

**FORM 8-K**  
**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**CURRENT REPORT**

**Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): **March 25, 2002**

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**AVI BioPharma, Inc.**

*(Exact name of registrant as specified in its charter)*

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

**0-22613**  
*(Commission  
File Number)*

**93-0797222**  
*(IRS Employer  
Identification Number)*

**One S.W. Columbia, Suite 1105  
Portland, OR 97258**  
*(Address of principal executive offices)*

**(503) 227-0554**  
*Registrant's telephone number, including area code*

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**Item 5. Other Events.**

**Private Placement of Securities**

AVI BioPharma, Inc. (NASDAQ: AVII, AVIIW, AVIIZ) (the "Company") announced on March 26, 2002 the sale on Monday, March 25, 2002 of 2,937,337 shares of its Common Stock, together with the related issuance of Warrants to acquire an additional 587,472 shares of its Common Stock, par value \$.0001 ("Common Stock"), to a group of investors at a price of \$7.50 per share, discounted 10% from the existing public market closing price on Monday, March 25, 2002 to reflect the restricted nature of the securities issued and the securities limited transferability. Subsequent to that announcement, in a supplemental closing, an additional 133,334 shares of Common Stock and Warrants covering 26,667 shares of Common Stock were issued, resulting in a total issuance of 3,070,671 shares of Common Stock and Warrants for 614,139 shares of Common Stock. The Company expects to receive net proceeds after certain selling commissions and expenses from both closings of approximately \$21,417,900. Following this transaction, the number of outstanding shares of the Company's Common Stock will be approximately 26,316,200.

As part of the transaction, the Company entered into a Securities Purchase Agreement containing customary representations and warranties and undertakings regarding the securities issued. The Company also entered into a Registration Rights Agreement that requires the Company to register the Common Stock issued in the transaction, as well as the Common Stock issuable upon exercise of the Warrants, within thirty (30) days and to cause such registration statement to become effective within one hundred eighty (180) days of the closing. The Registration Rights Agreement contains customary representations, warranties and undertakings and provides a penalty if the registration statement is not made effective within 180 days or maintained in effect, unless the securities covered by the registration statement are otherwise freely tradable under federal and state securities laws.

Copies of the Securities Purchase Agreement, form of Warrant, Registration Rights Agreement and Transfer Agent Instructions are being filed with this Form 8-K.

A copy of the press release dated March 26, 2002 issued by the Company regarding this financing is attached hereto as Exhibit No. 1.

**Item 7. Financial Statements, Pro Forma Financial Information and Exhibits.**

1. Press release dated March 26, 2002 issued by the Company.
  2. Securities Purchase Agreement dated March 25, 2002 between the Company and certain purchasers ("SPA").
  3. Form of Warrant issued by the Company to certain purchasers under the SPA.
  4. Registration Rights Agreement dated March 25, 2002 between the Company and certain purchasers.
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**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Portland, State of Oregon, on April 2, 2002.

AVI BioPharma, Inc.

By: /s/ ALAN P. TIMMINS

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Alan P. Timmins  
*President and Chief Operating Officer*  
*(Principal Operating Officer)*

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#### EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Document Description</u>
1	Press release dated March 26, 2001 issued by AVI BioPharma, Inc. and Medtronic, Inc.
10.41	Securities Purchase Agreement dated March 25, 2002 between the Company and certain purchasers ("SPA").
10.42	Form of Warrant issued by the Company to certain purchasers under the SPA.
10.43	Registration Rights Agreement dated March 25, 2002 between the Company and certain purchasers

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AVI Contacts:

AVI BioPharma Inc.  
Denis R. Burger, Ph.D., CEO  
Alan P. Timmins, President and COO  
(503) 227-0554

Investor Contacts:

Lippert/Heilshorn & Associates Inc.  
Bruce Voss (bvoss@lhai.com)  
Jody Cain (jcain@lhai.com)  
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(503) 443-7000

**For Immediate Release**

**March 26, 2002**

## **AVI BioPharma Completes \$22 Million Private Financing**

**PORTLAND, Ore.—March 26, 2002**—AVI BioPharma, Inc. (Nasdaq: AVII, AVI IW, AVI IZ) announced today that the company has closed a private equity financing for approximately \$22 million with several institutional investors. AVI sold approximately 2.94 million shares of common stock at \$7.50 per share, representing a discount of approximately 10 percent to Monday's closing price. Investors also received a warrant for the purchase of approximately 585,000 common shares for \$10.50 per share. UBS Warburg acted as the exclusive placement agent on the transaction.

The proceeds of the financing will be used to fund AVI's ongoing clinical trials and operations. AVI has two technologies in clinical trials, cancer immunotherapy and NeuGene® antisense technology which are both focused in applications for the treatment of life-threatening diseases. Initial applications in cancer and cardiovascular restenosis are currently in later stage clinical trials.

"We are pleased to complete this financing in an admittedly difficult market," stated Denis R. Burger, Ph.D., AVI's chief executive officer. "In addition to securing another year of cash for the company, we have significantly broadened our exposure to important institutional investors going forward. This broadened exposure will serve us well as our proprietary technologies continue to prove themselves in the lab and the clinic."

### **About AVI BioPharma**

AVI BioPharma develops therapeutic products for the treatment of life-threatening diseases using two technology platforms: NeuGene antisense drugs and cancer immunotherapy. Its lead cancer agent, AVICINE®, a therapeutic cancer vaccine, has completed three Phase II trials in colorectal and pancreatic cancer and has initiated a Phase III trial in colorectal cancer. The first application of its NeuGene compounds, Resten-NG™, is designed to treat cancer, cardiovascular restenosis and other cell proliferation disorders by inhibiting the production of a cellular transcription factor, the oncogene c-myc. It is currently in Phase II trials for restenosis and in Phase I/II trials for cancer and polycystic kidney disease. More information about AVI is available on the Company's Web site at <http://www.avibio.com/>.

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*"Safe Harbor" Statement under the Private Securities Litigation Reform Act of 1995: The statements that are not historical facts contained in this release are forward-looking statements that involve risks and uncertainties, including, but not limited to, the results of research and development efforts, the results of preclinical and clinical testing, the effect of regulation by the FDA and other agencies, the impact of competitive products, product development, commercialization and technological difficulties, and other risks detailed in the Company's Securities and Exchange Commission filings.*

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## SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this "Agreement") is dated as of March 25, 2002 among AVI BioPharma, Inc., an Oregon corporation (the "Company"), and the purchasers identified on the signature pages hereto (each a "Purchaser" and collectively the "Purchasers").

WHEREAS, subject to the terms and conditions set forth in this Agreement and pursuant to Section 4(2) of the Securities Act of 1933, as amended, and Rule 506 promulgated thereunder, the Company desires to issue and sell to the Purchasers, and the Purchasers, severally and not jointly, desire to purchase from the Company, securities of the Company as more fully described in this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and the Purchasers agree as follows:

### ARTICLE I DEFINITIONS

1.1. *Definitions.* In addition to the terms defined elsewhere in this Agreement, the following terms have the meanings indicated in this Section 1.1:

"**Affiliate**" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 144.

"**Closing**" means the closing of the purchase and sale of the Shares and Warrants pursuant to Section 2.1.

"**Closing Date**" means the date of the Closing.

"**Commission**" means the Securities and Exchange Commission.

"**Common Stock**" means the common stock of the Company, par value \$.0001 per share, and any securities into which such common stock may hereafter be reclassified into.

"**Company Counsel**" means Hurley, Lynch & Re, P.C.

"**Effective Date**" means the date that an Underlying Shares Registration Statement is first declared effective by the Commission.

"**Effectiveness Date**" means the date on which an Underlying Shares Registration Statement is required to become effective pursuant to the Registration Rights Agreement.

"**Eligible Market**" means any of the New York Stock Exchange, the American Stock Exchange, the Nasdaq National Market or the Nasdaq SmallCap Market.

"**Exchange Act**" means the Securities Exchange Act of 1934, as amended.

"**Losses**" means any and all losses, claims, damages, liabilities, settlement costs and expenses, including without limitation costs of preparation and reasonable attorneys' fees.

"**Person**" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

"**Proceeding**" means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition).

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"**Registration Rights Agreement**" means the Registration Rights Agreement, dated as of the date of this Agreement, among the Company and the Purchasers, in the form of *Exhibit A*.

"**Rule 144**" means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"**Securities**" means the Shares, Warrants and the Underlying Shares.

"**Securities Act**" means the Securities Act of 1933, as amended.

"**Shares**" means the shares of the Common Stock issued and sold to the Purchasers at the Closing.

"**Subsidiary**" means any subsidiary of the Company that is required to be listed in *Schedule 3.1(a)*.

"**Trading Market**" shall mean the Eligible Market on which the Company's Common Stock is then listed or qualified for trading or quotation.

"**Transaction Documents**" means this Agreement, the Warrants, the Transfer Agent Instructions, the Registration Rights Agreement and any other documents or agreements executed in connection with the transactions contemplated hereunder.

"**Transfer Agent Instructions**" means the Transfer Agent Instructions, in the form of *Exhibit C*, executed by the Company and delivered to and acknowledged in writing by the Company's transfer agent.

"**Underlying Shares**" means the Shares and the shares of common stock issuable upon exercise of the Warrants.

"**Underlying Shares Registration Statement**" means a registration statement meeting the requirements set forth in the Registration Rights Agreement and covering the resale of the Underlying Shares by the Purchasers.

"**Warrants**" means collectively the Common Stock purchase warrants, in the form of Exhibit B delivered to the Purchasers at the Closing in accordance with Section 2.2.

## ARTICLE II PURCHASE AND SALE

2.1. *Closing.* The Closing shall take place at the offices of Company Counsel or via facsimile immediately following the execution hereof, or by such other method or at such location or time as the parties may agree.

2.2. *Purchase and Sale.* Subject to and upon the terms and conditions set forth in this Agreement, the Company agrees to issue and sell to each Purchaser, and each Purchaser, severally but not jointly, hereby agrees to purchase from the Company, at the Closing, the number of Shares set forth opposite the name of such Purchaser on the Signature Pages hereto, at a purchase price of \$7.50 per share, and Warrants to purchase the number of shares of Common Stock set forth opposite the name of such Purchaser on the Signature Pages hereto. The total purchase price payable by each Purchaser for the Warrants and the number of Shares that such Purchaser is hereby agreeing to purchase is set forth opposite the name of such Purchaser on the Signature Pages hereto. The Company shall be obligated to register the Underlying Shares pursuant to the terms and conditions set forth in the Registration Rights Agreement.

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2.3. *Closing Deliveries.*

(a) At the Closing, the Company shall deliver or cause to be delivered to each Purchaser the following:

(i) a stock certificate, free and clear of all restrictive and other legends (except as expressly provided in Section 4.1(b) hereof), registered in the name of such Purchaser and representing the number of Shares purchased by such Purchaser at the Closing;

(ii) a Warrant, registered in the name of such Purchaser, pursuant to which such Purchaser shall have the right to acquire a number of shares of Common Stock equal to 20% of the number of Shares purchased by such Purchaser at the Closing;

(iii) the legal opinion of Company Counsel, in agreed form;

(iv) the Transfer Agent Instructions; and

(v) the Registration Rights Agreement duly executed by the Company.

(b) At the Closing, each Purchaser shall deliver or cause to be delivered to the Company the following:

(i) the amount in United States dollars indicated below such Purchaser's signature to this Agreement, in immediately available funds, by wire transfer to an account designated in writing by the Company for such purpose; and

(ii) the Registration Rights Agreement duly executed by such Purchaser.

