required FDA or other regulatory approval for our products;
- our expectations about the markets for our products;
- acceptance of our products, when introduced, in the marketplace;
- our future capital needs; and
- success of our patent applications.

Forward-looking statements are subject to risks and uncertainties, certain of which are beyond our control. Actual results could differ materially from those anticipated as a result of the factors described in "Risk Factors" in the accompanying prospectus and detailed in our other Securities and Exchange Commission (SEC) filings, including among others:

- the effect of regulation by the FDA and other governmental agencies;
- delays in obtaining, or our inability to obtain, approval by the FDA or other regulatory authorities for our products;
- research and development efforts, including delays in developing, or the failure to develop, our products;

the development of competing or more effective products by other parties;

the results of pre-clinical and clinical testing;

uncertainty of market acceptance of our products;

problems that we may face in manufacturing, marketing, and distributing our products;

our inability to raise additional capital when needed;

delays in the issuance of, or the failure to obtain, patents or licenses for our products and technologies; and

problems with important suppliers and business partners.

Because of these risks and uncertainties, the forward-looking events and circumstances discussed in this prospectus supplement and the accompanying prospectus or incorporated by reference might not transpire. Except for our ongoing obligations to disclose material information as required by the federal securities laws, we undertake no obligation to release publicly any revisions to any forward-looking statements to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events. All of the above factors are difficult to predict, contain uncertainties that may materially affect our actual results and may be beyond our control. New factors emerge from time to time, and it is not possible for our management to predict all of such factors or to assess the effect of each factor on our business.

PROSPECTUS SUPPLEMENT SUMMARY

The following information supplements, and should be read together with, the information contained or incorporated by reference in other parts of this prospectus supplement and in the accompanying prospectus. This summary highlights selected information from this prospectus supplement and the accompanying prospectus to help you understand our business. Because the following is only a summary, it does not contain all of the information that may be important to you. You should carefully read this prospectus supplement and the accompanying prospectus before deciding whether to invest in our common stock. You should pay special attention to the "Risk Factors" section beginning on page 2 of the accompanying prospectus to determine whether an investment in our common stock is appropriate for you.

Business Overview

We are a biopharmaceutical company developing therapeutic products principally based on third-generation NEUGENE® antisense technology. Our principal products in development target life-threatening diseases, including cardiovascular disease, infectious disease and cancer. Currently approved drugs or other therapies for these diseases often prove to be ineffective or produce undesirable side effects. Our pre-clinical and clinical studies indicate that our technology may produce drugs that we believe offer more effective treatment options with fewer side effects than currently approved products. A patent estate including 169 patents (foreign and domestic) issued or licensed to us and 148 pending patent applications (domestic and foreign) protects our technologies. Our lead product candidate, Resten-NG®, targets a market we believe may exceed $1 billion worldwide.

We have developed third-generation antisense technology that we believe produces drugs that may be more stable, specific, efficacious, and cost effective than other gene-targeting technologies, including second-generation antisense, ribozyme, and siRNA compounds. In eleven clinical trials involving 242 patients, we have not observed a single drug-related serious adverse event. NEUGENE drugs are synthetic polymers that block the function of selected genetic sequences involved in disease processes. Targeting specific genetic sequences provides for greater selectivity than that available through conventional drugs. NEUGENE drugs have the potential to provide safe and effective treatment for a wide range of human diseases. Our NEUGENE drugs are distinguished by a novel backbone chemistry that replaces the modified backbones of competing technologies with a synthetic backbone that has been designed to improve pharmaceutical parameters.

We have completed pre-clinical and some clinical studies using our NEUGENE drugs in the treatment of cardiovascular disease, infectious disease, cancer and polycystic kidney disease (PKD), and in regulating drug metabolism. We filed our first antisense Investigational New Drug application (IND) with the FDA for Resten-NG for cardiovascular restenosis in 1999 and have completed a Phase I substantially completed a Phase II clinical trial. We have completed four Phase I trials in our drug metabolism program and two Phase Ib trials in our cancer and polycystic kidney disease programs. We filed an IND and conducted a Phase Ib trial in 2003 for our NEUGENE antisense drug for West Nile virus infection.

AVICINE, a therapeutic cancer vaccine, is based on a second technology that we utilize in our cancer program. It represents an advanced product opportunity. We have substantially completed six human clinical trials for AVICINE, including multi-center Phase II trials for colorectal cancer and pancreatic cancer. Cancer vaccines operate under the rationale that immunization stimulates an immune response that is effective in combating an existing cancer. AVICINE stimulates an immune response against a hormone that is expressed on most cancers and is believed to promote the growth and spread of cancer. This hormone, human chorionic gonadotropin (hCG), is normally responsible for stimulating fetal development during pregnancy, but is also associated with major types of cancer, including colon, pancreatic, prostate, lung, and breast.

Based on our AVICINE clinical trials involving 174 patients with advanced stages of cancer, we believe that this vaccine has a modest toxicity profile compared to other cancer therapies and is capable of producing a specific immune response in most patients. Further, the patients who mounted an immune response to vaccination appeared to derive a survival benefit. We intend to investigate further the use of AVICINE alone and in combination with other approved therapies in additional Phase II trials for pancreatic cancer and, with the addition of an appropriate partner, Phase III trials.

Clinical Development Programs

Our therapeutic products are based on NEUGENE antisense technology with initial applications in cardiovascular disease, infectious disease, and cancer, and based on our AVICINE vaccine with applications in cancer. We currently have products at various stages of clinical development as summarized below. We will not have marketable products unless and until our drug candidates complete all required clinical trials and receive FDA approval in the United States or approval by regulatory agencies outside of the United States.

Product Candidate	Type	Pre-Clinical	Phase I/Ib	Phase II	Phase III
Cardiovascular Disease					
Restenosis: Resten-NG	NEUGENE Drug	Completed	Completed	Completed	Planned*
Restenosis: Resten-MP microparticles	NEUGENE Drug	Completed	Completed	In-progress	
CABG: AVI-4526-CP5	NEUGENE Drug	In-progress	Planned	Planned	
CABG: Resten-MP	NEUGENE Drug	In-progress			
Infectious Disease (Viral targets)					
West Nile: AVI-4020	NEUGENE Drug	Completed	Completed	In-progress	
Hepatitis C: AVI-4020	NEUGENE Drug	In-progress	Planned	Planned	
SARS: AVI-4179	NEUGENE Drug	Completed			
Ebola Zaire	NEUGENE Drug	In-progress	Planned	Planned	
Cancer					
Pancreatic: AVICINE	Cancer Vaccine	Completed	Completed	Completed	
Colorectal: AVICINE	Cancer Vaccine	Completed	Completed	Completed**	
Cancer: Oncomyc-NG	NEUGENE Drug	Completed	Completed	Planned	
Drug Metabolism					
Cytochrome P450: AVI-4557	NEUGENE Drug	Completed	Completed		
Genetic Disorders					
PKD: AVI-4126	NEUGENE Drug	Completed	Completed		

* In this table, "Planned" refers to trials that are being designed although a protocol may not yet be complete; "In-progress" refers to studies or trials that have actively begun but are not yet

complete; and "Completed" refers to studies in which the clinical trial or study has ended, the data have substantially been collected and validated, and a full study report is either in progress or complete.

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A Phase III trial in colorectal cancer is not anticipated. If we secure an appropriate partner with whom to share the costs of a Phase III program, we would anticipate moving into a Phase III clinical trial in the future.

Costs for a clinical trial typically range between $300,000 and $500,000 for a Phase I trial, between $500,000 and $4 million for a Phase II trial and could range between $5 and $50 million for a Phase III trial. Because the scope, timing and issues encountered in each trial vary, we cannot predict the exact costs associated with a particular trial in advance. For the same reasons, we cannot predict the nature, timing and costs of future studies or trials for a product, how a product will proceed toward and through Phase III clinical trials and, if Phase III clinical trials are successful, when and if FDA approval will be sought and received.

Overview

Cardiovascular Disease Program. Resten-NG is a NEUGENE antisense drug for treating cardiovascular restenosis, or the re-narrowing of a coronary artery following angioplasty. Resten-NG targets a key regulatory gene involved in the disease process. We believe that by blocking the action of this gene, the occurrence of vessel wall re-narrowing will be reduced or eliminated. At the September 2003 Transcatheter Cardiovascular Therapeutics conference, we announced interim Phase II clinical trial data showing that Resten-NG delivered via catheter during balloon angioplasty procedures resulted in an approximate 75% reduction in the restenosis rate. At the April 2003 American College of Cardiology meeting, results from two independent studies were presented that additionally demonstrate the potential of treating cardiovascular restenosis by delivering Resten-NG systemically using our proprietary microparticle delivery technology, possibly lessening the need for, or as an adjunct to, use of special drug delivery catheters or drug-coated stents. We have initiated a Phase II clinical trial with Resten-NG coupled with our microparticle delivery technology at the University of Nebraska Medical Center. We are planning a Phase III trial to be initiated in Europe for Resten-NG delivered on a stent platform to meet the regulatory requirements for a CE Mark, constituting marketing approval for the European Union.

Infectious Disease Program. Our infectious disease program is currently focusing on single-stranded RNA viruses using our proprietary NEUGENE antisense agents targeting West Nile virus, Hepatitis C virus, Dengue virus, and the SARS coronavirus, and also targeting many of the viruses included on the Domestic Homeland Security list of bioterrorism viruses. In May 2003, we filed an application with the FDA to obtain Orphan Drug designation for our West Nile NEUGENE drug candidate, AVI-4020, and submitted an IND the following month. Our NEUGENE drug candidate AVI-4179, designed to combat the SARS coronavirus, has been evaluated at an independent laboratory and found to be efficacious in pre-clinical studies. Phase Ib clinical trials in West Nile virus are currently underway. We have filed for Orphan Drug designation for our SARS coronavirus drug candidate, as well. Due to unpredictable future demand for drugs targeting West Nile virus and the SARS coronavirus, our future clinical development in viral diseases will initially focus on Hepatitis C virus.

Cancer Program. We have completed a Phase Ib clinical trial with our NEUGENE drug candidate AVI-4126, which demonstrated the systemic delivery into solid tumor tissues for both breast and prostate cancer patients. AVI-4126 targets the oncogene c-myc. Over-expression of c-myc has been described in many types of cancers. In January 2003, we were awarded a $250,000 grant from the National Cancer Institute to target prostate cancer. We plan to initiate an additional Phase II study in cancer in 2005.

In June 2000, we reported Phase II data demonstrating that AVICINE provided a survival benefit to patients with late-stage colorectal cancer who responded to the vaccine. Published studies indicate that patients that had a strong antibody response to the vaccine had a higher median survival than patients that had a weak antibody response, or than patients treated with chemotherapeutic drugs. These results were presented in May 2001 at the American Society of Clinical Oncology (ASCO) meeting and published in July 2002 in Cancer Research, a publication of the American Association for Cancer Research.

In December 2001, we reported Phase II data demonstrating that AVICINE provided a survival benefit to patients with pancreatic cancer. In this study, patients were treated with AVICINE alone, or with AVICINE in combination with the chemotherapeutic agent Gemzar®. A one-year survival rate of 30% was reported for patients treated with AVICINE plus Gemzar, which is approximately double the survival rate for either treatment alone. In May 2002, we presented complete survival data from the Phase II pancreatic cancer study at the ASCO meeting. This data confirmed and extended the positive results reported previously in our Phase II study in colorectal cancer. SuperGen, Inc. (SuperGen) is an exclusive partner with us in the development and commercialization of AVICINE in the United States, and we are seeking an appropriate partner with whom to share costs of a Phase III program.

Drug Metabolism Program. We have successfully completed clinical trials demonstrating that our NEUGENE antisense drug improved the pharmacokinetic profile of two different test drugs by down-regulating the liver enzyme that is critical to the body's processing of many drugs. Two clinical studies completed in late 2002 showed that AVI-4557 down-regulated cytochrome P450 3a4, which resulted in an improved pharmacokinetic profile of the test drugs. In September 2003, we initiated an oral dosing study with this agent to evaluate the oral route of administration for our antisense compounds. This study is substantially complete. Additional Phase II trials will be designed after establishing strategic relationships with pharmaceutical co-development partners.

Polycystic Kidney Disease Program. We completed a Phase Ib clinical trial in 2002 to evaluate the safety and pharmacokinetics of three doses of AVI-4126 in adult patients with polycystic kidney disease and with varying degrees of compromised kidney function. Results of the study showed an excellent safety profile and no adverse effect on kidney function.

Our Strategy

Our strategy is to:

- reduce risk associated with product development by exploiting two core technologies;
- select gene targets with broad or multiple disease applications;
- manage drug discovery, pre-clinical and early to mid-stage clinical development in-house; and
- initially co-develop or license products to strategic partners during or after completion of Phase II clinical trials to enhance value and share the costs of late stage clinical trials and commercialization.

THE OFFERING

Common stock offered by us	10,160,000 shares, 8,000,000 shares of which are being purchased immediately, with warrants (described below) being issued covering the remaining 2,160,000 shares.
Common stock to be outstanding after the offering	44,144,462 shares, based on the 8,000,000 shares being purchased immediately, but excluding 2,160,000 shares covered by the warrants
Warrants	The purchasers in this offering will receive warrants exercisable starting on or after July 19, 2005 and ending on July 19, 2009, covering 2,160,000 shares of our common stock at an exercise price of $5.00 per share (including a warrant for up to 560,000 shares issued to our placement agent). See "Description of Warrants" in this prospectus supplement for more information regarding the warrants.
Use of proceeds	We intend to use the net proceeds from this offering to fund clinical trials for our lead product candidates, to fund the advancement of our pre-clinical programs and for other research and development and general corporate purposes.
Risk factors	See "Risk Factors" beginning on page 2 of the accompanying prospectus and "Forward-Looking Information" on page S-1 of this prospectus supplement for a discussion of material risks that prospective purchasers of our common stock should consider.
Nasdaq National Market Symbol	AVII

The number of shares of common stock to be outstanding after the offering is based on the number of shares outstanding as of January [25], 2005, and does not include up to 2,160,000 shares of stock issuable upon exercise of certain warrants granted to the purchasers and a placement agent in this offering. As of that date, we had 44,144,462 shares of common stock outstanding, which does not include:

- 3,901,969 shares of common stock underlying options outstanding at a weighted average exercise price of $5.14 per share;
- 12,174,330 shares of common stock underlying warrants outstanding at a weighted average exercise price of $10.96 per share; and
- 2,727,703 shares available for future grant under our stock option plan and 100,661 shares available for future issuance under our employee stock purchase plan.

SUMMARY FINANCIAL DATA

The tables below set forth summary financial data for the years ended December 31, 2001, 2002 and 2003 and for the nine months ended September 30, 2003 and 2004. The summary financial data for the years ended December 31, 2001 through December 31, 2003 are derived from our audited financial statements for those periods. We derived the summary financial data as of September 30, 2004 and for the nine months ended September 30, 2003 and 2004 from our unaudited financial statements. The unaudited financial statement data includes, in our opinion, all adjustments that are necessary for a fair presentation of our financial position and results of operations for these periods. Operating results for the nine months ended September 30, 2004 are not necessarily indicative of the results that may be expected for the fiscal year ending December 31, 2004.

This information is only a summary. You should read it in conjunction with our historical financial statements and related notes contained in our annual reports, quarterly reports and other information on file with the SEC. For more details on how you can obtain our SEC reports and other information, you should read the section entitled, "Where You Can Find More Information," beginning on page 20 of the accompanying prospectus. The adjusted balance sheet data give effect to the sale of common stock in this offering, at an assumed offering price of $3.00 per share, after deducting the estimated underwriting discounts and commissions and estimated offering expenses.

Statement of operations data

	Year Ended December 31,			Nine Months Ended September 30,	
	2001	2002	2003	2003	2004
				(unaudited)	
	(in thousands, except per share data)				
Total revenues	$ 706	$ 837	$ 970	$ 835	$ 145
Total operating expenses	$ 16,109	$ 26,178	$ 19,843	$ 12,550	$ 20,252
Net loss	$ (26,925)	$ (29,359)	$ (14,617)	$ (11,520)	$ (19,787)
Net loss per share, basic and diluted	$ (1.20)	$ (1.14)	$ (0.49)	$ (0.40)	$ (0.55)
Shares used in computing basic and diluted net loss per share	22,399	25,692	29,809	29.062	35,948

Balance sheet data

	September 30, 2004	
	Actual	As Adjusted
	(unaudited)	
	(in thousands)	
Cash, cash equivalents and short-term investments	$ 23,105	$ 45,410
Working capital	$ 22,454	$ 44,759
Total assets	$ 32,373	$ 54,678
Long-term obligations, less current portion	$	$
Accumulated deficit	$ (150,982)	$ (150,982)
Total stockholders' equity	$ 31,024	$ 53,329

USE OF PROCEEDS

We expect to receive approximately $22.3 million in net proceeds from the sale of 8,000,000 shares of common stock in this offering which proceeds would be increased by $10.8 million if the purchasers and placement agent exercise their warrants in full, with the total net proceeds equal to approximately $33.1 million if all the warrants issued in this offering are exercised in full, after deducting placement agent fees of 7% and offering expenses payable by us. Pending the use of the net proceeds, we may invest the net proceeds in investment grade, interest-bearing securities.

We intend to use the net proceeds from this offering to fund clinical trials for our lead product candidates, to fund the advancement of our pre-clinical programs and for other research and development and general corporate purposes. We may also use a portion of the net proceeds to acquire or invest in businesses, products and technologies that are complementary to our own, although we are not currently planning or negotiating any such transactions. We have not identified the amounts we plan to spend on each of these areas or the timing of such expenditures, and we will have significant discretion in the use of any net proceeds. The amounts and timing of our actual expenditures for each purpose may vary significantly depending upon numerous factors, including the status of our research and product development efforts, regulatory approvals, competition, and economic or other conditions.