## ARTICLE III REPRESENTATIONS AND WARRANTIES

3.1. *Representations and Warranties of the Company.* The Company hereby makes the following representations and warranties to each Purchaser:

(a) *Subsidiaries.* The Company has no direct or indirect subsidiaries other than those listed in *Schedule 3.1(a)*. Except as disclosed in *Schedule 3.1(a)*, the Company owns, directly or indirectly, all of the capital stock of each Subsidiary free and clear of any lien, charge, security interest, encumbrance, right of first refusal or other restriction (collectively, "**Liens**"), and all the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights.

(b) *Organization and Qualification.* Each of the Company and each Subsidiary is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization (as applicable), with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to do business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not, individually or in the aggregate: (i) adversely affect the legality, validity or enforceability of any Transaction Document, (ii) have or result in a material adverse effect on the results of operations, assets, prospects, business or condition (financial or otherwise) of the Company and the

(c) *Authorization; Enforcement.* The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by each of the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of each of the Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further consent or action is required by the Company, its Board of Directors or its stockholders. Each of the Transaction Documents has been (or upon delivery will be) duly executed by the Company and is, or when delivered in accordance with the terms hereof, will constitute, the valid and binding obligation of the Company enforceable against the Company in accordance with its terms.

(d) *No Conflicts.* The execution, delivery and performance of the Transaction Documents by the Company and the consummation by the Company of the transactions contemplated hereby and thereby do not and will not: (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) subject to obtaining the Required Approvals (as defined below), conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not, individually or in the aggregate, have or result in a Material Adverse Effect.

(e) *Filings, Consents and Approvals.* Neither the Company nor any Subsidiary is required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than (i) the filings required under Section 4.8, (ii) the filing with the Commission of the Underlying Shares Registration Statement, (iii) the application(s) to each applicable Trading Market for the listing of the Underlying Shares for trading thereon in the time and manner required thereby, and (iv) applicable Blue Sky filings (collectively, the "**Required Approvals**").

(f) *Issuance of the Securities.* The Securities are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens. The Company has reserved from its duly authorized capital stock a sufficient number of Underlying Shares to enable it to comply with its exercise obligations under the Warrants.

(g) *Capitalization.* The number of shares and type of all authorized, issued and outstanding capital stock, options and other securities of the Company (whether or not presently convertible into, or exercisable or exchangeable for, shares of capital stock of the Company) is set forth in *Schedule 3.1(g)*. All outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable and have been issued in compliance with all applicable securities laws. No securities of the Company are entitled to preemptive or similar rights, and no Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents, except as set forth in *Schedule 3.1(g)*. Except as a result of the purchase and sale of the Securities and except as

disclosed in *Schedule 3.1(g)*, there are no outstanding options, warrants, script rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock, or securities or rights convertible into or exercisable or exchangeable for shares of Common Stock. Except as disclosed in *Schedule 3.1(g)*, there are no anti-dilution or price adjustment provisions contained in any security issued by the Company (or in any agreement providing rights to security holders) and the issuance and sale of the Securities will not obligate the Company to issue shares of Common Stock or other securities to any Person (other than the Purchasers) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, number of issuable shares, exchange or reset price under such securities. The Company will not authorize the issuance of any additional securities unless there are sufficient authorized shares of Common Stock (or any successor security thereto) available, taking into account all potential adjustments or anti-dilution provisions in such securities, to satisfy the rights of the Purchasers to acquire the Securities and underlying securities in the event of exercise of the Warrant. Further, if at any time the number of shares of Common Stock available for issuance were insufficient for any reason to satisfy such rights of the Purchasers, the Company would take immediate action to cause sufficient authorized shares to be authorized or effect a reverse stock split to provide sufficient shares to be available.

(h) *SEC Reports; Financial Statements.* The Company has filed all reports required to be filed by it under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two (2) years preceding the date hereof (or such shorter period as the Company was required by law to file such material) (the foregoing materials being collectively referred to herein as the "**SEC Reports**" and, together with the Schedules to this Agreement, the "**Disclosure Materials**") on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. The Company has delivered to the Purchasers a copy of all SEC Reports filed within the ten (10) days preceding the date hereof. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act and the rules and regulations of the Commission promulgated thereunder, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with generally accepted accounting principles applied on a consistent basis during the periods involved ("**GAAP**"), except as may be otherwise specified in such financial statements or the notes thereto, and fairly present in

all material respects the financial position of the Company and its consolidated subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments.

(i) *Material Changes.* Since the date of the latest audited financial statements included within the SEC Reports, except as specifically disclosed in the SEC Reports: (i) there has been no event, occurrence or development that, individually or in the aggregate, has had or that could result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or required to be disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting or the identity of its

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auditors, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock, and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans.

(j) *Litigation.* There is no action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an "**Action**") which: (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or (ii) could, if there were an unfavorable decision, individually or in the aggregate, have or result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. The Company does not have pending before the Commission any request for confidential treatment of information. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(k) *Compliance.* Neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) to the knowledge of the Company, is in violation of any order of any court, arbitrator or governmental body, or (iii) is or has been in violation of any statute, rule or regulation of any governmental authority, except in each case as could not, individually or in the aggregate, have or result in a Material Adverse Effect.

(l) *Labor Relations.* No strike, work stoppage, slow down or other material labor problem exists or, to the knowledge of the Company, is threatened or imminent with respect to any of the employees of the Company or any Subsidiary.

(m) *Regulatory Permits.* The Company and the Subsidiaries possess all certificates, authorizations and permits issued by the appropriate federal, state, local or foreign regulatory authorities necessary to conduct their respective businesses as described in the SEC Reports, except where the failure to possess such permits could not, individually or in the aggregate, have or result in a Material Adverse Effect ("**Material Permits**"), and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any Material Permit.

(n) *Title to Assets.* The Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them that is material to the business of the Company and the Subsidiaries and good and marketable title in all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries. Any real property and facilities held under lease by the Company and the Subsidiaries

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are held by them under valid, subsisting and enforceable leases of which the Company and the Subsidiaries are in compliance.

(o) *Patents and Trademarks.* The Company and the Subsidiaries have, or have rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, copyrights, licenses and other similar rights that are necessary or material for use in connection with their respective businesses as described in the SEC Reports and which the failure to so have could have a Material Adverse Effect (collectively, the "**Intellectual Property Rights**"). None of the Intellectual Property Rights have expired or terminated, or are expected to expire or terminate within two years from the date of this Agreement. Neither the Company nor any Subsidiary has received a written notice or otherwise has reason to believe that the Intellectual Property Rights used by the Company or any Subsidiary violates or infringes upon the rights of any Person. To the knowledge of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights.

(p) *Insurance.* To the knowledge of the Company, the Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost, except for cost increases being experienced by public companies in similar businesses and risk categories.

(q) *Transactions With Affiliates and Employees.* Except as set forth in SEC Reports filed at least ten (10) days prior to the date hereof, none of the officers or directors of the Company and, to the knowledge of the Company, none of the employees of the Company is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, or otherwise requiring payments to or from

any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee or partner.

(r) *Internal Accounting Controls.* The Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with generally accepted accounting principles and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(s) *Solvency.* Based on the financial condition of the Company as of the Closing Date: (i) the Company's fair saleable value of its assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature; (ii) the Company's assets do not constitute unreasonably small capital to carry on its business for the current fiscal year as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, and projected capital requirements and capital availability thereof; and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its debt

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when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt).

(t) *Certain Fees.* Except for the fees described in Schedule 3.1(t), all of which are payable by the Company to the registered broker-dealers named therein, no brokerage or finder's fees or commissions are or will be payable by the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by this Agreement, and the Company has not taken any action that would cause any Purchaser to be liable for any such fees or commissions. The Company agrees that the Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of any Person for fees of the type contemplated by this Section in connection with the transactions contemplated by this Agreement.

(u) *Form S-3 Eligibility; Private Placement.* The Company is eligible to register its Common Stock for resale by the Purchasers under Form S-3 promulgated under the Securities Act. Neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf, has engaged in any form of general solicitation or general advertising (within the meaning of Regulation D under the Securities Act) in connection with the offer or sale of the Securities. Neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would require registration of any of the Securities under the Securities Act or cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of the Securities Act or any applicable stockholder approval provisions, including, without limitation, under the rules and regulations of any exchange or automated quotation system on which any of the securities of the Company are listed or designated, nor will the Company or any of its Subsidiaries take any action or steps that would require registration of any of the Securities under the Securities Act or cause the offering of the Securities to be integrated with other offerings.

(v) *Listing and Maintenance Requirements.* The Company has not, in the 12 months preceding the date hereof, received notice from any Trading Market on which the Common Stock is or has been listed or quoted to the effect that the Company is not in compliance with the listing or maintenance requirements of such Trading Market. The Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The issuance and sale of the Securities hereunder does not contravene the rules and regulations of the Trading Market and no shareholder approval is required for the Company to fulfill its obligations under the Transaction Documents. The Company's Common Stock is currently listed on the NASDAQ National Market System.

(w) *Registration Rights.* Except as described in Schedule 3.1(w), the Company has not granted or agreed to grant to any Person any rights (including "piggy-back" registration rights) to have any securities of the Company registered with the Commission or any other governmental authority that have not been satisfied.

(x) *Application of Takeover Protections.* The Company and its Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company's Certificate of Incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable to the Purchasers as a result of the Purchasers and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including, without limitation, as a result of the Company's issuance of the Securities and the Purchasers' ownership of the Securities.

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(y) *Disclosure.* The Company confirms that neither it nor any other Person acting on its behalf has provided any of the Purchasers or their agents or counsel with any information that the Company believes constitutes, nonpublic information. The Company understands and confirms that the Purchasers will rely on the foregoing representations in effecting transactions in securities of the Company. All disclosure provided to the Purchasers regarding the Company, its business and the transactions contemplated hereby, including the Schedules to this Agreement, furnished by or on behalf of the Company are true and correct and do not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The Company acknowledges and agrees that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.2.

(z) *Investment Company.* The Company is not, and is not an Affiliate of, an "investment company" within the meaning of the Investment Company Act of 1940, as amended.



3.2. *Representations and Warranties of the Purchasers.* Each Purchaser hereby, for itself and for no other Purchaser, represents and warrants to the Company as follows:

(a) *Organization; Authority.* Such Purchaser is an entity duly organized, validly existing and in good standing under the laws of the jurisdiction of its organization with the requisite corporate or partnership power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The purchase by such Purchaser of the Securities to be acquired by it has been duly authorized by all necessary action on the part of such Purchaser. Each of this Agreement and the Registration Rights Agreement has been duly executed by such Purchaser and is, or with respect to the Registration Rights Agreement, when delivered by such Purchaser in accordance with the terms hereof, will constitute, the valid and binding obligation of such Purchaser, enforceable against it in accordance with its terms.

(b) *Investment Intent.* Such Purchaser is acquiring the Securities as principal for its own account for investment purposes only and not with a view to or for distributing or reselling such Securities or any part thereof, without prejudice, however, to such Purchaser's right, subject to the provisions of this Agreement, at all times to sell or otherwise dispose of all or any part of such Securities pursuant to an effective registration statement under the Securities Act or under an exemption from such registration and in compliance with applicable federal and state securities laws. Nothing contained herein shall be deemed a representation or warranty by such Purchaser to hold Securities for any period of time. Such Purchaser is acquiring the Securities hereunder in the ordinary course of its business. Such Purchaser does not have any agreement or understanding, directly or indirectly, with any Person to distribute any of the Securities.

(c) *Purchaser Status.* At the time such Purchaser was offered the Securities, it was, and at the date hereof it is, and on each date on which it exercises any Warrants, it will be an "accredited investor" as defined in Rule 501(a) under the Securities Act. Such Purchaser has not been formed solely for the purpose of acquiring the Securities.