PRICE RANGE OF COMMON STOCK

Our common stock has been quoted and traded on the Nasdaq National Market under the symbol "AVII". The following table sets forth, for the periods indicated, the reported high and low closing sales prices per share of our common stock on the Nasdaq National Market:

	AVI BioPharma Common Stock	
	Low	**High**
Calendar Year Ended December 31, 2002		
First quarter	8.04	12.97
Second quarter	2.69	7.95
Third quarter	2.71	5.34
Fourth quarter	4.60	6.39
Calendar Year Ended December 31, 2003		
First quarter	2.04	5.83
Second quarter	3.31	7.05
Third quarter	4.31	6.15
Fourth quarter	4.46	5.50
Calendar Year Ended December 31, 2004		
First Quarter	2.88	4.75
Second Quarter	2.02	3.58
Third Quarter	1.59	2.71
Fourth Quarter	2.04	2.35
Calendar Year Ended December 31, 2005		
First Quarter (January 3 through February 8, 2005)	2.00	4.14

On and as of February 8,, 2005, the last reported sale price of our common stock on the Nasdaq National Market on was $2.35 and there were approximately 618 stockholders of record of our common stock.

We have never declared or paid dividends on our common stock and do not intend to do so in the foreseeable future. We plan to retain any earnings for use in the operation of our business and to fund future growth.

CAPITALIZATION

The following table sets forth as of September 30, 2004:

- our actual unaudited cash, cash equivalents, short-term investments and capitalization; and
- actual unaudited cash, cash equivalents, short-term investments and capitalization as adjusted to give effect to this offering of our common stock and our receipt of an estimated $22.305 million in net proceeds (after deducting finders fees and offering expenses) and assuming the investors and placement agent do not exercise their warrants to purchase additional shares of our common stock.

This table should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing in our most recent quarterly and annual reports and the financial statements and the related notes incorporated by reference in the accompanying prospectus.

	As of September 30, 2004	
	Actual	As Adjusted
	(in thousands, except share and per share data)	
Cash, cash equivalents and short-term investments	$ 23,105	45,410
Long-term debt		
Stockholders' equity:		
Preferred stock, $0.0001 par value; 20,000,000 shares authorized; no shares issued, actual and as adjusted		
Common stock, $0.0001 par value; 200,000,000 shares authorized; 36,123,790 shares issued and outstanding, actual; and 44,123,790 shares issued and outstanding, as adjusted	4	4
Additional paid-in-capital	182,297	204,602
Accumulated other comprehensive income	(295)	(295)
Accumulated deficit	(150,982)	(150,982)
Total stockholders' equity	31,024	53,329
Total capitalization	$ 31,024	53,329

The information in the table above does not include:

- 3,803,278 shares of common stock issuable upon exercise of options outstanding at a weighted average exercise price of $5.22 per share;
- 10,428,616 shares of common stock issuable upon exercise of warrants outstanding at a weighted average exercise price of $12.01 per share;

2,104,840 shares of common stock that have been reserved for issuance upon future grants under our stock option plan and 120,024 shares available for future issuance under our employee stock purchase plan; and

up to 2,160,000 shares of common stock issuable upon exercise of the purchases' and placement agent's warrants.

DILUTION

The net tangible book value of our common stock on September 30, 2004 was approximately $29.077 million, or approximately $0.80 per share. Net tangible book value per share is equal to the amount of our total tangible assets, less total liabilities, divided by the aggregate number of shares of common stock outstanding. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after this offering. After giving effect to the sale of 8,000,000 shares of common stock in this offering at a sales price of $3.00 per share, and after deducting estimated finders fees and offering expenses, our net tangible book value at September 30, 2004 would have been approximately $51.382 million, or approximately $1.16 per share. This represents an immediate dilution of $1.84 per share to new investors purchasing shares of common stock in this offering. The following table illustrates this dilution:

Public offering price per share		$ 3.00
Net tangible book value per share as of September 30, 2004	$ 0.80	
Increase per share attributable to new investors	0.36	
Net tangible book value per share as of September 30, 2004 after giving effect to this offering		1.16
Dilution per share to new investors		$ 1.84

The foregoing table does not take into account further dilution to new investors that could occur upon the exercise of outstanding options having a per share exercise price less than the per share offering price to the public in this offering. As of September 30, 2004, there were 36,123,790 shares of common stock outstanding, which does not include:

- 3,803,278 shares of common stock issuable upon exercise of options outstanding at a weighted average exercise price of $5.22 per share;
- 10,428,616 shares of common stock issuable upon exercise of warrants outstanding at a weighted average exercise price of $12.01;
- 2,104,840 shares available for future grant under our stock option plan and 120,024 available for future issuance under our employee stock purchase plan.

The above table does not reflect the expected loss to date for our fiscal quarter ending December 31, 2004, which would increase the dilution per share, and does not include up to 2,160,000 shares of common stock issuable upon exercise of warrants being issued in this offering.

PLAN OF DISTRIBUTION

The Company directly placed the securities with the purchasers. The purchase is being documented through Stock Purchase Agreements, copies of which are separately being filed with the SEC. The Company was assisted in the offering by a placement agent which is receiving certain compensation in connection with this offering. That compensation includes a sales commission equal to seven percent (7%) of the amount raised in this offering, reimbursement of certain expenses and a warrant to acquire up to 560,000 shares of our common stock.

DESCRIPTION OF WARRANTS

We offered to certain investors in a direct placement 8,000,000 shares of our common stock at a sales price of $3.00 per share, together with warrants to acquire up to an additional 1,600,000 shares of our common stock. We also issued to our placement agent a warrant to acquire 560,000 shares of our

common stock. We did not use a warrant agent in connection with the issuance of the warrants. The exercise price for all warrants is $5.00 per share and they are exercisable beginning July 19, 2005 and ending July 19, 2009. If all warrants are exercised, we will issue a total of 2,160,000 additional shares of common stock.

The number of shares deliverable and/or the exercise price under the warrants are subject to adjustment to reflect stock splits and dividends and similar corporate action. The holders of this warrant are also entitled to notice of certain corporate events, such as declaration of a dividend, certain transactions (such as a merger, consolidation or liquidation) and similar events at least twenty (20) days prior to applicable record or effective date for the event.

Our common stock is quoted on the Nasdaq National Market under the symbol "AVII".

LEGAL MATTERS

Certain legal matters with respect to the validity of the securities offered under this prospectus supplement will be passed upon for us by Davis Wright Tremaine LLP, Portland, Oregon.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the shares of common stock and preferred stock and/or warrants we are offering under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's public reference rooms at Room 1024, 450 Fifth Street, N.W., Washington, D.C. 20549, as well as at the SEC's regional offices at 500 West Madison Street, Suite 1400, Chicago, IL 60661 and at 233 Broadway, New York, NY 10279. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference rooms. Our SEC filings are also available at the SEC's web site at "http://www.sec.gov." In addition, you can read and copy our SEC filings at the office of the National Association of Securities Dealers, Inc. at 1735 K Street, N.W., Washington, D.C. 20006.

The SEC allows us to "incorporate by reference" information that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference into this registration statement and prospectus the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement but prior to effectiveness of the registration statement and after the date of this prospectus but prior to the termination of the offering of the securities covered by this prospectus.

The following documents filed with the SEC are incorporated by reference in this prospectus:

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2003, which was filed on March 15, 2004, including information incorporated by reference in the Form 10-K from our definitive proxy statement for the 2004 annual meeting of stockholders, which was filed on April 8, 2004;

Our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2004, which was filed on May 7, 2004, the Form 10-Q for the quarter ended June 30, 2004, which was filed on August 9, 2004, and the Form 10-Q for the quarter ended September 30, 2004, which was filed on November 9, 2004;

Our Current Reports on Form 8-K each filed on January 20, 2005; and

The description of our common stock set forth in our registration statement on Form 8-A filed May 29, 1997.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to:

AVI BioPharma, Inc.
Investor Relations
One S.W. Columbia
Suite 1105
Portland, OR 97258
Attn: Michael C. Hubbard
(503) 227-0554

PROSPECTUS

AVI BIOPHARMA, INC.

$75,000,000

Common Stock
Preferred Stock
Warrants

From time to time, we may sell common stock, preferred stock and/or warrants.

We will provide the specific terms of these securities in one or more supplements to this prospectus. You should read this prospectus and any prospectus supplement carefully before you invest.

Our common stock is traded on The Nasdaq National Market under the trading symbol "AVII." The applicable prospectus supplement will contain information, where applicable, as to any other listing (if any) on The Nasdaq Stock Market's National Market or any securities exchange of the securities covered by the prospectus supplement.