(d) *Experience of such Purchaser.* Such Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

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(e) *Access to Information.* Such Purchaser acknowledges that it has reviewed the Disclosure Materials and has been afforded: (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to public information about the Company and the Subsidiaries and their respective financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment. Neither such inquiries nor any other investigation conducted by or on behalf of such Purchaser or its representatives or counsel shall modify, amend or affect such Purchaser's right to rely on the truth, accuracy and completeness of the Disclosure Materials and the Company's representations and warranties contained in the Transaction Documents.

(f) *General Solicitation.* Such Purchaser is not purchasing the Securities as a result of any advertisement, article, notice or other communication regarding the Securities published in any newspaper, magazine or similar media or broadcast over television or radio or presented at any seminar or any other general solicitation or general advertisement.

(g) *Reliance.* Such Purchaser understands and acknowledges that: (i) the Securities are being offered and sold to it without registration under the Securities Act in a private placement that is exempt from the registration provisions of the Securities Act and (ii) the availability of such exemption depends in part on, and the Company will rely upon the accuracy and truthfulness of, the foregoing representations and such Purchaser hereby consents to such reliance.

(h) *Rights of First Refusal.* Each Purchaser acknowledges that one investor ("1999 Holders") in the Company's December 1999 private financing ("1999 Financing") had certain rights of first refusal that apply to this financing that may not have terminated or been waived as of the Closing Date. Each Purchaser further agrees that additional Securities may be issued by the Company to that investor, New Technology Fund, within fifteen (15) days of the Closing Date to satisfy those rights under the terms and conditions herein and, by amendment to the Transaction Documents, such 1999 Holder, if it exercises such right after the Closing Date may be made a party to the Transaction Documents and this financing, such amendment to be signed by the Company and such 1999 Holder and promptly distributed to all Purchasers. In such event, the Purchasers agree that all Transaction Documents and rights therein shall be interpreted to include such 1999 Holder in the definition of Purchaser. Company Counsel will issue an opinion letter in the form issued hereunder as to each such transaction addressed to the Purchasers and the Company will promptly notify the Purchasers of any such transactions. Each 1999 Holder who is a Purchaser as of the Closing Date, acknowledges and agrees that its participation herein fully satisfies its rights of first refusal under the agreements related to the 1999 Financing, including any additional sales hereafter that are part of this financing. Each Purchaser acknowledges that information regarding such rights of first refusal is set forth in Schedule 3.1.

The Company acknowledges and agrees that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in this Section 3.2.

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ARTICLE IV  
OTHER AGREEMENTS OF THE PARTIES

4.1. *Transfer Restrictions.*

(a) The Securities may only be disposed of by a Purchaser in compliance with state and federal securities laws. In connection with any transfer of Securities other than pursuant to an effective registration statement, to the Company, to an Affiliate of a Purchaser or to a Person managed or advised by the same Person as manager or adviser to such Purchaser or in connection with a pledge as contemplated in Section 4.1(b), the Company may require the transferor thereof to provide to the Company an opinion of counsel selected by the transferor, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Securities under the Securities Act. As a condition of transfer, any such transferee shall restate the representations and warranties of such Purchaser under Section 3.2 and agree in writing to be bound by the terms of this Agreement and shall have the rights of a Purchaser under this Agreement and the Registration Rights Agreement.

(b) The Purchasers agree to the imprinting, so long as is required by this Section 4.1(b), of the following legend on any certificate evidencing Securities:

[NEITHER] THESE SECURITIES [NOR THE SECURITIES INTO WHICH THESE SECURITIES ARE [EXERCISABLE] HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THESE SECURITIES AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

The Company acknowledges and agrees that a Purchaser may from time to time pledge pursuant to a bona fide margin agreement or grant a security interest in some or all of the Securities and, if required under the terms of such arrangement, such Purchaser may transfer pledged or secured Securities to the pledgees or secured parties. Such a pledge or transfer would not be subject to approval of the Company and no legal opinion of the pledgee, secured party or pledgor shall be required in connection therewith; provided, if such transfer occurs prior to the conditions for removal of the stock legend in Section 4.1(c), then, any such pledge or transfer would be conditioned on the Securities remaining subject to the restrictions on further transfer herein and will only be made to a party that is sophisticated and an "accredited" investor, except as otherwise provided or allowed under federal and state securities laws without affecting the exemptions being relied upon herein for the sale of the Securities. Further, no notice shall be required of such pledge. At the appropriate Purchaser's expense, the Company will execute and deliver such reasonable documentation as a pledgee or secured party of Securities may reasonably request in connection with a pledge or transfer of the Securities, including the preparation and filing of any required prospectus supplement under Rule 424(b)(3) of the Securities Act or other applicable provision of the Securities Act to appropriately amend the list of Selling Stockholders thereunder.

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(c) Certificates evidencing Securities shall not contain any legend (including the legend set forth in Section 4.1(b)): (i) while a registration statement (including the Underlying Shares Registration Statement) covering the resale of such security is effective under the Securities Act; (ii) following any sale of such Securities pursuant to Rule 144; (iii) if such Securities are eligible for sale under Rule 144(k); or (iv) if such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the Staff of the Commission). The Company shall cause its counsel to issue the legal opinion included in the Transfer Agent Instructions to the Company's transfer agent on the Effective Date. If all or any portion of the Warrants are exercised at a time when the Underlying Shares are eligible for resale under Rule 144(k) or if such legend is no longer required under the applicable requirements of the Securities Act, such Underlying Shares shall be issued free of all legends. The Company agrees that, at such time as such legend is no longer required under this Section 4.1(c), it will, no later than three (3) Trading Days following the delivery by a Purchaser to the Company or the Company's transfer agent of a certificate representing Securities issued with a restrictive legend, deliver or cause to be delivered to such Purchaser a certificate representing such Securities that is free from all restrictive and other legends. The Company may not make any notation on its records or give instructions to any transfer agent of the Company that enlarge the restrictions on transfer set forth in this Section.

4.2. *Acknowledgment of Dilution.* The Company acknowledges that the issuance of the Securities will result in dilution of the outstanding shares of Common Stock. The Company further acknowledges that its obligations under the Transaction Documents, including without limitation, its obligation to issue the Underlying Shares pursuant to the Transaction Documents, are unconditional and absolute and not subject to any right of set off, counterclaim, delay or reduction, regardless of the effect of any such dilution or any claim that the Company may have against any Purchaser.

4.3. *Furnishing of Information.* As long as any Purchaser owns Securities, the Company covenants to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act. Upon the request of any Purchaser, the Company shall deliver to such Purchaser a written certification of a duly authorized officer as to whether it has complied with the preceding sentence. As long as any Purchaser owns Securities, if the Company is not required to file reports pursuant to such laws, it will prepare and furnish to the Purchasers and make publicly available in accordance with Rule 144(c) such information as is required for the Purchasers to sell the Securities under Rule 144.

4.4. *Integration.* The Company shall not, and shall use its best efforts to ensure that no Affiliate of the Company shall, sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities in a manner that would require the registration under the Securities Act of the sale of the Securities to the Purchasers, or that would be integrated with the offer or sale of the Securities for purposes of the rules and regulations of any Trading Market.

4.5. *Reservation and Listing of Securities.* The Company shall maintain a reserve from its duly authorized shares of Common Stock to comply with its exercise obligations under the Warrants pursuant to the Transaction Documents. The Company shall promptly secure the listing of all of the Registrable Securities (as defined in the Registration Rights Agreement) upon each national securities exchange and automated quotation system, if any, upon which shares of Common Stock are then listed (subject to official notice of issuance) and shall maintain, so long as any other shares of Common Stock shall be so listed, such listing of all Registrable Securities from time to time issuable under the terms of the Transaction Documents. The Company shall maintain the Common Stock's authorization for quotation on the NASDAQ National Market ("NASDAQ") or listing on The New York Stock Exchange, Inc. ("NYSE") (as applicable, the "Principal Market"). Neither the Company nor any of its Subsidiaries shall take any action which would be reasonably expected to result in the delisting or

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suspension of the Common Stock from the Principal Market. The Company shall pay all fees and expenses in connection with satisfying its obligations under this Section 4.5.

4.6. *Exercise Procedures.* The form of Election to Purchase included in the Warrants set forth the totality of the procedures required in order to exercise the Warrants. No additional legal opinion or other information or instructions shall be necessary to enable the Purchasers to exercise their Warrants. The Company shall honor exercises of the Warrants and shall deliver Underlying Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

4.7. *Subsequent Placements.* Until the Effective Date, the Company shall not, directly or indirectly, offer, sell or grant any option to purchase, or otherwise dispose of, or announce any offer, sale, grant or any option to purchase or other disposition (collectively, a "**Subsequent Placement**") of any of its Common Stock or other securities which entitle the holder thereof to receive Common Stock, including, without limitation, any debt, preferred stock or other instrument or security that is, at any time during its life and under any circumstances, convertible into or exercisable or exchangeable for Common Stock.

4.8. *Securities Laws Disclosure; Publicity.* The Company shall, not later than the Closing Date, issue a press release reasonably acceptable to the Purchasers disclosing all material terms of the transactions contemplated hereby. The Company and the Purchasers shall consult with each other in issuing any press releases with respect to the transactions contemplated hereby. Notwithstanding the foregoing, the Company shall not publicly disclose the name of any Purchaser, or include the name of any Purchaser in any filing with the Commission or any regulatory agency or Trading Market, without the prior written consent of such Purchaser, except to the extent such disclosure is required by law or Trading Market regulations, in which case the Company shall provide the Purchasers with prior notice of such disclosure. On or before 8:30 a.m., Eastern Standard time, the first (1<sup>st</sup>) Business Day following the Closing Date the Company shall file a Current Report on Form 8-K with the Commission describing the terms of the transactions contemplated by the Transaction Documents and including as exhibits to such Current Report on Form 8-K or in a filing or amendment to such filing within two days after such initial filing, this Agreement, the Registration Rights Agreement and the form of the Warrants, in the form required by the Exchange Act.

4.9. *Non-Public Information.* The Company covenants and agrees that neither it nor any other Person acting on its behalf has provided or will provide any Purchaser or its agents or counsel with any information that the Company believes constitutes material non-public information, unless prior thereto such Purchaser shall have executed a written agreement regarding the confidentiality and use of such information. The Company understands and confirms that each Purchaser shall be relying on the foregoing representations in effecting transactions in securities of the Company.

4.10. *Use of Proceeds.* The Company shall use the net proceeds from the sale of the Securities hereunder for working capital purposes and not for the satisfaction of any portion of the Company's debt (other than payment of trade payables and accrued expenses in the ordinary course of the Company's business and prior practices), to redeem any Company equity or equity-equivalent securities or to settle any outstanding litigation.

4.11. *Indemnification of Purchasers.* The Company will indemnify and hold the Purchasers and their directors, officers, shareholders, members, partners, employees and agents (each, a "**Purchaser Party**") harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation (collectively, "**Losses**") that any such Purchaser Party may suffer or incur as a result of or relating to: (a) any misrepresentation, breach or inaccuracy, or any allegation by a third party that, if true, would constitute a breach or inaccuracy, of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents; or (b) any cause of action, suit or claim brought or made against

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such Purchaser Party and arising solely out of or solely resulting from the execution, delivery, performance or enforcement of this Agreement or any of the other Transaction Documents and without causation by any other activity, obligation, condition or liability pertaining to such Purchaser and not to the transactions contemplated by this Agreement. The Company will reimburse such Purchaser for its reasonable legal and other expenses (including the cost of any investigation, preparation and travel in connection therewith) incurred in connection therewith, as such expenses are incurred.

4.12. *Shareholders Rights Plan.* In the event that a shareholders rights plan is adopted by the Company, no claim will be made or enforced by the Company or any other Person that any Purchaser is an "Acquiring Person" under any such plan or in any way could be deemed to trigger the provisions of such plan by virtue of receiving Securities under the Transaction Documents.

4.13. *Additional Closings.* The Purchasers agree that through Monday, April 1, 2002, the Company, with the consent of each purchaser whose purchase price is \$5.0 million or more, may sell additional Securities as part of this offering. Such sales shall be on the terms and conditions of and be deemed, except for the closing date, part of this offering. Such additional closings shall be evidenced by the additional investors signing signature pages to the Transaction Documents. Such additional investors shall be deemed Purchasers under this agreement and all other Transaction Documents. The Company shall notify all existing Purchasers of any such additional investments and provide an updated opinion letter covering such additional investments.

#### ARTICLE V MISCELLANEOUS

5.1. *Fees and Expenses.* Unless otherwise agreed, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all transfer agent fees, stamp taxes and other taxes and duties levied in connection with the issuance of any Securities.

5.2. *Entire Agreement.* The Transaction Documents, together with the Exhibits and Schedules thereto, contain the entire understanding of the parties with respect to the subject matter hereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules. At or after the Closing, and without further consideration, the Company will execute and deliver to the Purchasers such further documents as may be reasonably requested in order to give practical effect to the intention of the parties under the Transaction Documents.

5.3. *Notices.* Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of (a) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section prior to 6:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or

communication is delivered via facsimile at the facsimile number specified in this Section on a day that is not a Trading Day or later than 6:30 p.m. (New York City time) on any Trading Day, (c) the Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (d) upon actual receipt by the party to whom such notice is required to be given. The addresses for such notices and communications are those set forth on the signature pages hereof, or such other address as may be designated in writing hereafter, in the same manner, by such Person.

5.4. *Amendments; Waivers.* No provision of this Agreement may be waived or amended except in a written instrument signed, in the case of an amendment, by the Company and each of the Purchasers or, in the case of a waiver, by the party against whom enforcement of any such waiver is sought. No

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waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of either party to exercise any right hereunder in any manner impair the exercise of any such right.

5.5. *Construction.* The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof. The language used in this Agreement will be deemed to be the language chosen by the parties to express their mutual intent, and no rules of strict construction will be applied against any party.

5.6. *Successors and Assigns.* This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of the Purchasers. Any Purchaser may assign its rights under this Agreement and the Registration Rights Agreement to any Person to whom such Purchaser assigns or transfers any Securities.

5.7. *No Third-Party Beneficiaries.* This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except that each Purchaser Party is an intended third party beneficiary of Section 4.11 and may enforce the provisions of such section directly against the Company.

5.8. *Governing Law; Venue; Waiver of Jury Trial.* All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York, Borough of Manhattan. Each party hereto hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of the any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such Proceeding is improper. Each party hereto hereby irrevocably waives personal service of process and consents to process being served in any such Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. Each party hereto hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby. If either party shall commence a Proceeding to enforce any provisions of a Transaction Document, then the prevailing party in such Proceeding shall be reimbursed by the other party for its reasonable attorneys fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Proceeding.

5.9. *Survival.* The representations, warranties, agreements and covenants contained herein shall survive the Closing and the delivery and exercise of the Securities, as applicable.

5.10. *Execution.* This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to the other party, it being understood that

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the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile signature page were an original thereof.

5.11. *Severability.* If any provision of this Agreement is held to be invalid or unenforceable in any respect, the validity and enforceability of the remaining terms and provisions of this Agreement shall not in any way be affected or impaired thereby and the parties will attempt to agree upon a valid and enforceable provision that is a reasonable substitute therefor, and upon so agreeing, shall incorporate such substitute provision in this Agreement.

5.12. *Rescission and Withdrawal Right.* Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) the Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights.

5.13. *Replacement of Securities.* If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof, or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction and customary and reasonable indemnity, if requested. The applicants for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs associated with the issuance of such replacement Securities.

5.14. *Remedies.* In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be

adequate compensation for any loss incurred by reason of any breach of obligations described in the foregoing sentence and hereby agrees to waive in any action for specific performance of any such obligation the defense that a remedy at law would be adequate.

5.15. *Payment Set Aside.* To the extent that the Company makes a payment or payments to any Purchaser pursuant to any Transaction Document or a Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

5.16. *Usury.* To the extent it may lawfully do so, the Company hereby agrees not to insist upon or plead or in any manner whatsoever claim, and will resist any and all efforts to be compelled to take the benefit or advantage of, usury laws wherever enacted, now or at any time hereafter in force, in connection with any claim, action or proceeding that may be brought by any Purchaser in order to enforce any right or remedy under any Transaction Document. Notwithstanding any provision to the contrary contained in any Transaction Document, it is expressly agreed and provided that the total liability of the Company under the Transaction Documents for payments in the nature of interest shall not exceed the maximum lawful rate authorized under applicable law (the "**Maximum Rate**"), and, without limiting the foregoing, in no event shall any rate of interest or default interest, or both of

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them, when aggregated with any other sums in the nature of interest that the Company may be obligated to pay under the Transaction Documents exceed such Maximum Rate. It is agreed that if the maximum contract rate of interest allowed by law and applicable to the Transaction Documents is increased or decreased by statute or any official governmental action subsequent to the date hereof, the new maximum contract rate of interest allowed by law will be the Maximum Rate of interest applicable to the Transaction Documents from the effective date forward, unless such application is precluded by applicable law. If under any circumstances whatsoever, interest in excess of the Maximum Rate is paid by the Company to any Purchaser with respect to indebtedness evidenced by the Transaction Documents, such excess shall be applied by such Purchaser to the unpaid principal balance of any such indebtedness or be refunded to the Company, the manner of handling such excess to be at such Purchaser's election.

5.17. *Independent Nature of Purchasers' Obligations and Rights.* The rights and obligations of each Purchaser under any Transaction Document are several and not joint with the rights and obligations of the other Purchaser and a Purchaser shall not be responsible in any way for the performance of the obligations of the other Purchaser under any Transaction Document. Nothing contained herein or in any Transaction Document, and no action taken by any Purchaser pursuant thereto shall constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights, including without limitation the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for the other Purchaser to be joined as an additional party in any proceeding for such purpose.

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IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

**AVI BIOPHARMA, INC.**

By: \_\_\_\_\_ /s/ DENIS R. BURGER, PH.D.

Name: Denis R. Burger, Ph.D.

Title: Chairman & Chief Financial Officer

Address for Notice:

One S.W. Columbia, Suite 1105

Portland, Oregon 97258

Facsimile: (503) 227-0751

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**SMITHFIELD FIDUCIARY LLC**

By: \_\_\_\_\_ /s/ ADAM J. CHILL

Name: Adam J. Chill

Title: Authorized Signatory

Shares of Common Stock: 866,667

Warrant Shares: 173,334



Purchase Price: \$ 1,625,000

Address for Notice:

CC Life Science, Ltd.  
c/o Castle Creek Life Science Partners, LLC  
111 West Jackson Blvd, Suite 2020  
Chicago, IL 60604

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**SDS MERCHANT FUND, LP**

By: \_\_\_\_\_ /s/ STEVE DERBY

Name: Steve Derby  
Title: Managing Member

Shares of Common Stock: 133,334

Warrant Shares: 26,667

Purchase Price: \$ 1,000,000

Address for Notice:

SDS Merchant Fund, LP  
c/o SDS Capital Partners, LLC  
1 Sound Shore Drive, Suite 202  
Greenwich, CT 06830

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**DMG LEGACY FUND LLC**

By: \_\_\_\_\_ /s/ ANDREW WILDER

Name: Andrew Wilder  
Title: Chief Financial Officer

Shares of Common Stock: 20,000

Warrant Shares: 4,000

Purchase Price: \$ 7.50

Address for Notice:

DMG Legacy Fund LLC  
c/o DMG Advisors LLC  
One Sound Shore Drive, Ste 202  
Greenwich, CT 06830

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**DMG LEGACY INSTITUTIONAL FUND LLC**

By: \_\_\_\_\_ /s/ ANDREW WILDER

Name: Andrew Wilder  
Title: Chief Financial Officer

Shares of Common Stock: 60,000

Warrant Shares: 12,000

Purchase Price: \$ 7.50

Address for Notice:

DMG Legacy Institutional Fund LLC  
c/o DMG Advisors LLC

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**DMG LEGACY INTERNATIONAL LTD.**

By: \_\_\_\_\_ /s/ ANDREW WILDER

Name: Andrew Wilder  
Title: Chief Financial Officer

Shares of Common Stock: 53,334

Warrant Shares: 10,667

Purchase Price: \$ 7.50

Address for Notice:

DMG Legacy International Ltd.  
c/o DMG Advisors LLC  
One Sound Shore Drive, Ste 202  
Greenwich, CT 06830

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**GRYPHON MASTER FUND, L.P.**

By: \_\_\_\_\_ /s/ E.B. LYON, IV

Name: E.B. Lyon, IV  
Title: Authorized Agent

Shares of Common Stock: 224,000

Warrant Shares: 44,800

Purchase Price: \$ 7.50

Address for Notice:

500 Crescent Court, Suite 270  
Dallas, TX 75201

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**QUANTICO PARTNERS, L.P.**

By: \_\_\_\_\_ /s/ JEFFREY THORP

Name: Jeffrey Thorp  
Title: Managing Partner of  
Langley Capital, LLC,  
its General Partner

Shares of Common Stock: 213,334

Warrant Shares: 42,668

Purchase Price: \$ 1,600,000.00

Address for Notice:

Quantico Partners, L.P.  
c/o Langley Capital, LLC  
535 Madison Avenue, 7<sup>th</sup> Floor  
New York, NY 10022  
(212) 850-7528 Telephone  
(212) 850-7589 Facsimile  
JT@LangleyCapital.com



**BNY CAPITAL MARKETS, INC.**

By:                     /s/ WESLEY V. PRITCHETT

Name: Wesley V. Pritchett  
Title: M.D.

Shares of Common Stock:                      133,334

Warrant Shares:                                      26,227

Purchase Price:                                   \$            7.50

Address for Notice:

Attn: Raymond Lang,  
Managing Director  
BNY Capital Markets, Inc.  
32 Old Slip, 15<sup>th</sup> Floor  
New York, NY 10286

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**UNITED CAPITAL MANAGEMENT, INC.**

By:                     /s/ JAMES A. LUSTIG

Name: James A. Lustig  
Title: Proprietor

Shares of Common Stock:                      66,667

Warrant Shares:                                      13,334

Purchase Price:                                   \$            7.50

(Total: \$500,000)

Address for Notice:

410 17<sup>th</sup> Street, Suite 1705  
Denver, CO 80202

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**On behalf of  
THE TAIL WIND FUND LIMITED  
Tail Wind Advisory & Management Ltd.**

By:                     /s/ DAVID CROOK

Name: David Crook  
Title: Chief Executive Officer

Shares of Common Stock:                      66,666

Warrant Shares:                                      13,333

Purchase Price:                                   \$            [7.50]

Total: \$500,000

Address for Notice:

David Crook, Esq.  
Chief Executive Officer  
Tail Wind Advisory & Management Ltd.  
1<sup>st</sup> Floor, No. 1 Regent Street  
London, SW1Y 4NS, UK  
Tel: +44 20 7468 7691 Fax: 7657

**Please copy all correspondence to:**  
Peter J. Weisman, P.C.  
110 East 59<sup>th</sup> Street



(par value \$.0001)

*Footnotes:*

- (1) The investors in the 1999 Financing are entitled to additional shares of Common Stock if certain financing transactions occur on or before December 16, 2002 at prices below the purchase price for their Common Stock in the 1999 Financing.
- (2) Numbers, including outstanding shares in the following table, are as of March 12, 2002 and there may be differences of up to 20,000 shares reflecting exercise of options and warrants for Common Stock not yet reflected in such numbers.