THIS PROSPECTUS MAY NOT BE USED TO OFFER OR SELL ANY SECURITIES UNLESS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

The securities may be sold directly by us to investors, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution." If any underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such underwriters and any applicable commissions or discounts will be set forth in a prospectus supplement. The net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED THESE SECURITIES OR DETERMINED IF THIS PROSPECTUS IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

October 9, 2003

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This prospectus is part of a registration statement we filed with the Securities and Exchange Commission. You should rely only on the information we have provided or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus or any prospectus supplement is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the SEC using a "shelf" registration process. Under this shelf registration process, we may sell common stock, preferred stock and/or warrants in one or more offerings up to a total dollar amount of $75,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we sell common stock, preferred stock and/or warrants, we will provide a prospectus supplement that will contain more specific information, as set forth below under "The Securities We May Offer." We may also add, update or change in the prospectus supplement any of the information contained in this prospectus. This prospectus, together with applicable prospectus supplements, includes all material information relating to this offering. Please carefully read both this prospectus and any prospectus supplement together with the additional information described below under "Where You Can Find More Information."

AVI BIOPHARMA

We are a biopharmaceutical company therapeutic products for the treatment of life-threatening diseases using two technology platforms: NEUGENE® antisense drugs and cancer immunotherapy. Our lead NEUGENE antisense compound is designed to target cancer, cardiovascular restenosis, polycystic kidney disease and other cell proliferation disorders. In addition to targeting specific genes in the body, our antiviral program uses NEUGENE antisense compounds to target single-stranded RNA viruses, including West Nile Virus, SARS, coronavirus, calicivirus, and Hepatitis C. Our lead cancer agent, AVICINE®, is a therapeutic cancer vaccine that has completed Phase II clinical trials in colorectal and pancreatic cancer. We were incorporated in Oregon in 1980 as Antivirals, Inc., and changed our name to AVI BioPharma, Inc. in 1998.

Our executive offices are currently located at One S.W. Columbia St., Suite 1105, Portland, OR 97258. Our telephone number is (503) 227-0554. Our common stock is listed on the NASDAQ National Market under the symbol "AVII." We maintain a site on the Internet at "www.avibio.com;" however, information found on our website is not part of this prospectus.

"AVI" and the AVI logo are trademarks of AVI BioPharma, Inc. All other brand names or trademarks appearing in this prospectus are the property of their respective holders.

THE SECURITIES WE MAY OFFER

We may offer shares of our common stock and preferred stock and/or warrants to purchase any of such securities with a total value of up to $75 million from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

designation or classification;

aggregate offering price;

maturity, if applicable;

rates and times of payment of dividends, if any;

redemption, conversion or sinking fund terms, if any;

voting or other rights, if any;

conversion prices, if any; and

important federal income tax considerations.

The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference.

THIS PROSPECTUS MAY NOT BE USED TO CONSUMMATE A SALE OF SECURITIES UNLESS IT IS ACCOMPANIED BY A PROSPECTUS SUPPLEMENT.

We may sell the securities directly to or through agents, underwriters or dealers. We, and our agents or underwriters, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through agents or underwriters, we will include in the

applicable prospectus supplement:

- the names of those agents or underwriters;
- applicable fees, discounts and commissions to be paid to them; and

the net proceeds to us.

Common Stock. We may issue shares of our common stock from time to time. Holders of common stock are entitled to one vote per share on all matters submitted to a vote of stockholders. Subject to any preferences of outstanding shares of preferred stock, holders of common stock are entitled to dividends when and if declared by the board of directors.

Preferred Stock. We may issue shares of our preferred stock from time to time, in one or more series. Our board of directors shall determine the rights, preferences, privileges and restrictions of the preferred stock, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series. Convertible preferred stock will be convertible into our common stock. Conversion may be mandatory or at your option and would be at prescribed conversion rates.

Warrants. We may issue warrants for the purchase of common stock and/or preferred stock in one or more series. We may issue warrants independently or together with common and/or preferred stock, and the warrants may be attached to, or separate from, these securities. In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the prospectus supplements related to the series of warrants being offered, as well as the warrant agreement that contains the terms of the warrants. The warrant agreement and form of warrant containing the terms of the warrants being offered will be filed as exhibits to the registration statement of which this prospectus is a part or will be incorporated by reference from reports we file with the SEC.

We will evidence each series of warrants by warrant certificates that we will issue under a separate agreement. We will enter into the warrant agreement with a warrant agent. Each warrant agent will be a bank that we select which has its principal office in the United States and a combined capital and surplus of at least $50,000,000. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

RISK FACTORS

AN INVESTMENT IN OUR SECURITIES INVOLVES A HIGH DEGREE OF RISK. YOU SHOULD CAREFULLY CONSIDER THE SPECIFIC FACTORS LISTED BELOW, TOGETHER WITH THE CAUTIONARY STATEMENT THAT FOLLOWS THIS SECTION AND THE OTHER INFORMATION INCLUDED IN THIS PROSPECTUS, BEFORE PURCHASING SECURITIES IN THIS OFFERING. If the possibilities described as risks below actually occur, our operating results and financial condition would likely suffer, and the trading price of our Common Stock or, if issued, our Preferred Stock, may fall, causing you to lose some or all of your investment in the shares we are offering.

Risks Related to AVI's Business

Our products are in an early stage of development and may not be determined to be safe or effective.

We are only in the early stages of clinical development with our NEUGENE antisense pharmaceutical products and mid stage clinical development of our AVICINE products. We have devoted almost all of our time to research and development of our technology and products, protecting our proprietary rights and establishing strategic alliances. Our proposed products are in the pre-clinical or clinical stages of development and will require significant further research, development, clinical testing and regulatory clearances. We have no products available for sale and we do not expect to have any products available for sale for several years. Our proposed products are subject to development risks. These risks include the possibilities that any of the products could be found to be ineffective or toxic, or could fail to receive necessary regulatory clearances. Although we have obtained favorable results in Phase II trials using AVICINE to treat colorectal cancer patients, we may not obtain similar

or more favorable results in our planned Phase III clinical trial. We have not received any significant revenues from the sale of products and we may not successfully develop marketable products that will increase sales and provide adequate margins to make us profitable. Third parties may develop superior or equivalent, but less expensive, products.

We have incurred net losses since our inception, and we may not achieve or sustain profitability

We incurred a net loss of $26.9 million in 2001 and $29.4 million in 2002, including non-cash write-downs of our investment securities in accordance with SEC accounting rules of $12.5 million in 2001 and $4.5 million in 2002. As of December 31, 2002, our accumulated deficit was $116.6 million and, at June 30, 2003, was $123.5 million. Our losses have resulted principally from expenses incurred in research and development of our technology and products and from selling, general and administrative expenses that we have incurred while building our business infrastructure. We expect to continue to incur significant losses in the future as we continue our research and development efforts and seek to obtain regulatory approval of our products. Our ability to achieve profitability depends on our ability to complete development of our products, obtain regulatory approvals and market our products. It is uncertain when, if ever, we will become profitable.

If we fail to attract significant additional capital, we may be unable to continue to successfully develop our products.

Since we began operations, we have obtained operating funds primarily by selling shares of our common stock and warrants to purchase shares of our common stock. In May 2003, we raised $20.7 million, net of offering costs, by issuing common stock and warrants. Based on our current plans, we believe that current cash balances will be sufficient to meet our operating needs through calendar 2004. However, the actual amount of funds that we will need will be determined by many factors, some of which are beyond our control. These factors include the success of our research and development efforts, the status of our pre-clinical and clinical testing, costs relating to securing regulatory approvals and the costs and timing of obtaining new patent rights, regulatory changes, competition and technological developments in the market. We may need funds sooner than currently anticipated.

We anticipate that we may need to obtain additional funds in the future. If necessary, potential sources of additional funding include strategic relationships, public or private sales of shares of our common stock or debt or other arrangements. We do not have any committed sources of additional financing at this time. We may not obtain additional funding when we need it on terms that will be acceptable to us or at all. If we raise funds by selling additional shares of our common stock or securities convertible into our common stock, the ownership interest of our existing shareholders will be diluted. If we are unable to obtain financing when needed, our business and future prospects would be materially adversely affected.

If we fail to receive necessary regulatory approvals, we will be unable to commercialize our products.

All of our products are subject to extensive regulation by the FDA and by comparable agencies in other countries. The FDA and comparable agencies require new pharmaceutical products to undergo lengthy and detailed clinical testing procedures and other costly and time-consuming compliance procedures. AVICINE has completed three Phase I and two Phase II studies and is ready to start a Phase III trial. Our first NEUGENE Antisense drug, Resten-NG®, completed Phase I trials in late 2001 and a Phase II trial in 2002. We initiated two additional Phase 1b studies in 2001 for cancer and polycystic kidney disease and completed three Phase I trials on drug metabolism. Except for clinical trials underway or ready to start, we may not initiate additional trials when predicted or at all, or complete our clinical trials that are started or in a timely fashion. We do not know when or if we will be able to submit our products for regulatory review. Even if we submit a product for regulatory review, there may be delays in obtaining regulatory approvals, or we may not obtain them at all. Sales

of our products outside the United States will also be subject to regulatory requirements governing clinical trials and product approval. These requirements vary from country to country and could delay introduction of our products in those countries. We cannot assure you that any of our products will receive marketing approval from the FDA or comparable foreign agencies.