**Rights to Acquire Common Stock**

Type of Right	Number of Shares Covered (1)(2)
Stock options	2,849,187
Stock purchase plan	0(3)
Warrants	10,292,626(4)
Other Rights	0(5)

*Footnotes:*

- (1) Most rights carry typical anti-dilution provisions for stock splits, stock dividends and similar matters and adjustments/substitutions for mergers, reorganizations and similar transactions.
- (2) Numbers, including outstanding shares in prior table, are as of March 12, 2002 and there may be differences of up to 20,000 shares reflecting exercise of options and warrants for Common Stock not yet reflected in such numbers.
- (3) Purchases under the plan by employees are done semiannually in May and November each year, the number of shares expected to be purchased based on present participation would be 32,000 shares (for calendar 2002).
- (4) The Warrant for SuperGen, Inc. ("SuperGen Warrant") covering 1,665,878 shares has an anti-dilution provision that adjusts the number of shares that may be acquired to approximately 11.11% of the then outstanding shares upon the first exercise of the warrant. The adjustment is to the number of shares, but the exercise per share is not adjusted. The warrant is not currently

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exercisable. If the first exercise were to occur immediately after Closing and the financing was for \$28 million at \$8.00 per share, the approximate number of shares that SuperGen, Inc. could acquire would be 2,972,000 shares.

- (5) Medtronic International, Ltd. (formerly Medtronic Asset Management, Inc.) ("MIL") has the right under an Investment Agreement with the Company to purchase (i) an additional 352,113 shares of the Common Stock at a price of \$7.10 per share and (ii) the right to purchase 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. These contractual purchase rights are subject to certain technology milestones being met or waived by MIL and any required regulatory or shareholder approvals. MIL may require us to register these shares upon the exercise of such purchase rights. MIL also holds a warrant covering 3,000,000 shares of the Company's Common Stock at an exercise price of \$10.00 per share which is reflected in the numbers for warrants in this table.

**Right of First Refusal:**

The investors in the 1999 Financing acquired certain rights of first refusal as to 50% of certain future financings, which rights expire around December 16, 2002. Those rights have been satisfied as to three of the five 1999 Holders by their participation in this financing under Section 3.2(h) of the Purchase Agreement and as to one 1999 Holder by its written waiver as to participation in this financing and will be satisfied by notice to the last 1999 Holder of its right to participate on or before the Closing Date and the right to sell to such holder under Section 3.2(h) of the Purchase Agreement.

**Anti-dilution Adjustment Rights**

The investors in the 1999 Financing are entitled to additional shares of Common Stock if certain financing transactions occur on or before December 16, 2002 at prices below the purchase price for their Common Stock in the 1999 Financing.

**(t) Commissions**

The Company has agreed to pay UBS Warburg certain percentage placement fees, certain fixed fees and certain reimbursable expenses in connection with this of its services hereunder. The Company has also given certain exclusive rights to UBS Warburg to raise any additional financings for a fixed period of time and a "tail" commission on certain funds raised after the termination of the agreement.

**(w) Registration Rights**

The Company currently is registering approximately 4,812,327 shares of its Common Stock relating to 51,763 and 1,408,451 shares of Common Stock owned respectively by Boston Healthcare and MIL and 3,352,113 shares under a warrant and purchase right held by MIL..

The Company has other contractual obligations to register shares issueable upon the exercise of

1. the purchase rights of MIL as to \$7.5 million in additional securities
2. warrants covering 3,400,000 shares

3. shares covered by its employee stock option and stock purchase plans, including future plans
4. the SuperGen Warrant

## QuickLinks

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NEITHER THESE SECURITIES NOR THE SECURITIES INTO WHICH THESE SECURITIES ARE EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THESE SECURITIES AND THE SECURITIES ISSUABLE UPON EXERCISE OF THESE SECURITIES MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

AVI BIOPHARMA, INC.

WARRANT

Warrant No. [ ]

Date of Original Issuance: March 25, 2002

AVI BioPharma, Inc., an Oregon corporation (the "Company"), hereby certifies that, for value received, [Name of Holder] or its registered assigns (the "Holder"), is entitled to purchase from the Company up to a total of <sup>1</sup> shares of common stock, \$.0001 par value per share (the "Common Stock"), of the Company (each such share, a "Warrant Share" and all such shares, the "Warrant Shares") at an exercise price (as adjusted from time to time as provided in Section 9, the "Exercise Price") per Warrant Share equal to \$9.00 at any time and from time to time from and after the date hereof and through and including March 24, 2006 (the "Expiration Date"), and subject to the following terms and conditions:

1. *Definitions.* In addition to the terms defined elsewhere in this Warrant, capitalized terms that are not otherwise defined herein and that are defined in the Securities Purchase Agreement, dated as of March 25, 2002, between the Company and the original Holder (the "Purchase Agreement"), shall have the meanings given to such terms in the Purchase Agreement. .

2. *Registration of Warrant.* The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "**Warrant Register**"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

3. *Registration of Transfers.* The Company shall register the transfer of any portion of this Warrant in the Warrant Register, upon surrender of this Warrant, with the Form of Assignment attached hereto duly completed and signed, to the Transfer Agent or to the Company at its address specified herein. Upon any such registration or transfer, a new warrant to purchase Common Stock, in substantially the form of this Warrant (any such new warrant, a "**New Warrant**"), evidencing the portion of this Warrant so transferred shall be issued to the transferee and a New Warrant evidencing the remaining portion of this Warrant not so transferred, if any, shall be issued to the transferring Holder. The acceptance of the New Warrant by the transferee thereof shall be deemed the acceptance by such transferee of all of the rights and obligations of a holder of a Warrant.

4. *Exercise and Duration; Early Call*

(a) Subject to the provisions of Section 4(b), this Warrant shall be exercisable by the registered Holder at any time and from time to time on or after the date hereof to and including the Expiration Date. At 6:30 p.m., New York City time, on the Expiration Date, the portion of this Warrant available for exercise and not exercised prior thereto shall be and become void and of no value.

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(b) If at any time after September 24, 2003 (18 months following the Closing Date) (1) the closing price per share of the Common Stock as reported on Bloomberg has exceeded 200% of the Exercise Price then in effect for a period of ten (10) consecutive Trading Days (the "Determination Period") and (2) a registration statement covering resales of the Common Stock issuable upon exercise of the Warrants has been effective and available for use at all times required pursuant to the Registration Rights Agreement and is expected to remain effective and available for use until at least the last date on which the registration statement is required to be kept effective under the terms of the Registration Rights Agreement, then the Company may, at its sole option, provide all of the Holders irrevocable written notice ("Call Notice") requiring all of the Holders to fully exercise all Warrants as of the Call Date (as defined below). If all of the conditions described herein have been satisfied and continue to be satisfied through the Call Date, any Warrant not exercised before the close of business on the Call Date, shall automatically be deemed exercised in accordance with Section 5(a) as of the close of trading on the Call Date and the Company will deliver the Warrant Shares to the Holder upon receipt of a completed Exercise Notice along with the original copy of the Warrant for cancellation (or an affidavit of lost Warrant in accordance with Section 12) and payment for the Warrant Shares as provided herein. "Call Date" shall mean that Trading Day that is at least thirty (30) days following the date on which the Company has given the Call Notice to the Holders.

5. *Delivery of Warrant Shares.*

(a) Upon delivery of the Form of Election to Purchase (in the form of Exhibit A) ("Exercise Notice") to the Company (with the Warrant Shares Exercise Log in the form of Exhibit B hereto) at its address for notice set forth in Section 13 and (i) upon payment of the Exercise Price multiplied by the number of Warrant Shares that the Holder intends to purchase hereunder or (ii) upon notifying the Company that this Warrant is being exercised pursuant to a Cashless Exercise (as defined in Section 5(e)), the Company shall promptly (but in no event later than three (3) Trading Days after the Date of Exercise (as defined herein)) issue and deliver to the Holder, a certificate for the Warrant Shares issuable upon such exercise free of restrictive legends unless otherwise required by the Purchase Agreement. The Company shall, upon request of the Holder, if available, use its best efforts to deliver Warrant Shares hereunder electronically through the Depository Trust Corporation.

A "Date of Exercise" means the date on which the Holder shall have delivered to the Company (i) the Form of Election to Purchase (with the Warrant Exercise Log attached to it), appropriately completed and duly signed and (ii) (A) payment of the Exercise Price for the number of Warrant Shares so indicated by the Holder to be purchased or (B) notification to the Company that this Warrant is being exercised pursuant to a Cashless Exercise.

(b) If by the fifth Trading Day after a Date of Exercise the Company fails to deliver the required number of Warrant Shares in the manner required pursuant to Section 5(a), then the Holder will have the right to rescind such exercise.

(c) If by the third Trading Day after a Date of Exercise the Company fails to deliver the required number of Warrant Shares in the manner required pursuant to Section 5(a), and if after such fifth Trading Day the Holder purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "**Buy-In**"), then the Company shall (1) pay in cash to the Holder the amount by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (A) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue by (B) the closing price of the Common Stock at the time of the obligation giving rise to such purchase obligation and (2) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored or deliver to the Holder the number of

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shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with a market price on the date of exercise totaled \$10,000, under clause (1) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice, which notice shall include such supporting documentation as reasonably necessary to substantiate the amounts payable, indicating the amounts payable to the Holder in respect of the Buy-In.

(d) The Company's obligations to issue and deliver Warrant Shares in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Company to the Holder in connection with the issuance of Warrant Shares. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

(e) If, despite the Company's obligations under the Purchase Agreement and the Registration Rights Agreement, the Warrant Shares to be issued are not registered and available for resale pursuant to an effective registration statement in accordance with the Registration Rights Agreement within the timeframes provided therein, then, notwithstanding anything contained herein to the contrary, the Holder of this Warrant may, at its election exercised in its sole discretion, exercise this Warrant in whole or in part and, in lieu of paying the Exercise Price in cash, elect instead to receive upon such exercise the "Net Number" of shares of Common Stock determined according to the following formula (a "**Cashless Exercise**"):

$$\text{Net Number} = \frac{(A \times B) - (A \times C)}{B}$$

For purposes of the foregoing formula:

A= the total number of shares with respect to which this Warrant is then being exercised;

B= the greater of the (i) closing price per share of the Common Stock (as reported by Bloomberg) on the Trading Day immediately preceding the date of the Exercise Notice or (ii) the average of the closing prices per share of Common Stock (as reported by Bloomberg) for the ten (10) Trading Days immediately preceding the date of the Exercise Notice; and

C= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

6. *Charges, Taxes and Expenses.* Issuance and delivery of certificates for shares of Common Stock upon exercise of this Warrant shall be made without charge to the Holder for any issue or transfer tax, withholding tax, transfer agent fee or other incidental tax or expense in respect of the issuance of such certificates, all of which taxes and expenses shall be paid by the Company; provided, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or Warrants in a name other than that of the

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Holder. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

7. *Replacement of Warrant.* If this Warrant is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation hereof, or in lieu of and substitution for this Warrant, a New Warrant, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction and customary and reasonable indemnity, if requested. Applicants for a New Warrant under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Company may prescribe.

8. *Reservation of Warrant Shares.* The Company covenants that it will at all times reserve and keep available out of the aggregate of its authorized but unissued and otherwise unreserved Common Stock, solely for the purpose of enabling it to issue Warrant Shares upon exercise of this Warrant as herein provided, the number of Warrant Shares which are then issuable and deliverable upon the exercise of this entire Warrant. The Company covenants that all Warrant Shares so issuable and deliverable shall, upon issuance and the payment of the applicable Exercise Price in accordance with the terms hereof, be duly and validly authorized, issued and fully paid and nonassessable.