We may fail to compete effectively, particularly against larger, more established pharmaceutical companies, causing our business to suffer.

The biotechnology industry is highly competitive. We compete with companies in the United States and abroad that are engaged in the development of pharmaceutical technologies and products. They include: biotechnology, pharmaceutical, chemical and other companies; academic and scientific institutions; governmental agencies; and public and private research organizations.

Many of these companies and many of our other competitors have much greater financial and technical resources and production and marketing capabilities than we do. Our industry is characterized by extensive research and development and rapid technological progress. Competitors may successfully develop and market superior or less expensive products which render our products less valuable or unmarketable.

We have limited operating experience.

We have engaged solely in the development of pharmaceutical technology. Although some members of our management have experience in biotechnology company operations, we have limited experience in manufacturing or selling pharmaceutical products. We also have only limited experience in negotiating and maintaining strategic relationships, and in conducting clinical trials and other later-stage phases of the regulatory approval process. We may not successfully engage in some or all of these activities.

We have limited manufacturing capability.

While we believe that we can produce materials for clinical trials and produce products for human use at our recently completed Good Manufacturing Practices, or GMP, manufacturing facility, we may need to, depending on demand, expand our commercial manufacturing capabilities for products in the future if we elect not to or cannot contract with others to manufacture our products. This expansion may occur in stages, each of which would require regulatory approval, and product demand could at times exceed supply capacity. We have not selected a site for any expanded facilities and do not know what the construction cost will be for such facilities and whether we will have the financing needed for such construction. We do not know if or when the FDA will determine that such facilities comply with Good Manufacturing Practices. The projected location and construction of any facilities will depend on regulatory approvals, product development, pharmaceutical partners and capital resources, among other factors. We have not obtained regulatory approvals for any productions facilities for our products, nor can we assure investors that we will be able to do so.

If we lose key personnel or are unable to attract and retain additional, highly skilled personnel required for our activities, our business will suffer.

Our success will depend to a large extent on the abilities and continued service of several key employees, including Drs. Denis Burger, Patrick Iversen, David Mason and Dwight Weller. We maintain key man life insurance in the amount of $1,000,000 for Dr. Burger and $500,000 for each of Drs. Iversen and Weller. The loss of any of these key employees could significantly delay the achievement of our goals. Competition for qualified personnel in our industry is intense, and our success will depend on our ability to attract and retain highly skilled personnel. To date, we are not aware of any key personnel who plan to retire or otherwise leave AVI in the near future.

Asserting, defending and maintaining our intellectual property rights could be difficult and costly, and our failure to do so would harm our ability to compete and the results of our operations.

Our success will depend on our existing patents and licenses, and our ability to obtain additional patents in the future. We have been issued 74 patents and have filed an additional 110 patent applications in the United States, Canada, Europe, Australia and Japan. We license the composition, manufacturing and use of AVICINE in all fields, except fertility regulation, from The Ohio State University, and we license other patents for certain complementary technologies from others.

Some of our patents on core technologies expire as early as 2008, including for NEUGENE; however, based on patented improvements and additions to such core patents, we believe our patent protection for those products and other products would extend beyond 2020.

We cannot assure investors that our pending patent applications will result in patents being issued in the United States or foreign countries. In addition, the patents that have been or will be issued may not afford meaningful protection for our technology and products. Competitors may develop products similar to ours that do not conflict with our patents. Others may challenge our patents and, as a result, our patents could be narrowed or invalidated. The patent position of biotechnology firms generally is highly uncertain, involves complex legal and factual questions, and has recently been the subject of much litigation. No consistent policy has emerged from the United States Patent and Trademark Office, or USPTO, or the courts regarding the breadth of claims allowed or the degree of protection afforded under biotechnology patents. In addition, there is a substantial backlog of biotechnology patent applications at the USPTO and the approval or rejection of patents may take several years.

Our success will also depend partly on our ability to operate without infringing upon the proprietary rights of others, as well as our ability to prevent others from infringing on our proprietary rights. We may be required at times to take legal action to protect our proprietary rights and, despite our best efforts, we may be sued for infringing on the proprietary rights of others. We have not received any communications or other indications from owners of related patents or others that such persons believe our products or technology may infringe their patents. Patent litigation is costly and, even if we prevail, the cost of such litigation could adversely affect our financial condition. If we do not prevail, in addition to any damages we might have to pay, we could be required to stop the infringing activity or obtain a license. Any required license may not be available to us on acceptable terms, or at all. If we fail to obtain a license, our business might be materially adversely affected.

To help protect our proprietary rights in unpatented trade secrets, we require our employees, consultants and advisors to execute confidentiality agreements. However, such agreements may not provide us with adequate protection if confidential information is used or disclosed improperly. In addition, in some situations, these agreements may conflict with, or be subject to, the rights of third parties with whom our employees, consultants or advisors have prior employment or consulting relationships. Further, others may independently develop substantially equivalent proprietary information and techniques, or otherwise gain access to our trade secrets.

If our relationships are unsuccessful, our business could be harmed.

Our strategic relationships with SuperGen, Inc., Medtronic, Inc., Exelixis, Inc. and others are important to our success. The development, improvement and marketing of many of our key therapeutic products are or will be dependent on the efforts of our strategic partners. For example, under the SuperGen relationship, we may fail to achieve clinical and sales milestones; AVICINE may fail to achieve regulatory approval; AVICINE may not be commercially successful; SuperGen may fail to perform its obligations under our agreements, such as failing to devote sufficient resources to marketing AVICINE; and our agreements with SuperGen may be terminated against our will. Similarly, Medtronic may fail to perform its obligations under our nonexclusive agreement, such as failing to devote sufficient resources to development or to market such products. We may also need additional

future funding, including for operations, product development and our other activities. We may not receive additional funding from our strategic partners, including SuperGen and Medtronic, under existing agreements. We may not receive any additional payments from SuperGen or Medtronic and those relationships may not be commercially successful. The transactions contemplated by our agreements with strategic partners, including the equity purchases and cash payments, are subject to numerous risks and conditions. The occurrence of any of these events could severely harm our business.

Our near-term strategy is to co-develop products with strategic partners or to license the marketing rights for our products to pharmaceutical partners after we complete one or more Phase II clinical trials. In this manner, the extensive costs associated with late-stage clinical development and marketing will be shared with, or become the responsibility of, our strategic partners.

To fully realize the potential of our products, including development, production and marketing, we may need to establish other strategic relationships.

We have limited sales capability and may not be able to successfully commercialize our products.

We have been engaged solely in the development of pharmaceutical technology. Although some of our management have experience in biotechnology company operations, we have limited experience in manufacturing or selling pharmaceutical products. We also have only limited experience in negotiating and maintaining strategic relationships, and in conducting clinical trials and other later phases of the regulatory approval process. To the extent we rely on strategic partners to fully commercialize our products, we will be dependent on their efforts. We may not successfully engage in any of these activities.

We may be subject to product liability lawsuits and our insurance may not be adequate to cover damages.

We believe we carry adequate insurance for the product development research we currently conduct. In the future, when we have products available for commercial sale and use, the use of our products will expose us to the risk of product liability claims. Although we intend to obtain product liability insurance coverage, product liability insurance may not continue to be available to us on acceptable terms and our coverage may not be sufficient to cover all claims against us. A product liability claim, even one without merit or for which we have substantial coverage, could result in significant legal defense costs, thereby increasing our expenses, lowering our earnings or, depending on revenues, potentially resulting in additional losses.

Continuing efforts of government and third party payers to contain or reduce the costs of health care may adversely affect our revenues and future profitability.

In addition to obtaining regulatory approval, the successful commercialization of our products will depend on our ability to obtain reimbursement for the cost of the product and treatment. Government authorities, private health insurers and other organizations, such as HMOs, are increasingly challenging the prices charged for medical products and services. Also, the trend toward managed health care in the United States, the growth of healthcare organizations, such as HMOs, and legislative proposals to reform healthcare and government insurance programs could significantly influence the purchase of healthcare services and products, resulting in lower prices and reducing demand for our products. The cost containment measures that healthcare providers are instituting and any healthcare reform could affect our ability to sell our products and may have a material adverse effect on our operations. Reimbursement in the United States or foreign countries may not be available for any of our products, any reimbursement granted may be reduced or discontinued, and limits on reimbursement available from third-party payors may reduce the demand for, or the price of, our products. The lack or inadequacy of third-party reimbursements for our products would have a material adverse effect on our operations. Additional legislation or regulation relating to the healthcare industry or third-party

coverage and reimbursement may be enacted in the future that adversely affects our products and our business.

If we fail to establish strategic relationships with larger pharmaceutical partners, our business may suffer.

We do not intend to conduct late-stage human clinical trials ourselves. We anticipate entering into relationships with larger pharmaceutical companies to conduct later stage pharmaceutical trials and to market our products and we also plan to continue to use contract manufacturing for late stage clinical and commercial quantities of our products. We may be unable to enter into corporate partnerships, which could impede our ability to bring our products to market. Any such corporate partnerships, if entered, may not be on favorable terms and may not result in the successful development or marketing of our products. If we are unsuccessful in establishing advantageous clinical testing, manufacturing and marketing relationships, we are not likely to generate significant revenues and become profitable.

We use hazardous substances in our research activities.

We use organic and inorganic solvents and reagents in our clinical development that are customarily used in pharmaceutical development and synthesis. Some of those solvents and reagents we use, such as methylene chloride, isopropyl alcohol, ethyl acetate and acetone, may be classified as hazardous substances, are flammable and, if exposed to human skin can cause anything from irritation to severe burns. We endeavor to receive, store, use and dispose of such chemicals in compliance with all applicable laws with containment storage facilities and contained handling and disposal safeguards and procedures. We are routinely inspected by federal, state and local governmental and public safety agencies regarding our storage, use and disposal of such chemicals, including the federal Occupational, Safety and Health Agency ("OSHA"), the Oregon Department of Environmental Quality and local fire departments. Based on our limited use of such chemicals, the nature of such chemicals and the safeguards we undertake for storage, use and disposal, we believe we do not have any material exposure for toxic tort liability. While we do not have toxic tort liability insurance at this time, we believe our current insurance coverage is adequate to cover most liabilities that may arise from our use of such substances. If we are wrong in any of our beliefs, we could incur a liability in certain circumstances that would be material to our finances and the value of an investment in our securities.

Risks Related to AVI Common Stock

Our right to issue preferred stock, our classified board of directors and Oregon anti-takeover laws may delay a takeover attempt and prevent or frustrate any attempt to replace or remove the then current management of the company by shareholders.

Our authorized capital consists of 200,000,000 shares of common stock and 20,000,000 shares of preferred stock. Our board of directors, without any further vote by the shareholders, has the authority to issue preferred shares and to determine the price, preferences, rights and restrictions, including voting and dividend rights, of these shares. The rights of the holders of shares of common stock may be affected by the rights of holders of any preferred shares that our board of directors may issue in the future. For example, our board of directors may allow the issuance of preferred shares with more voting rights, higher dividend payments or more favorable rights upon dissolution, than the shares of common stock or special rights to elect directors.

In addition, we have a "classified" board of directors, which means that only one-half of our directors are eligible for election each year. Therefore, if shareholders wish to change the composition of our Board of Directors, it could take up to two years to remove a majority of the existing directors or to change all directors. Having a classified board of directors may, in some cases, delay mergers, tender offers or other possible transactions which may be favored by some or a majority of our shareholders and may delay or frustrate action by shareholders to change the then current board of directors and management.

The Oregon Control Share Act and Business Combination Act may limit parties who acquire a significant amount of voting shares from exercising control over us for specific periods of time. These acts may lengthen the period for a proxy contest or for a person to vote their shares to elect the majority of our Board and change management.

Our stock price is volatile and may fluctuate due to factors beyond our control.

Historically, the market price of our stock has been highly volatile. The table below shows the volatility of our stock, illustrated by the range of the high and low closing price per share sales prices, over the past two calendar years and calendar year 2003 through September 18, 2003.

	AVI COMMON STOCK	
	LOW	**HIGH**
CALENDAR YEAR ENDED DECEMBER 31, 2001		
First quarter	$ 3.00	$ 6.87
Second quarter	3.75	9.85
Third quarter.	5.86	10.45
Fourth quarter.	7.12	11.19
CALENDAR YEAR ENDED DECEMBER 31, 2002		
First quarter	8.04	12.97
Second quarter	2.70	7.95
Third quarter.	2.71	5.34
Fourth quarter.	4.60	6.39
CALENDAR YEAR ENDING DECEMBER 31, 2003		
First quarter	2.04	5.83
Second quarter	3.31	7.05
Third quarter (through September 18, 2003).	4.31	6.15

The following types of announcements could have a significant impact on the price of our common stock: positive or negative results of testing and clinical trials by ourselves or competitors; delays in entering into corporate partnerships; technological innovations or commercial product introductions by ourselves or competitors; changes in government regulations; developments concerning proprietary rights, including patents and litigation matters; public concern relating to the commercial value or safety of any of our products; or general stock market conditions.

Further, the stock market has in recent years experienced and may continue to experience significant price and volume fluctuations. These fluctuations have particularly affected the market prices of equity securities of many biopharmaceutical companies that are not yet profitable. Often, the effect on the price of such securities is unrelated or disproportionate to the operating performance of such companies. These broad market fluctuations may adversely affect the ability of a shareholder to dispose of his or her shares at a price equal to or above the price at which the shares were purchased.

The significant number of our shares of common stock eligible for future sale may cause the price of our common stock to fall.

As of September 18, 2003, we had outstanding 31,205,412 shares of common stock and all were eligible for sale under Rule 144 or are otherwise freely tradable. The shares being registered hereunder

will be freely tradable upon issuance and, in the case of warrants or convertible securities, the underlying shares issuable upon conversion or exercise will be freely tradable. In addition:

- Our employees and others hold options to buy a total of 3,705,804 shares of common stock as of September 18, 2003. The shares of common stock to be issued upon exercise of these options have been registered, and therefore may be freely sold when issued.

- We may issue options to purchase up to an additional 1,517,267 shares of common stock under our stock option plans as of September 18, 2003, which also will be freely tradable when issued.

- We are authorized to sell up to 164,004 shares of common stock under our Employee Stock Purchase Plan to our full-time employees, nearly all of whom are eligible to participate.

- There are outstanding warrants to buy 8,724,070 shares of common stock as of September 18, 2003. All of these shares of common stock are registered for resale and may be freely sold when issued.

We have also granted certain contractual rights to purchase (i) up to 352,113 shares of our common stock at a price of $7.10 per share and (ii) up to $7,500,000 of our common stock based on the average closing sales price for the five days preceding the commitment to purchase. If we meet certain technological milestones, the holder of these rights is obligated to purchase shares of common stock from us. The holder of these rights may require us to register the shares issued upon the exercise of such purchase rights.

Sales of substantial numbers of shares into the public market could lower the market price of our common stock.

We were unable to obtain Arthur Andersen LLP's consent to incorporate by reference in this shelf registration Arthur Andersen's report on our financial statements for calendar years 2000 and 2001 which Arthur Andersen audited, which could reduce your rights if there were any material misstatements or omissions in such financial statements.

On May 15, 2002, we dismissed Arthur Andersen as our auditors and retained KPMG LLP. In June 2002, Arthur Andersen was convicted of federal obstruction of justice charges. As a result of Arthur Andersen's conviction, Arthur Andersen is no longer in a position to reissue their audit reports or to provide consents to include financial statements in this prospectus supplement.

Our financial statements for our two fiscal years ended December 31, 2001 and 2000 were audited by Arthur Andersen LLP ("Prior Financials"). Those Prior Financials were included in our annual report on Form 10-K for the fiscal year ended December 31, 2002, filed with the SEC on March 31, 2003. The Arthur Andersen report, dated February 21, 2002, expressed an unqualified opinion on those financials. The SEC rules relating to the registration of the securities included in this exchange offer require that we include in the registration of such shares the 2002 and 2001 financial statements and the auditor's reports thereon by incorporation of and reference to our annual report on Form 10-K for the year ended December 31, 2002, and that we file a consent of Arthur Andersen to such inclusion of their report. The consent of Arthur Andersen is not available as they are no longer in a position to reissue their reports or provide consents.

Without Arthur Andersen's consent to such inclusion in the registration of the shares being offered, you may not rely on their audit of the Prior Financials in connection with your decision to exchange shares of eXegenics capital stock for shares of AVI common stock. As a result, your remedies as an investor against Arthur Andersen may be materially reduced or eliminated in the event of a material misstatement or omission in such Prior Financials. Under Section 11 of the Securities Act of 1933, as amended, you would otherwise have certain claims against Arthur Andersen if there were material misstatements or omissions related to Arthur Andersen's audit and opinion included in such Prior Financials. Without such consent, there would not be such liability. Further, there may be similar

claims and remedies under the antifraud provisions of the 1933 Act, the Securities Exchange Act of 1934 and applicable state securities laws that will also not be available against Arthur Andersen for the audit and material misstatements or omissions, if any, related to such audit without such consent. In giving such consent, Arthur Andersen would normally undertake certain review and updating procedures that could uncover certain material misstatements or omissions, if they existed, in the Prior Financials or require their qualification. The Prior Financials incorporated herein will not have had the benefit of such review process and possible disclosure of any such misstatements, omissions or qualifications. While we are not aware of any material misstatements or omissions or qualifications related to the Prior Financials or Arthur Andersen's audit work, there is no assurance that there are none. If there are any, the value of an investment in our securities could be adversely affected and an investor would not have any recourse against Arthur Andersen if it were otherwise responsible to investors under applicable law for such loss. If there were any, we believe that it is unlikely that damages, if any, could be recovered from Arthur Andersen for any claim against Arthur Andersen.

We do not expect to pay dividends in the foreseeable future.