9. *Certain Adjustments.* The Exercise Price and number of Warrant Shares issuable upon exercise of this Warrant are subject to adjustment from time to time as set forth in this Section 9.

(a) *Stock Dividends and Splits.* If the Company, at any time while this Warrant is outstanding, (i) pays a stock dividend on its Common Stock or otherwise makes a distribution on any class of capital stock that is payable in shares of Common Stock, (ii) subdivides outstanding shares of Common Stock into a larger number of shares, or (iii) combines outstanding shares of Common Stock into a smaller number of shares, then in each such case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event.

(b) *Pro Rata Distributions.* If the Company, at any time while this Warrant is outstanding, distributes to all holders of Common Stock (i) evidences of its indebtedness, (ii) any security (other than a distribution of Common Stock covered by the preceding paragraph), (iii) rights or warrants to subscribe for or purchase any security, or (iv) any other asset (in each case, "**Distributed Property**"), then, at the request of any Holder delivered before the 90th day after the record date fixed for determination of stockholders entitled to receive such distribution, the Company will deliver to such Holder, within five (5) Trading Days after such request (or, if later, on the effective date of such distribution), the Distributed Property that such Holder would have been entitled to receive in respect of the Warrant Shares for which such Holder's Warrant could have been exercised immediately prior to such record date. If such Distributed Property is not delivered to a Holder pursuant to the preceding sentence, then upon any exercise of the Warrant that occurs after such record date, such Holder shall be entitled to receive, in addition to the Warrant Shares otherwise issuable upon such conversion, the Distributed Property that such Holder would have been entitled to receive in respect of such number of Warrant Shares had the Holder been the record holder of such Warrant Shares immediately prior to such record date.

(c) *Fundamental Transactions.* If, at any time while this Warrant is outstanding: (i) the Company effects any merger or consolidation of the Company with or into another Person, (ii) the Company effects any sale of all or substantially all of its assets in one or a series of related transactions, (iii) any tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property, or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is

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effectively converted into or exchanged for other securities, cash or property (in any such case, a "**Fundamental Transaction**"), then the Holder shall have the right thereafter to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Shares then issuable upon exercise in full of this Warrant (the "**Alternate Consideration**"). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one (1) share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. At the Holder's option and request, any successor to the Company or surviving entity in such Fundamental Transaction shall issue to the Holder a new warrant substantially in the form of this Warrant and consistent with the foregoing provisions and evidencing the Holder's right to purchase the Alternate Consideration for the aggregate Exercise Price upon exercise thereof. The terms of any agreement pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this paragraph (c) and insuring that the Warrant (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction.

(d) *Subsequent Equity Sales.*

- (i) If at any time while this Warrant is outstanding, the Company or any subsidiary thereof, as applicable with respect to Common Stock Equivalents (as defined below), shall issue shares of Common Stock or rights, warrants, options or other securities or debt that is convertible into or exercisable or exchangeable for shares of Common Stock ("Common Stock Equivalents"), entitling any person to acquire shares of Common Stock at a price per share less than the Exercise Price (if the holder of the Common Stock or Common Stock Equivalent so issued shall at any time, whether by operation of purchase price adjustments, reset provisions, floating conversion, exercise or exchange prices or otherwise, or due to warrants, options or rights issued in connection with such issuance, be entitled to receive shares of Common Stock at a price less than the Exercise Price, such issuance shall be deemed to have occurred for less than the Exercise Price), (such lower price shall be referred to herein as the "New Sale Price" and such issuance shall be referred to herein as a "New Sale Issuance"); then, the Exercise Price will be reduced to the New Sale Price, whenever such Common Stock or Common Stock Equivalents are issued; provided, if there is more than one New Sale Issuance, the Exercise Price shall be adjusted to the lowest of the New Sale Prices. The number of shares of Common Stock covered by such Warrants would not be adjusted, except for adjustments otherwise required under other subparagraphs of this Section 9, such as subsections (a) or (b). The price adjustment provisions in this Section 9(d)(i) are not intended to apply to the sale or issuance of Common Stock arising from the exercise of any rights, of whatsoever nature, as such rights exist as of the Closing Date and disclosed in Schedule 3.1(g) of the Purchase Agreement.
- (ii) If, at any time while this Warrant is outstanding, the Company or any Subsidiary issues Common Stock Equivalents at a price per share that floats or resets or otherwise varies or is subject to adjustment based on market prices of the Common Stock (a "**Floating Price Security**"), then for purposes of applying the preceding paragraph in connection

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with any subsequent exercise, the Exercise Price will be determined separately on each Date of Exercise and will be deemed to equal the lowest price per share at which any holder of such Floating Price Security is entitled to acquire shares of Common Stock on such Date of Exercise (regardless of whether any such holder actually acquires any shares on such date).

Notwithstanding the foregoing, no adjustment will be made under this paragraph (d) in respect of (i) the granting of options to employees, officers and directors of the Company pursuant to any stock option plan duly adopted by the Company prior to the date hereof or to the issuance of Common Stock upon

exercise of such options or (ii) issuances of shares of Common Stock pursuant to a Strategic Transaction. A "**Strategic Transaction**" shall mean a transaction or relationship in which the Company issues Common Stock to a Person which is, itself or through its subsidiaries, an operating company in a business related to the business of the Company and in which the Company receives material benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

(e) *Number of Warrant Shares.* Simultaneously with any adjustment to the Exercise Price pursuant to paragraphs (a) or (b) of this Section, the number of Warrant Shares that may be purchased upon exercise of this Warrant shall be increased or decreased proportionately, so that after such adjustment the aggregate Exercise Price payable hereunder for the adjusted number of Warrant Shares shall be the same as the aggregate Exercise Price in effect immediately prior to such adjustment.

(f) *Calculations.* All calculations under this Section 9 shall be made to the nearest cent or the nearest 1/100th of a share, as applicable. The number of shares of Common Stock outstanding at any given time shall not include shares owned or held by or for the account of the Company, and the disposition of any such shares shall be considered an issue or sale of Common Stock.

(g) *Notice of Adjustments.* Upon the occurrence of each adjustment pursuant to this Section 9, the Company at its expense will promptly compute such adjustment in accordance with the terms of this Warrant and prepare a certificate setting forth such adjustment, including a statement of the adjusted Exercise Price and adjusted number or type of Warrant Shares or other securities issuable upon exercise of this Warrant (as applicable), describing the transactions giving rise to such adjustments and showing in detail the facts upon which such adjustment is based. Upon written request, the Company will promptly deliver a copy of each such certificate to the Holder and to the Company's Transfer Agent.

(h) *Notice of Corporate Events.* If the Company (i) declares a dividend or any other distribution of cash, securities or other property in respect of its Common Stock, including without limitation any granting of rights or warrants to subscribe for or purchase any capital stock of the Company or any Subsidiary, (ii) authorizes or approves, enters into any agreement contemplating or solicits stockholder approval for any Fundamental Transaction or (iii) authorizes the voluntary dissolution, liquidation or winding up of the affairs of the Company, then the Company shall deliver to the Holder a notice describing the material terms and conditions of such transaction, at least twenty (20) calendar days prior to the applicable record or effective date on which a Person would need to hold Common Stock in order to participate in or vote with respect to such transaction, and the Company will take all steps reasonably necessary in order to insure that the Holder is given the practical opportunity to exercise this Warrant prior to such time so as to participate in or vote with respect to such transaction; provided, however, that the failure to deliver such notice or any defect therein shall not affect the validity of the corporate action required to be described in such notice and provided that such information shall be publicly

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disclosed pursuant to Regulation FD prior to or in conjunction with such notice being provided to the Holder.

10. *Payment of Exercise Price.* The Holder shall pay the Exercise Price in cash by delivering immediately available funds or, if permitted by Section 5(e), through a Cashless Exercise.

11. *Limitation on Exercise.*

(a) Notwithstanding anything to the contrary contained herein, the number of shares of Common Stock that may be acquired by the Holder upon any exercise of this Warrant (or otherwise in respect hereof) shall be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by such Holder and its Affiliates and any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act, does not exceed 4.999% of the total number of issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise). For such purposes, beneficial ownership shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. Each delivery of an Exercise Notice hereunder will constitute a representation by the Holder that it has evaluated the limitation set forth in this paragraph and determined that issuance of the full number of Warrant Shares requested in such Exercise Notice is permitted under this paragraph. By written notice to the Company, the Holder may waive the provisions of this Section but (i) any such waiver will not be effective until the 61st day after such notice is delivered to the Company, and (ii) any such waiver will apply only to the Holder and not to any other holder of Warrants.

(b) Notwithstanding anything to the contrary contained herein, the number of shares of Common Stock that may be acquired by the Holder upon any exercise of this Warrant (or otherwise in respect hereof) shall be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by such Holder and its Affiliates and any other Persons whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act, does not exceed 9.999% of the total number of issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise). For such purposes, beneficial ownership shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. Each delivery of an Exercise Notice hereunder will constitute a representation by the Holder that it has evaluated the limitation set forth in this paragraph and determined that issuance of the full number of Warrant Shares requested in such Exercise Notice is permitted under this paragraph. By written notice to the Company, the Holder may waive the provisions of this Section but (i) any such waiver will not be effective until the 61st day after such notice is delivered to the Company, and (ii) any such waiver will apply only to the Holder and not to any other holder of Warrants.

12. *No Fractional Shares.* No fractional shares of Warrant Shares will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares which would, otherwise be issuable, the Company shall pay cash equal to the product of such fraction multiplied by the closing price of one Warrant Share as reported on the Eligible Market on the date of exercise.

13. *Notices.* Any and all notices or other communications or deliveries hereunder (including without limitation any Exercise Notice or Call Notice) shall be in writing and shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section prior to 6:30 p.m. (New York City time) on a Trading Day, (ii) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section on a day that is not a Trading Day or later than 6:30 p.m. (New York City time) on any Trading Day, (iii) the Trading

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To AVI BioPharma, Inc.:

In accordance with Warrant No. [ ] issued to the undersigned, the undersigned hereby elects to purchase \_\_\_\_\_ shares of common stock ("Common Stock"), [\$ ] par value per share, of AVI BioPharma, Inc.

1. Form of Warrant Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

\_\_\_\_\_ "Cash Exercise" with respect to \_\_\_\_\_  
\_\_\_\_\_ Warrant Shares; and/or \_\_\_\_\_  
\_\_\_\_\_ "Cashless Exercise" with respect to \_\_\_\_\_  
\_\_\_\_\_ Warrant Shares (to the extent permitted by the terms of the  
Warrant).

2. Payment of Exercise Price. In the event that the holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the holder shall pay the sum of \$ \_\_\_\_\_ to the Company in accordance with the terms of the Warrant.

By its delivery of this Form of Election To Purchase, the Holder represents and warrants to the Company that in giving effect to the exercise evidenced hereby the Holder will not beneficially own in excess of the number of shares of Common Stock (determined in accordance with Section 13(d) of the Securities Exchange Act of 1934) permitted to be owned under Section 11 of this Warrant to which this notice relates.

The undersigned requests that certificates for the shares of Common Stock issuable upon this exercise be issued in the name of

PLEASE INSERT SOCIAL SECURITY OR TAX IDENTIFICATION NUMBER: \_\_\_\_\_

Please print name and address  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Exhibit B**

*Warrant Shares Exercise Log*

Date	Number of Warrant Shares Available to be Exercised	Number of Warrant Shares Exercised	Number of Warrant Shares Remaining to be Exercised
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**Exhibit C**

**FORM OF ASSIGNMENT**

[To be completed and signed only upon transfer of Warrant]

FOR VALUE RECEIVED, the undersigned hereby sells, assigns and transfers unto \_\_\_\_\_ the right represented by the within Warrant to purchase \_\_\_\_\_ shares of Common Stock of AVI BioPharma, Inc. to which the within Warrant relates and appoints \_\_\_\_\_ attorney to transfer said right on the books of AVI BioPharma, Inc. with full power of substitution in the premises.

Dated: \_\_\_\_\_, \_\_\_\_\_

(Signature must conform in all respects to name of holder as specified on the face of the Warrant)

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Address of Transferee

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In the presence of:

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## QuickLinks

- [AVI BIOPHARMA, INC. WARRANT](#)
- [Exhibit A FORM OF ELECTION TO PURCHASE](#)
- [Exhibit B Warrant Shares Exercise Log](#)
- [Exhibit C FORM OF ASSIGNMENT](#)

## REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this "*Agreement*") is made and entered into as of March 25, 2002, by and among AVI BioPharma, Inc. an Oregon corporation (the "*Company*"), and each of the purchasers identified on the signature pages hereto (each a "*Purchaser*" and collectively, the "*Purchasers*").

This Agreement is made pursuant to the Securities Purchase Agreement, dated as of the date hereof among the Company and the Purchasers (the "*Purchase Agreement*").

The Company and the Purchasers hereby agree as follows:

1. *Definitions.* Capitalized terms used and not otherwise defined herein that are defined in the Purchase Agreement shall have the meanings given such terms in the Purchase Agreement. As used in this Agreement, the following terms shall have the following meanings:

"*Effectiveness Date*" means the earlier of (a) the 120th day following the Closing Date and (b) the fifth Trading Day following the date on which the Company is notified by the Commission that such Registration Statement will not be reviewed or is no longer subject to further review and comments.

"*Effectiveness Period*" shall have the meaning set forth in Section 2(a).

"*Filing Date*" means, with respect to the initial Registration Statement required to be filed hereunder, the 30th day following the Closing Date.

"*Holder*" or "*Holder*s" means the holder or holders, as the case may be, from time to time of Registrable Securities.

"*Indemnified Party*" shall have the meaning set forth in Section 5(c).

"*Indemnifying Party*" shall have the meaning set forth in Section 5(c).

"*Losses*" shall have the meaning set forth in Section 5(a).

"*Proceeding*" means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

"*Prospectus*" means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A promulgated under the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by the Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

"*Registrable Securities*" means the shares of Common Stock issued pursuant to the Purchase Agreement and issuable upon exercise of the Warrants.

"*Registration Statement*" means the initial registration statement required to be filed hereunder and any additional registration statements contemplated by Section 2(d), including (in each case) the Prospectus, amendments and supplements to such registration statement or Prospectus, including pre- and post-effective amendments, all exhibits thereto, and all material incorporated by reference or deemed to be incorporated by reference in such registration statement.

"*Rule 144*" means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"*Rule 415*" means Rule 415 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

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"*Rule 424*" means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

"*Warrants*" means the Common Stock purchase warrants issued pursuant to the Purchase Agreement.

### 2. *Registration.*

(a) On or prior to the Filing Date, the Company shall prepare and file with the Commission a Registration Statement covering the Registrable Securities for an offering to be made on a continuous basis pursuant to Rule 415. The Registration Statement shall be on Form S-3 (except if the Company is not then eligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form in accordance herewith) and shall contain (except if otherwise required by the Commission) the "*Plan of Distribution*" attached hereto as *Annex A*. The Company shall cause the Registration Statement to become effective and remain effective as provided herein. The Company shall use its best efforts to cause the Registration Statement to be declared effective under the Securities Act as promptly as possible after the filing thereof, but in any event prior to its Effectiveness Date, and shall use its best efforts to keep the Registration Statement continuously effective under the Securities Act until the date which is the earlier date of when (i) all Registrable Securities have been sold or (ii) all Registrable Securities may be sold immediately without registration under the Securities Act and without volume restrictions pursuant to Rule 144(k), as determined by the counsel to the Company pursuant to an unqualified written opinion letter to such effect, addressed and acceptable to the Company's transfer agent and the affected Holders (the "*Effectiveness Period*").

(b) If: (a) any Registration Statement is not filed on or prior to the Filing Date; (b) a Registration Statement filed hereunder is not declared effective by the Commission by the Effectiveness Date; (c) after a Registration Statement is filed with and declared effective by the Commission, such Registration

Statement ceases to be effective (by suspension or otherwise) as to all Registrable Securities to which it is required to relate at any time prior to the expiration of the Effectiveness Period without being succeeded within fifteen (15) Trading Days by an amendment to such Registration Statement or by a subsequent Registration Statement filed with and declared effective by the Commission; (d) the Common Stock is not listed or quoted, or is suspended from trading on the Nasdaq National Market for a period of three (3) Trading Days (which need not be consecutive Trading Days); or (e) the exercise rights of the Holders pursuant to the Warrants are suspended for any reason (any such failure or breach being referred to as an "Event," and for purposes of clause (a), (b) or (e) the date on which such Event occurs, or for purposes of clause (c) the date which such fifteen (15) Trading Day-period is exceeded, or for purposes of clause (d) the date on which such three (3) Trading Day period is exceeded, being referred to as "Event Date"), then until the applicable Event is cured, the Company shall pay to each Holder an amount in cash, as liquidated damages and not as a penalty, equal to 1.0% for each thirty (30) day period (prorated for partial periods) on a daily basis of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement. Such liquidation damages shall be paid not less than each thirty (30) days during an Event and within three (3) days following the date on which such Event has been cured by the Company. If the Company fails to pay any liquidated damages pursuant to this Section in full within seven days after the date payable, the Company will pay interest thereon at a rate of 18% per annum (or such lesser maximum amount that is permitted to be paid by applicable law) to the Holder, accruing daily from the date such liquidated damages are due until such amounts, plus all such interest thereon, are paid in full.

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### 3. Registration Procedures

In connection with the Company's registration obligations hereunder, the Company shall:

(a) Not less than three (3) Trading Days prior to the filing of the Registration Statement or any related Prospectus or any amendment or supplement thereto, the Company shall, (i) furnish to the Holders copies of all such documents proposed to be filed (including documents incorporated or deemed incorporated by reference) which documents will be subject to the review of such Holders, and (ii) cause its officers and directors, counsel and independent certified public accountants to respond to such inquiries as shall be necessary, in the reasonable opinion of respective counsel to conduct a reasonable investigation within the meaning of the Securities Act. The Company shall not file the Registration Statement or any such Prospectus or any amendments or supplements thereto to which the Holders of a majority of the Registrable Securities shall reasonably object in good faith.

(b) (i) Prepare and file with the Commission such amendments, including post-effective amendments, to the Registration Statement and the Prospectus used in connection therewith as may be necessary to keep the Registration Statement continuously effective as to the applicable Registrable Securities for the Effectiveness Period and prepare and file with the Commission such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities; (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement, and as so supplemented or amended to be filed pursuant to Rule 424; (iii) respond as promptly as reasonably possible, and in any event within ten (10) days, to any comments received from the Commission with respect to the Registration Statement or any amendment thereto and, as promptly as reasonably possible provide the Holders true and complete copies of all correspondence from and to the Commission relating to the Registration Statement; and (iv) comply in all material respects with the provisions of the Securities Act and the Exchange Act with respect to the disposition of all Registrable Securities covered by the Registration Statement during the applicable period in accordance with the intended methods of disposition by the Holders thereof set forth in the Registration Statement as so amended or in such Prospectus as so supplemented.

(c) Notify the Holders of Registrable Securities to be sold as promptly as reasonably possible (and, in the case of (i)(A) below, not less than three (3) Trading Days prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one (1) Trading Day following the day (i)(A) when a Prospectus or any Prospectus supplement or post-effective amendment to the Registration Statement is proposed to be filed; (B) when the Commission notifies the Company whether there will be a "review" of such Registration Statement and whenever the Commission comments in writing on such Registration Statement (the Company shall provide true and complete copies thereof and all written responses thereto to each of the Holders); and (C) with respect to the Registration Statement or any post-effective amendment, when the same has become effective; (ii) of any request by the Commission or any other Federal or state governmental authority for amendments or supplements to the Registration Statement or Prospectus or for additional information; (iii) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose; (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose; and (v) of the occurrence of any event or passage of time that makes the financial statements included in the Registration Statement ineligible for inclusion therein or any statement made in the Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to the Registration Statement, Prospectus or other documents

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so that, in the case of the Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(d) Use its best efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order suspending the effectiveness of the Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(e) Furnish to each Holder, without charge, at least one conformed copy of the Registration Statement and each amendment thereto, including financial statements and schedules, all documents incorporated or deemed to be incorporated therein by reference, and all exhibits to the extent requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the Commission.

(f) Promptly deliver to each Holder, without charge, as many copies of the Prospectus or Prospectuses (including each form of prospectus) and each amendment or supplement thereto as such Persons may reasonably request. The Company hereby consents to the use of such Prospectus and each

amendment or supplement thereto by each of the selling Holders in connection with the offering and sale of the Registrable Securities covered by such Prospectus and any amendment or supplement thereto.

(g) Use its best efforts to register or qualify or cooperate with the selling Holders in connection with the registration or qualification (or exemption from such registration or qualification) of all applicable Registrable Securities for offer and sale under the securities or Blue Sky laws of all applicable jurisdictions within the United States as any Holder requests in writing, to keep each such registration or qualification (or exemption therefrom) effective during the Effectiveness Period and to do any and all other acts or things necessary or advisable to enable the disposition in such jurisdictions of the Registrable Securities covered by a Registration Statement; *provided*, that the Company shall not be required to qualify generally to do business in any jurisdiction where it is not then so qualified or subject the Company to any material tax in any such jurisdiction where it is not then so subject.

(h) Cooperate with the Holders to facilitate the timely preparation and delivery of certificates representing Registrable Securities to be delivered to a transferee pursuant to a Registration Statement, which certificates shall be free, to the extent permitted by the Purchase Agreement, of all restrictive legends, and to enable such Registrable Securities to be in such denominations and registered in such names as any such Holders may request.

(i) Upon the occurrence of any event contemplated by Section 3(c)(v), as promptly as reasonably possible, prepare a supplement or amendment, including a post-effective amendment, to the Registration Statement or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, neither the Registration Statement nor such Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(j) Comply with all applicable rules and regulations of the Commission.

(k) The Company may require each selling Holder to furnish to the Company a certified statement as to the number of shares of Common Stock beneficially owned by such Holder and such other reasonable information as the Company is required to obtain for inclusion in the Registration Statement.

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4. *Registration Expenses.* All fees and expenses incident to the performance of or compliance with this Agreement by the Company shall be borne by the Company whether or not any Registrable Securities are sold pursuant to the Registration Statement. The fees and expenses referred to in the foregoing sentence shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (A) with respect to filings required to be made with the Trading Market on which the Common Stock is then listed for trading, and (B) in compliance with applicable state securities or Blue Sky laws), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities and of printing prospectuses, (iii) messenger, telephone and delivery expenses, (iv) Securities Act liability insurance, if the Company so desires such insurance, and (v) fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder.

#### 5. *Indemnification*

(a) *Indemnification by the Company.* The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Holder, the officers, directors, agents, brokers (including brokers who offer and sell Registrable Securities as principal as a result of a pledge or any failure to perform under a margin call of Common Stock), investment advisors and employees of each of them, each Person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, agents and employees of each such controlling Person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable costs of preparation and reasonable attorneys' fees) and expenses (collectively, "*Losses*"), as incurred, arising out of or relating to any untrue or alleged untrue statement of a material fact contained in the Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or form of prospectus or supplement thereto, in the light of the circumstances under which they were made) not misleading, except to the extent, but only to the extent, that (1) such untrue statements or omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in the Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (2) in the case of an occurrence of an event of the type specified in Section 3(c)(ii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated or defective and prior to the receipt by such Holder of the Advice contemplated in Section 6(d). The Company shall notify the Holders promptly of the institution, threat or assertion of any Proceeding of which the Company is aware in connection with the transactions contemplated by this Agreement.