We have never paid dividends on our shares of common stock and do not intend to pay dividends in the foreseeable future. Therefore, you should only invest in our common stock with the expectation of realizing a return through capital appreciation on your investment. You should not invest in our common stock if you are seeking dividend income.

FORWARD-LOOKING INFORMATION

Certain of the information relating to us contained in or incorporated by reference into this prospectus is forward-looking in nature. All statements included or incorporated by reference into this prospectus or made by your management, other than statements of historical fact regarding us, are forward-looking statements. Examples of forward-looking statements include statements regarding our financing needs, projected costs, future products and services, competitive positions, the effect of FDA regulation, the status and completion of clinical and pre-clinical trials, research and development efforts and plans and objectives of management for future operations. In some cases, you can identify forward-looking statements by terminology, such as "may," "will," "intends," "should," "would," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential" or "continue" or the negative of these terms or other comparable terminology. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this prospectus. These and many other factors could affect our future financial and operating results and could cause actual results to differ materially from expectations based on forward-looking statements made in this document or elsewhere.

Because the risk factors referred to above, as well as the risk factors incorporated by reference, could cause actual results or outcomes to differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any forward-looking statements. Further, any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which the statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

USE OF PROCEEDS

Except as described in any prospectus supplement, we currently intend to use the net proceeds from the sale of our securities for research and development and general corporate purposes. We may also use a portion of the net proceeds to commercialize our products, or to acquire or invest in businesses, products and technologies that are complementary to our own or provide us with a strategic advantage, although we currently are not planning or negotiating any such transactions. Pending these uses, the net proceeds will be invested in investment-grade, interest-bearing securities.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 200 million shares of common stock, $.0001 par value, and 20 million shares of preferred stock, $.0001 par value. As of September 18, 2003, there were 31,205,412 shares of common stock outstanding and no shares of preferred stock outstanding.

Common Stock

The holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders and do not have cumulative voting rights. Accordingly, holders of a majority of the shares of common stock entitled to vote in any election of directors may elect all of the directors standing for election. Subject to preferences that may be applicable to any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably such dividends as may be declared by the board of directors out of funds legally available therefor. Upon the liquidation, dissolution or winding up of the Company, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preferences of any outstanding shares of preferred stock. Holders of common stock have no preemptive rights and no right to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to our common stock. All outstanding shares of common stock are, and all shares of common stock that may be issued under this prospectus will be, fully paid and non-assessable.

Preferred Stock

Pursuant to our Amended and Restated Articles of Incorporation (as amended), our board of directors has the authority, without further action by the stockholders, to issue up to 20 million shares of preferred stock, in one or more series. Our board shall determine the rights, preferences, privileges and restrictions of the remaining preferred stock, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series.

We will fix the rights, preferences, privileges and restrictions of the preferred stock of each series in the certificate of designation relating to that series. We will incorporate by reference as an exhibit to the registration statement that includes this prospectus or as an exhibit to a current report on Form 8-K, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. This description will include:

- the title and stated value;
- the number of shares we are offering;
- the liquidation preference per share;
- the purchase price;
- the dividend rate, period and payment date and method of calculation for dividends;
- whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate; the procedures for any auction and remarketing, if any;
- the provisions for a sinking fund, if any;
- the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;
- any listing of the preferred stock on any securities exchange or market;

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whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;

whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange period;

voting rights, if any, of the preferred stock;

preemption rights, if any;

restrictions on transfer, sale or other assignment, if any;

whether interests in the preferred stock will be represented by depositary shares;

a discussion of any material or special United States federal income tax considerations applicable to the preferred stock;

the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;

any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

If we issue shares of preferred stock under this prospectus, the shares will be fully paid and nonassessable and will not have, or be subject to, any preemptive or similar rights.

The Oregon Business Corporation Act provides that the holders of preferred stock will have the right to vote separately as a class on any proposal involving fundamental changes in the rights of holders of that preferred stock. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

The issuance of preferred stock could adversely affect the voting power, conversion or other rights of holders of common stock. Preferred stock could be issued quickly with terms calculated to delay or prevent a change in control of our company or make removal of management more difficult. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of common stock.

Registration Rights

As of the date hereof, holders of rights to acquire approximately 31 million shares of common stock will either acquire shares that are registered upon acquisition and freely tradable or be entitled to require us, at our expense, subject to certain limitations, to file one or more registration statements under the Securities Act with respect to their shares of common stock, when acquired, and we will be required to use our best efforts to effect such registrations and, in some cases, keep such registrations effective until all such shares are sold or registration is no longer required under federal and state securities laws. In certain cases, if we propose to register any of our securities under the Securities Act, either for our own account or for the account of others, certain holders of these shares may be notice of the registration and be entitled to include, at our expense, their shares of common stock in the registration and any related underwriting, provided, among other conditions, that the underwriters may limit the number of shares to be included in the registration, if those shares are not otherwise then registered.

Anti-Takeover Effects of Provisions of Oregon Law and Our Charter Documents.

Oregon Takeover Statute; Hostile Takovers. The Oregon Control Share Act ("OCSA") regulates the process by which a person may acquire control of certain Oregon-based corporations without the consent and cooperation of the board of directors. The OCSA provisions restrict a shareholder's ability to vote shares of stock acquired in certain transactions not approved by the board that cause the acquiring person to gain control of a voting position exceeding one-fifth, one-third, or one-half of the votes entitled to be cast in an election of directors. Shares acquired in a control share acquisition have no voting rights except as authorized by a vote of the shareholders. A corporation may opt out of the OCSA by provision in the corporation's articles of incorporation or bylaws. AVI has not opted to take itself outside of the coverage of the OCSA.

Interested Shareholder Transactions. Except under certain circumstances, the OBCA prohibits a "business combination" between a corporation and an "interested shareholder" within three years of the shareholder becoming an "interested shareholder." Generally, an "interested shareholder" is a person or group that directly or indirectly controls, or has the right to acquire or control, the voting or disposition of 15% or more of the outstanding voting stock or is an affiliate or associate of the corporation and was the owner of 15% or more of such voting stock at any time within the previous three years. A "business combination" is defined broadly to include, among others (i) mergers and sales or other dispositions of 10% or more of the assets of a corporation with or to an interested shareholder, (ii) certain transactions resulting in the issuance or transfer to the interested shareholder of any stock of the corporation or its subsidiaries, (iii) certain transactions which would result in increasing the proportionate share of the stock of a corporation or its subsidiaries owned by the interested shareholder, and (iv) receipt by the interested shareholder of the benefit (except proportionately as a shareholder) of any loans, advances, guarantees, pledges, or other financial benefits.

A business combination between a corporation and an interested shareholder is prohibited unless (i) prior to the date the person became an interested shareholder, the board of directors approved either the business combination or the transaction which resulted in the person becoming an interested shareholder, (ii) upon consummation of the transaction that resulted in the person becoming an interested shareholder, that person owns at least 85% of the corporation's voting stock outstanding at the time the transaction is commenced (excluding shares owned by persons who are both directors and officers and shares owned by employee stock plans in which participants do not have the right to determine confidentially whether shares will be tendered in a tender or exchange offer), or (iii) the business combination is approved by the board of directors and authorized by the affirmative vote (at an annual or special meeting and not by written consent) of at least $66^{2}/_{3}\%$ of the outstanding voting stock not owned by the interested shareholder.

These restrictions placed on interested shareholders by the OBCA do not apply under certain circumstances, including, but not limited to, the following: (i) if the corporation's original articles of incorporation or certificate of incorporation contains a provision expressly electing not to be governed by the applicable section of the OBCA; or (ii) if the corporation, by action of its shareholders, adopts an amendment to its bylaws, articles of incorporation or certificate of incorporation expressly electing not to be governed by the applicable section of the OBCA, provided that such an amendment is approved by the affirmative vote of not less than a majority of the outstanding shares entitled to vote. Such an amendment, however, generally will not be effective until 12 months after its adoption and will not apply to any business combination with a person who became an interested shareholder at or prior to such adoption. AVI has not elected to take itself outside the coverage of the applicable sections of the OBCA. In addition, the restrictions are not applicable to business combinations proposed between the announcement and the consummation or abandonment of certain transactions, including mergers and tender offers.

Board Of Directors' Criteria For Evaluating Business Combinations. Under the OBCA, members of the board of directors of a corporation are authorized to consider certain factors in determining the best interests of the corporation when evaluating any (i) offer of another party to make a tender or exchange offer, (ii) merger or consolidation proposal, or (iii) offer of another party to purchase all or substantially all of the assets of the corporation. These factors include the social, legal and economic effects on employees, customers and suppliers of the corporation and on the communities and geographical areas in which the corporation operates, the economy and the state of the nation, the long-term and short-term interests of the corporation and its shareholders, including the possibility that these interests may be best served by the continued independence of the corporation, and other relevant factors.