(b) *Indemnification by Holders.* Each Holder shall, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees, each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents or employees of such controlling Persons, to the

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fullest extent permitted by applicable law, from and against all Losses, as incurred, arising solely out of or based solely upon: (x) such Holder's failure to comply with the prospectus delivery requirements of the Securities Act or (y) any untrue statement of a material fact contained in the Registration Statement, any Prospectus, or any form of prospectus, or in any amendment or supplement thereto, or arising solely out of or based solely upon any omission of a material fact required to be stated therein or necessary to make the statements therein not misleading to the extent, but only to the extent,

that such untrue statement or omission is contained in any information so furnished in writing by such Holder to the Company specifically for inclusion in such Registration Statement or such Prospectus or to the extent that (1) such untrue statements or omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in the Registration Statement (it being understood that the Holder has approved Annex A hereto for this purpose), such Prospectus or such form of Prospectus or in any amendment or supplement thereto or (2) in the case of an occurrence of an event of the type specified in Section 3(c)(ii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated or defective and prior to the receipt by such Holder of the Advice contemplated in Section 6(d). In no event shall the liability of any selling Holder hereunder be greater in amount than the dollar amount of the net proceeds received by such Holder upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) *Conduct of Indemnification Proceedings.* If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "Indemnified Party"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "Indemnifying Party") in writing, and the Indemnifying Party shall assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all fees and expenses incurred in connection with defense thereof; provided, that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have proximately and materially adversely prejudiced the Indemnifying Party.

An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless: (1) the Indemnifying Party has agreed in writing to pay such fees and expenses; (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding; or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and such Indemnified Party shall have been advised by counsel that a conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and such counsel shall be at the expense of the Indemnifying Party). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding.

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All fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within ten (10) Trading Days of written notice thereof to the Indemnifying Party (regardless of whether it is ultimately determined that an Indemnified Party is not entitled to indemnification hereunder; provided, that the Indemnifying Party may require such Indemnified Party to undertake to reimburse all such fees and expenses to the extent it is finally judicially determined that such Indemnified Party is not entitled to indemnification hereunder).

(d) *Contribution.* If a claim for indemnification under Section 5(a) or 5(b) is unavailable to an Indemnified Party (by reason of public policy or otherwise), then each Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of such Losses, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in Section 5(c), any reasonable attorneys' or other reasonable fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 5(d) were determined by *pro rata* allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 5(d), no Holder shall be required to contribute, in the aggregate, any amount in excess of the amount by which the proceeds actually received by such Holder from the sale of the Registrable Securities subject to the Proceeding exceeds the amount of any damages that such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No Person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any Person who was not guilty of such fraudulent misrepresentation.

The indemnity and contribution agreements contained in this Section are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties.

## 6. Miscellaneous

(a) *Remedies.* In the event of a breach by the Company or by a Holder, of any of their obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, will be entitled to specific performance of its rights under this Agreement. The Company and each Holder agree that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agrees that, in the event of any action for specific performance in respect of such breach, it shall waive the defense that a remedy at law would be adequate.

(b) *No Piggyback on Registrations.* Except as and to the extent specified in *Schedule 6(b)* hereto, neither the Company nor any of its security holders (other than the Holders in such

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capacity pursuant hereto) may include securities of the Company in the Registration Statement other than the Registrable Securities, and the Company shall not after the date hereof enter into any agreement providing any such right for inclusion of shares in the Registration Statement to any of its security holders. Except as and to the extent specified in *Schedule 6(b)* hereto, the Company has not previously entered into any agreement granting any registration rights with respect to any of its securities to any Person which has not been fully satisfied.

(c) *Compliance*. Each Holder covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it in connection with sales of Registrable Securities pursuant to the Registration Statement.

(d) *Discontinued Disposition*. Each Holder agrees by its acquisition of such Registrable Securities that, upon receipt of a notice from the Company of the occurrence of any event of the kind described in Section 3(c), such Holder will forthwith discontinue disposition of such Registrable Securities under the Registration Statement until such Holder's receipt of the copies of the supplemented Prospectus and/or amended Registration Statement or until it is advised in writing (the "Advice") by the Company that the use of the applicable Prospectus may be resumed, and, in either case, has received copies of any additional or supplemental filings that are incorporated or deemed to be incorporated by reference in such Prospectus or Registration Statement. The Company may provide appropriate stop orders to enforce the provisions of this paragraph.

(e) *Piggy-Back Registrations*. If at any time during the Effectiveness Period there is not an effective Registration Statement covering all of the Registrable Securities and the Company shall determine to prepare and file with the Commission a registration statement relating to an offering for its own account or the account of others under the Securities Act of any of its equity securities, other than on Form S-4 or Form S-8 (each as promulgated under the Securities Act) or their then equivalents relating to equity securities to be issued solely in connection with any acquisition of any entity or business or equity securities issuable in connection with stock option or other employee benefit plans, then the Company shall send to each Holder written notice of such determination and, if within fifteen days after receipt of such notice, any such Holder shall so request in writing, the Company shall include in such registration statement all or any part of such Registrable Securities such holder requests to be registered, subject to customary underwriter cutbacks applicable to all holders of registration rights.

(f) *Amendments and Waivers*. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given, unless the same shall be in writing and signed by the Company and the Holders of the then outstanding Registrable Securities. Notwithstanding the foregoing, a waiver or consent to depart from the provisions hereof with respect to a matter that relates exclusively to the rights of certain Holders and that does not directly or indirectly affect the rights of other Holders may be given by Holders of at least a majority of the Registrable Securities to which such waiver or consent relates; *provided, however*, that the provisions of this sentence may not be amended, modified, or supplemented except in accordance with the provisions of the immediately preceding sentence.

(g) *Notices*. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile telephone number specified in this Section prior to 6:30 p.m. (New York City time) on a Trading Day, (ii) the Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile telephone number specified in this Agreement later than 6:30 p.m. (New York City time) on any date and earlier than 11:59 p.m.

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(New York City time) on such date, (iii) the Trading Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as follows:

If to the Company:	AVI BioPharma, Inc. One S.W. Columbia, Suite 1105 Portland, Oregon 97258 Facsimile: (503) 227-0751
If to a Purchaser:	To the address set forth under such Purchaser name on the signature pages hereto.
If to any other Person who is then the registered Holder:	To the address of such Holder as it appears in the stock transfer books of the Company

or such other address as may be designated in writing hereafter, in the same manner, by such Person.

(h) *Successors and Assigns*. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties and shall inure to the benefit of each Holder. The Company may not assign its rights or obligations hereunder without the prior written consent of each Holder. Each Holder may assign their respective rights hereunder in the manner and to the Persons as permitted under the Purchase Agreement.

(i) *Execution and Counterparts*. This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and, all of which taken together shall constitute one and the same Agreement. In the event that any signature is delivered by facsimile transmission, such signature shall create a valid binding obligation of the party executing (or on whose behalf such signature is executed) the same with the same force and effect as if such facsimile signature were the original thereof.

(j) *Governing Law*. All questions concerning the construction, validity, enforcement and interpretation of this Agreement shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, employees or agents)







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**DMG LEGACY FUND LLC**

By: \_\_\_\_\_ /s/ ANDREW WILDER

Name: Andrew Wilder  
Title: Chief Financial Officer

Address for Notice:

DMG Legacy Fund LLC  
c/o DMG Advisors LLC  
One Sound Shore Drive, Ste 202  
Greenwich, CT 06830

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**DMG LEGACY INSTITUTIONAL FUND LLC**

By: \_\_\_\_\_ /s/ ANDREW WILDER

Name: Andrew Wilder  
Title: Chief Financial Officer

Address for Notice:

DMG Legacy Institutional Fund LLC  
c/o DMG Advisors LLC  
One Sound Shore Drive, Ste 202  
Greenwich, CT 06830

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**DMG LEGACY INTERNATIONAL LTD.**

By: \_\_\_\_\_ /s/ ANDREW WILDER

Name: Andrew Wilder  
Title: Chief Financial Officer

Address for Notice:

DMG Legacy International Ltd.  
c/o DMG Advisors LLC  
One Sound Shore Drive, Ste 202  
Greenwich, CT 06830

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**GRYPHON MASTER FUND, L.P.**

By: \_\_\_\_\_ /s/ E.B. LYON, IV

Name: E.B. Lyon, IV  
Title: Authorized Agent

Address for Notice:

500 Crescent Court, Suite 270  
Dallas, TX 75201

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**QUANTICO PARTNERS, L.P.**

By: \_\_\_\_\_ /s/ JEFFREY THORP

Name: Jeffrey Thorp  
Title: Managing Partner of  
Langley Capital, LLC,  
its General Partner

Address for Notice:

Quantico Partners, L.P.  
c/o Langley Capital, LLC  
535 Madison Avenue, 7<sup>th</sup> Floor  
New York, NY 10022  
(212) 850-7528 Telephone  
(212) 850-7589 Facsimile  
*JT@LangleyCapital.com*

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**BNY CAPITAL MARKETS, INC.**

By: \_\_\_\_\_ /s/ WESLEY V. PRITCHETT

Name: Wesley V. Pritchett  
Title: M.D.

Address for Notice:

Attn: Raymond Lang, Managing Director  
BNY Capital Markets, Inc.  
32 Old Slip, 15<sup>th</sup> Floor  
New York, NY 10286

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**UNITED CAPITAL MANAGEMENT, INC.**

By: \_\_\_\_\_ /s/ JAMES A. LUSTIG

Name: James A. Lustig  
Title: Proprietor

Address for Notice:

410 17<sup>th</sup> Street, Suite 1705  
Denver, CO 80202

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**On behalf of  
THE TAIL WIND FUND LIMITED  
Tail Wind Advisory & Management Ltd.**

By: \_\_\_\_\_ /s/ DAVID CROOK

Name: David Crook  
Title: Chief Executive Officer

Address for Notice:

David Crook, Esq.  
Chief Executive Officer  
Tail Wind Advisory & Management Ltd.  
1<sup>st</sup> Floor, No. 1 Regent Street  
London, SW1Y 4NS, UK  
Tel: +44 20 7468 7691 Fax: 7657

***Please copy all correspondence to:***

Peter J. Weisman, P.C.  
110 East 59<sup>th</sup> Street  
New York, NY 10005  
Tel: +212-418-4792 Fax: 212-317-8855

***Please send the common shares a.s.a.p. directly to:***

Bishop Rosen & Co.  
Attn: Mr. D. Freedman  
100 Broadway, 18<sup>th</sup> Floor  
New York, NY 10006  
Tel: +212-602-0054 Fax: +212-602-0697

***Please send the warrants to:***

The Tail Wind Fund, Ltd.  
MecaPierson (Bahamas) Ltd.  
Attn: Ngairé Rolle,  
Windermere House, 404 East Bay St.,  
PO Box SS 5539, Nassau, Bahamas  
Tel: 242-393-8777 Fax: 242-393-9021

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**JULES NORDLICHT**

By: \_\_\_\_\_ /s/ JULES NORDLICHT

Name: Jules Nordlicht

Title:

Address for Notice:

255 W. Beech St  
Long Beach, NY 11561

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*Annex A*

*Plan of Distribution*

The selling stockholders and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholders may use any one or more of the following methods when selling shares:

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

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

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

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock or Warrants owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell the shares of common stock from time to time under this prospectus, or under an amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933 amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

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

The Company is required to pay all fees and expenses incident to the registration of the shares. The Company has agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

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## QuickLinks

[REGISTRATION RIGHTS AGREEMENT](#)