Charter Documents. Our Amended and Restated Articles of Incorporation (as amended) and bylaws require that any action required or permitted to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders. Additionally, our Amended and Restated Articles of Incorporation or Bylaws:

do not allow the use of cumulative voting in the election of directors;

The amendment or repeal of any provisions of our Amended and Restated Articles of Incorporation requires, in addition to the affirmative vote of any particular or series of AVI voting stock required by law, the affirmative vote of the holders of at least 66$^2/_3$% of the shares entitled to vote at an election of our directors;

our Amended and Restated Articles of Incorporation provides that at all times that there are six or more positions on our board of directors, our entire board will be divided into two classes, with each class serving a staggered two-year term;

provides that the setting of the authorized number of directors and any changes to the authorized number of directors may be effected only by amendment of the Bylaws and approval of such amendment by holders of a majority of the shares then outstanding, voting as a single class;

provides that a director may be removed with or without cause by a vote of the majority of the voting power of the corporation entitled to vote at an election of directors;

authorizes our board of directors to issue blank check preferred stock to increase the amount of outstanding shares; and

provides that the Bylaws may only be altered or amended or new Bylaws adopted by the affirmative vote of at least 66$^2/_3$% of the directors or by the affirmative vote of at least 66$^2/_3$% of the voting power of all of the then-outstanding shares of the voting stock of the corporation entitled to vote.

Our board of directors may appoint new directors to fill vacancies or newly created directorships. Oregon law limits who may call a special meeting of stockholders.

Oregon law and these charter provisions may have the effect of deterring or delaying hostile takeovers or delaying changes in control of our management, which could depress the market price of our common stock.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Mellon Investor Services LLC. Its address is 520 Pike Street, Suite 1220, Seattle, WA 98101and its telephone number is (206) 674-3030.

DESCRIPTION OF WARRANTS

The following description, together with the additional information we may include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus and the related warrant agreements and warrant certificates. While the terms summarized below will apply generally to any warrants that we may offer, we will describe the particular terms of any series of warrants in more detail in the applicable prospectus supplement. If we indicate in the prospectus supplement, the terms of any warrants offered under that prospectus supplement may differ from the terms described below. Specific warrant agreements will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement that includes this prospectus or as an exhibit to a current report on Form 8-K.

General

We will describe in the applicable prospectus supplement the terms of the series of warrants, including:

- the offering price and aggregate number of warrants offered;
- the currency for which the warrants may be purchased;
- if applicable, the designation and terms of the securities with which the warrants are issued and the number of warrants issued with each such security or each principal amount of such security;
- if applicable, the date on and after which the warrants and the related securities will be separately transferable;
- in the case of warrants to purchase debt securities, the principal amount of debt securities purchasable upon exercise of one warrant and the price at, and currency in which, this principal amount of debt securities may be purchased upon such exercise;
- in the case of warrants to purchase common stock or preferred stock, the number of shares of common stock or preferred stock, as the case may be, purchasable upon the exercise of one warrant and the price at which these shares may be purchased upon such exercise;
- the effect of any merger, consolidation, sale or other disposition of our business on the warrant agreement and the warrants;
- the terms of any rights to redeem or call the warrants;
- any provisions for changes to or adjustments in the exercise price or number of securities issuable upon exercise of the warrants;
- the dates on which the right to exercise the warrants will commence and expire;
- the manner in which the warrant agreement and warrants may be modified;
- federal income tax consequences of holding or exercising the warrants;

the terms of the securities issuable upon exercise of the warrants; and

any other specific terms, preferences, rights or limitations of or restrictions on the warrants.

Before exercising their warrants, holders of warrants will not have any of the rights of holders of the securities purchasable upon such exercise, including:

in the case of warrants to purchase debt securities, the right to receive payments of principal of, or premium, if any, or interest on, the debt securities purchasable upon exercise or to enforce covenants in the applicable indenture; or

in the case of warrants to purchase common stock or preferred stock, the right to receive dividends, if any, or, payments upon our liquidation, dissolution or winding up or to exercise voting rights, if any.

Exercise of Warrants

Each warrant will entitle the holder to purchase the securities that we specify in the applicable prospectus supplement at the exercise price that we describe in the applicable prospectus supplement. Unless we otherwise specify in the applicable prospectus supplement, holders of the warrants may exercise the warrants at any time up to 5:00 P.M. New York time on the expiration date that we set forth in the applicable prospectus supplement. After the close of business on the expiration date, unexercised warrants will become void.

Holders of the warrants may exercise the warrants by delivering the warrant certificate representing the warrants to be exercised together with specified information, and paying the required amount to the warrant agent in immediately available funds, as provided in the applicable prospectus supplement. We will set forth on the reverse side of the warrant certificate and in the applicable prospectus supplement the information that the holder of the warrant will be required to deliver to the warrant agent.

Upon receipt of the required payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will issue and deliver the securities purchasable upon such exercise. If fewer than all of the warrants represented by the warrant certificate are exercised, then we will issue a new warrant certificate for the remaining amount of warrants. If we so indicate in the applicable prospectus supplement, holders of the warrants may surrender securities as all or part of the exercise price for warrants.

Enforceability of Rights by Holders of Warrants

Each warrant agent will act solely as our agent under the applicable warrant agreement and will not assume any obligation or relationship of agency or trust with any holder of any warrant. A single bank or trust company may act as warrant agent for more than one issue of warrants. A warrant agent will have no duty or responsibility in case of any default by us under the applicable warrant agreement or warrant, including any duty or responsibility to initiate any proceedings at law or otherwise, or to make any demand upon us. Any holder of a warrant may, without the consent of the related warrant agent or the holder of any other warrant, enforce by appropriate legal action its right to exercise, and receive the securities purchasable upon exercise of, its warrants.

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee maintain for this purpose as the "holders" of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as "indirect holders" of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Street Name Holders

Investors may choose to hold their securities in their own names or in "street name." Securities held by an investor in street name would be registered in the name of a bank, broker or other financial

institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee and of any third parties employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold securities, in street name or by any other indirect means.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with depositary participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of the indenture or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the holders.

Special Considerations For Indirect Holders

If you hold securities through a bank, broker or other financial institution in street name, you should check with your own institution to find out:

- how it handles securities payments and notices;
- whether it imposes fees or charges;
- how it would handle a request for the holders' consent, if ever required;
- whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;
- how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and
- if the securities are in book-entry form, how the depositary's rules and procedures will affect these matters.

PLAN OF DISTRIBUTION

We may sell the securities through underwriters or dealers, through agents, or directly to one or more purchasers. The prospectus supplement will describe the terms of the offering of the securities, including:

- the name or names of any underwriters, if any;
- the purchase price of the securities and the proceeds we will receive from the sale;

any over-allotment options under which underwriters may purchase additional securities from us;

any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;

any initial public offering price;

any discounts or concessions allowed or reallowed or paid to dealers; and

any securities exchange or market on which the securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the securities for their own account and may resell them from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all the securities of the series offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallowed or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions we will pay the agent in the prospectus supplement.

Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against certain civil liabilities, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to such liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

All securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in over allotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Any underwriters who are qualified market makers on the Nasdaq National Market may engage in passive market making transactions in the securities on the Nasdaq National Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the securities. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

LEGAL MATTERS

The validity of the securities being offered hereby will be passed upon by Hurley, Lynch & Re, P.C., Bend, Oregon.

EXPERTS

Our financial statements as of December 31, 2002 and for the year then ended, have been incorporated by reference herein and in the registration statement in reliance upon the report of KPMG llp, independent accountants, incorporated by reference herein, and upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the shares of common stock and preferred stock and/or warrants we are offering under this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information with respect to us and the securities we are offering under this prospectus, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's public reference rooms at Room 1024, 450 Fifth Street, N.W., Washington, D.C. 20549, as well as at the SEC's regional offices at 500 West Madison Street, Suite 1400, Chicago, IL 60661 and at 233 Broadway, New York, NY 10279. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference rooms. Our SEC filings are also available at the SEC's web site at "http://www.sec.gov." In addition, you can read and copy our SEC filings at the office of the National Association of Securities Dealers, Inc. at 1735 K Street, N.W., Washington, D.C. 20006.

The SEC allows us to "incorporate by reference" information that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference into this registration statement and prospectus the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement but prior to effectiveness of the registration statement and after the date of this prospectus but prior to the termination of the offering of the securities covered by this prospectus.

The following documents filed with the SEC are incorporated by reference in this prospectus:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2002 filed on March 31, 2003, including information incorporated by reference in the Form 10-K from our definitive proxy statement for the 2003 annual meeting of stockholders, which was filed on April 10, 2003;

Our Quarterly Reports on Form 10-Q for the quarter ended March 31, 2003, which was filed on May 13, 2003, and for the quarter ended June 30, 2003, which was filed on August 12, 2003;

Our Current Reports on Form 8-K filed on May 7, 2003, May 8, 2003, May 9, 2003, May 20, 2003, July 17, 2003, August 8, 2003, September 2, 2003 and September 19, 2003; and

The description of our common stock set forth in our registration statement on Form 8-A filed May 29, 1997.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to:

AVI BioPharma, Inc.
Investor Relations
One S.W. Columbia
Suite 1105
Portland, OR 97258
Attn: Michael C. Hubbard
(503) 227-0554

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